

David Decker

From: Haynes, Laura (Carper) [Laura_Haynes@carper.senate.gov]
Sent: Friday, March 11, 2011 3:26 PM
To: Schmidt, Rebecca; Decker, David; Powell, Amy
Subject: FW: UCS on the nuclear crisis at Fukushima (Japan)

This is a lot more information than I received earlier from David— is there any way to validate the claims in this email or reports?

From: Robert Cowin [mailto:rcowin@ucsusa.org]
Sent: Friday, March 11, 2011 3:20 PM
To: Haynes, Laura (Carper)
Subject: UCS on the nuclear crisis at Fukushima (Japan)

Nuclear Crisis at Fukushima

| by [Ed Lyman](#) | [nuclear power](#) | [nuclear power safety](#) |

As of 2:30 pm EST Friday 3/11/11:

The massive earthquake off the northeast coast of Japan has caused a potentially catastrophic situation at one of Japan's nuclear power plants. The situation is still evolving, but here is a preliminary assessment based on the facts we currently understand them.

The plant's owner, Tokyo Electric Power Company (TEPCO), reported that at 2:46 p.m. local time (12:46 a.m. EST) "turbines and reactors of Tokyo Electric Power Company's Fukushima Daiichi Nuclear Power Station Unit 1 ... and Units 2 and 3 ... automatically shut down due to the Miyagiken-oki Earthquake."

These reactors are 3 of the 6 operating reactors at the Fukushima I nuclear facility. All are boiling water reactors. Unit 1 has a rated output of 460 megawatts, and Units 2 and 3 each have a rated output of 784 megawatts.

TEPCO went on to state the shutdowns were caused by the loss of off-site power "due to malfunction of one out of two off-site power systems." This loss of power triggered emergency diesel generators, which automatically started to provide backup power to the reactors.

However, at 3:41 p.m. local time (1:46 a.m. EST), the emergency diesel generators shut down "due to malfunction, resulting in the complete loss of alternating current for all three units," according to TEPCO. The failure of the diesel generators was most likely due to the arrival of the tsunami, which caused flooding in the area. The earthquake was centered 240 kilometers from Japan, and it would have taken the tsunami approximately an hour to reach the Japanese islands.

This power failure resulted in one of the most serious conditions that can affect a nuclear plant—a "station blackout"—during which off-site power and on-site emergency alternating current (AC) power is lost. Nuclear plants generally need AC power to operate the motors, valves and instruments that control the systems that provide cooling water to the radioactive core. If all AC power is lost, the options to cool the core are limited.

The boiling water reactors at Fukushima are protected by a Reactor Core Isolation Cooling (RCIC) system, which can operate without AC power because it is steam-driven and therefore does not require electric pumps. However, it does require DC power from batteries for its valves and controls to function.

If battery power is depleted before AC power is restored, however, the RCIC will stop supplying water to the core and the water level in the reactor core could drop. If it drops far enough, the core would overheat and the fuel would become damaged. Ultimately, a “meltdown” could occur: The core could become so hot that it forms a molten mass that melts through the steel reactor vessel. This would release a large amount of radioactivity from the vessel into the containment building that surrounds the vessel.

The containment building’s purpose is to keep radioactivity from being released into the environment. A meltdown would build up pressure in the containment building. At this point we do not know if the earthquake damaged the containment building enough to undermine its ability to contain the pressure and allow radioactivity to leak out.

According to technical documents translated by Aileen Mioko Smith of Green Action in Japan, if the coolant level dropped to the top of the active fuel rods in the core, damage to the core would begin about 40 minutes later, and damage to the reactor vessel would occur 90 minutes after that.

Concern about a serious accident is high enough that while TEPCO is trying to restore cooling the government has evacuated a 3-km (2-mile) radius area around the reactor.

Bloomberg News reported that the battery life for the RCIC system is eight hours. This means that the batteries would have been depleted before 10 a.m. EST today. It is unclear if this report is accurate, since it suggests that several hours have elapsed without any core cooling. Bloomberg also reported that Japan had secured six backup batteries and planned to transport them to the site, possibly by military helicopter. It is unclear how long this operation would take.

There also have been news reports that Fukushima Unit 2 has lost its core cooling, suggesting its RCIC stopped working, but that the situation “has been stabilized,” although it is not publicly known what the situation is. TEPCO reportedly plans to release steam from the reactor to reduce the pressure, which had risen 50% higher than normal. This venting will release some radioactivity.

More information about the cooling issue is available in this [*New York Times* story](#).

We will post updates as more information becomes available.

<http://allthingsnuclear.org/post/3788886037/nuclear-crisis-at-fukushima>

David Decker

From: David Decker
Sent: Friday, March 11, 2011 3:35 PM
To: 'Haynes, Laura (Carper)'; Rebecca Schmidt; Amy Powell
Subject: RE: UCS on the nuclear crisis at Fukushima (Japan)

Laura,
I'll start checking to see if there is anything more on this that we know for sure. As far as I know, what we know from Japan (that we put in the press-release type info that just went out a few minutes ago) is "there is the possibility of a release of radioactive materials due to decrease in reactor water level".

David

From: Haynes, Laura (Carper) [mailto:Laura_Haynes@carper.senate.gov]
Sent: Friday, March 11, 2011 3:26 PM
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failure of the diesel generators was most likely due to the arrival of the tsunami, which caused flooding in the area. The earthquake was centered 240 kilometers from Japan, and it would have taken the tsunami approximately an hour to reach the Japanese islands.

This power failure resulted in one of the most serious conditions that can affect a nuclear plant—a “station blackout”—during which off-site power and on-site emergency alternating current (AC) power is lost. Nuclear plants generally need AC power to operate the motors, valves and instruments that control the systems that provide cooling water to the radioactive core. If all AC power is lost, the options to cool the core are limited.

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<http://allthingsnuclear.org/post/3788886037/nuclear-crisis-at-fukushima>

David Decker

From: David Decker
Sent: Friday, March 11, 2011 4:53 PM
To: 'Epstein, Jonathan (Bingaman)'
Subject: RE: Update on Japan Nuclear Reactors

Jon,
We had the exact same question! At this point, we're still wondering what she was referring to. My guess is that she's offered to fly over a replacement diesel generator, and that somehow "cooling water" was described? If I find out anything I will let you know.

David

From: Epstein, Jonathan (Bingaman) [mailto:Jonathan_Epstein@bingaman.senate.gov]
Sent: Friday, March 11, 2011 4:48 PM
To: Decker, David
Subject: RE: Update on Japan Nuclear Reactors

David – can you tell me what the shipping of cooling water is that Secretary Clinton talked about?

From: Decker, David [<mailto:David.Decker@nrc.gov>]
Sent: Friday, March 11, 2011 4:43 PM
To: Dedrick, Kathy (EPW); Haynes, Laura (Carper); Caputo, Annie (EPW); Clifford, Brian (Barrasso); michael.beckerman@mail.house.gov; Baran, Jeff; mary.neumayr@mail.house.gov; abigail.pinkele@mail.house.gov; david.mccarthy@mail.house.gov; john.marshall@mail.house.gov; chris.sarley@mail.house.gov; maryam.brown@mail.house.gov; Fowler, Sam (Energy); Epstein, Jonathan (Bingaman); Billups, Karen (Energy); Edwards, Isaac (Energy)
Subject: Update on Japan Nuclear Reactors

Attached is updated information regarding the status of the Fukushima reactor in Japan. This is the one that's been having issues with cooling water. Unit 1 apparently did vent steam (underlining below is my change), while a mobile power generator arrived on-site as well.

David

At 1945 UTC (1445 EST), the International Atomic Energy Agency (IAEA) Incident and Emergency Centre released information about the status of the Fukushima Daiichi nuclear power plant. This information was a result of IAEA communications with Japan's Nuclear and Industrial Safety Agency (NISA) and Ministry of Education, Culture, Sports, Science, and Technology (MEXT). The following information comes from the release:

"Unit 1

The reactor is being maintained shutdown. However there is no information regarding the status of the supply of power to Unit 1. The reactor water level is reported to be oscillating. At 15:30 UTC the reactor water was approximately 130 cm above the top of the core. Containment is intact in Unit 1, however due to an increase of pressure within containment the decision has been made to perform a limited controlled venting to avoid over pressurization of the containment.

Unit 2

The reactor is being maintained shutdown. There is currently no supply of power to Unit 2. Work is currently being undertaken to restore power. At 15:30 UTC the reactor water level is reported to be at approximately 350 cm above the top of the core. Containment is intact in Unit 2.

Unit 3

The reactor is being maintained shutdown. Power is being supplied to Unit 3. At 13:00 UTC the reactor water level is reported to be at approximately 450 cm above the top of the core. Containment is intact in Unit 3.

A mobile power generator has arrived at the site of the Fukushima Daiichi nuclear power plant.”

Cohen, Shari

From: Leeds, Eric
Sent: Friday, March 11, 2011 7:53 AM
To: 'Lawrence.BURKHART@oecd.org'
Subject: RE: [Yama] Situation now - Japan NPPs - ECCS mode

Thanks so much Larry! We really appreciate getting the info. The US is making tsunami preps at Diablo Canyon and San Onofre.

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
301-415-1270

From: Lawrence.BURKHART@oecd.org [<mailto:Lawrence.BURKHART@oecd.org>]
Sent: Friday, March 11, 2011 5:51 AM
To: Leeds, Eric; Regan, Christopher; Sheron, Brian; Sangimino, Donna-Marie; Doane, Margaret; Cullingford, Michael; Johnson, Michael; Uhle, Jennifer; Schwartzman, Jennifer
Cc: Holahan, Gary; Williams, Donna; John.NAKOSKI@oecd.org; Diane.JACKSON@oecd.org
Subject: FW: [Yama] Situation now - Japan NPPs - ECCS mode

Dear all,

Greetings from Paris. Im sure you've heard about the earthquake in Japan and Im sure you may have your own information sources. But just wanted to pass on this is an email from a colleague (who used to work at NEA but recently returned to Japan).

Apparently all of the 15 Japanese Nuclear Power Plants shutdown successfully but there are some issues with Diesel Generators operating properly at the plants listed below.

I will send more info if it is relevant and if you would like.

Very Best Regards. Larry

From: Akihiro YAMAMOTO [<mailto:a-yamamoto@houshasen.tsuruga.fukui.jp>]
Sent: Friday, March 11, 2011 11:30
To: GAUVAIN Jean, NEA/SURN

Cc: REIG Javier, NEA/SURN; ECHAVARRI Luis, NEA; YOSHIMURA Uichiro, NEA/SRAN; GUYOT Lydie, NEA; PEYRAT Marie-Laure, NEA/SRAN; GAS Serge, NEA/RE; BREEST Axel, NEA/SURN; MAUNY Elisabeth, NEA/SURN; LAMARRE Greg, NEA/SURN; REHACEK Radomir, NEA/SURN; HUERTA Alejandro, NEA/SURN; JACKSON Diane, NEA/SURN; GAUVAIN Jean, NEA/SURN; NAKOSKI John, NEA/SURN; GRESS Philippe, NEA/SURN; BURKHART Lawrence, NEA/SURN; IANNOLO Nicolina, NEA/SURN; CHAUHAN Roopa, DAF/COMP; christele.tephanympnia@oecd.org; LITTLE Aileen, NEA/ADMI; 'Carlo Vitanza'; AMRI Abdallah, NEA/SURN

Subject: [Yama] Situation now - ECCS mode

Dear all,

TEPCO (Tokyo Electric Power Company) declared the state of emergency of following NPPs:

Fukushima 1-1

Fukushima 1-2

Fukushima 1-3

Fukushima 2-1 (**ECCS mode now**)

I am trying to get information why DG can't start up (problem of intake sea water for the cooling DG system?)

There is a fire from turbine building (B1 floor) at Onagawa NPP unit 1 but the fire fighting was completely succeeded.

<http://www.yomiuri.co.jp/dy/national/20110311dy01.htm>

A while ago, Fukui (my office located) had also earthquake (M4.1). We have 15 NPPs but no damage to the NPPs.

Yama

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Akihiro YAMAMOTO

Ageing Management Specialist,

Nuclear Safety Measurement Division

Fukui Prefectural Government

Telephone: +81 (0) 776 20 0314

E-mail: a-yamamoto@houshasen.tsuruga.fukui.jp

+++++

David Decker

From: David Decker
Sent: Friday, March 11, 2011 11:37 AM
To: Raeann Shane
Subject: RE: HEADS UP re: press release coming soon on tsunami issues

Thanks!

From: Shane, Raeann
Sent: Friday, March 11, 2011 11:37 AM
To: Powell, Amy; Quesenberry, Jeannette; Decker, David
Cc: Schmidt, Rebecca; Belmore, Nancy; Weil, Jenny
Subject: RE: HEADS UP re: press release coming soon on tsunami issues

OIP here in OPS center has some press releases from Japan that they are going to send to me.

From: Powell, Amy
Sent: Friday, March 11, 2011 11:26 AM
To: Quesenberry, Jeannette; Decker, David
Cc: Schmidt, Rebecca; Belmore, Nancy; Shane, Raeann; Weil, Jenny
Subject: HEADS UP re: press release coming soon on tsunami issues

FYI, OPA is getting close on a press release regarding NRC efforts related to the tsunami, preparations that the agency is doing with the CA plants, West Coast licensees. Jeanette, per usual, please get that to the oversight committees' contacts when it comes out. David, would you please send it to Michal, Jenny's Diablo Canyon and San Onofre contacts (listed on her Excel sheet on the shared drive), and Liz Craddock (elizabeth_craddock@landrieu.senate.gov) in Sen. Landrieu's office (she called and asked if NRC would be making a statement)?

Thanks
AP

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

TTTT/5

David Decker

From: Powell, Amy
Sent: Friday, March 11, 2011 10:41 AM
To: Shane, Raeann
Cc: Weil, Jenny; Decker, David
Subject: RE: Japan info?

OK – thanks. If there is a dial-in for the conference call, let us know and we'll have another OCAer on the line.

From: Shane, Raeann
Sent: Friday, March 11, 2011 10:38 AM
To: Powell, Amy
Subject: Re: Japan info?

Not that I can find. We are going to have a conference call at 1230. R4 is in monitoring mode. I'll let you know when I get something.

From: Powell, Amy
To: Shane, Raeann
Cc: Weil, Jenny; Decker, David
Sent: Fri Mar 11 10:33:38 2011
Subject: Japan info?

Does the Ops Center (or the OPA staff there) have anything prepped yet on Japan that we can share externally (status of the plants there? Damage?)? I've asked Josh and Elliot for the same, but since you are in the nerve center I thought I'd check with you...

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

TITIT 6

David Decker

From: Weil, Jenny
Sent: Friday, March 11, 2011 10:39 AM
To: Shane, Raeann
Cc: Decker, David
Subject: FW: Quake/tsunami talking points
Attachments: 3_11_QUAKE_talk_pts.docx

From: Burnell, Scott
Sent: Friday, March 11, 2011 9:28 AM
To: Screnci, Diane; Sheehan, Neil; Hannah, Roger; Ledford, Joey; Chandrathil, Prema; Mitlyng, Viktoria; Dricks, Victor; Uselding, Lara; Harrington, Holly; McIntyre, David; Couret, Ivonne; Weil, Jenny
Cc: Batkin, Joshua; Monninger, John; Brenner, Eliot
Subject: Quake/tsunami talking points

All;

These are to be used consistent with the Chairman's direction to OPA to keep the public informed of our activities but NOT to get in front of our Japanese counterparts concerning events in that country.

Scott

TTTT/7

David Decker

From: Powell, Amy
Sent: Friday, March 11, 2011 7:02 PM
To: Powell, Amy
Cc: Shane, Raeann; Schmidt, Rebecca; Droggitis, Spiros; Riley (OCA), Timothy; Decker, David; Dacus, Eugene
Subject: NRC Congressional Affairs contacts, coverage regarding Japanese earthquake and tsunami issues
Importance: High

Hi all –

In the event that it is needed, NRC's Office of Congressional Affairs is planning to have staff available in the NRC's Operations Center through the weekend as the agency continues to track Japanese earthquake and tsunami issues. Here is the schedule for who will be available and when:

Friday, March 11th

Raeann Shane	until 10:00 pm
Eugene "Gene" Dacus	10:00 pm to 7:00 am

Saturday, March 12th

Rebecca "Becky" Schmidt	7:00 am to 2:00 pm
Spiros Droggitis	2:00 pm to 9:00 pm
David Decker	9:00 pm to 7:00 am

Sunday, March 13th

Amy Powell	7:00 am to 2:00 pm
Tim Riley	2:00pm to 9:00pm

I've cc'ed all of our NRC Congressional Affairs staff on this schedule so that you have their e-mail addresses. If this changes at any point in the weekend, we will notify you.

Amy

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

TTTT / 8

David Decker

From: Shane, Raeann
Sent: Friday, March 11, 2011 6:04 PM
To: Decker, David; Caputo, Annie (EPW)
Cc: Powell, Amy; Schmidt, Rebecca; Dacus, Eugene; Riley (OCA), Timothy
Subject: RE: Update on Japan Nuclear Reactors

Annie:

We don't have absolute confirmation but the 1000x could be pretty close.

From: Decker, David
Sent: Friday, March 11, 2011 5:40 PM
To: Caputo, Annie (EPW)
Cc: Powell, Amy; Schmidt, Rebecca; Shane, Raeann; Dacus, Eugene; Riley (OCA), Timothy
Subject: RE: Update on Japan Nuclear Reactors

Annie,

Here's what I found about the radiation levels from a NYTimes article – it may be the same thing you've seen, but I wanted to send it to you in case you hadn't seen it.

Emergency Declared at Japanese Nuclear Plant

Japanese officials early Saturday expanded the area around a crippled nuclear power plant subject to emergency evacuation, as radiation levels inside the facility were reported to have surged and operators struggled to keep the plant's cooling system operating on battery power.

A Japanese nuclear safety panel said radiation levels were 1,000 times above normal in a reactor control room after a huge quake damaged a plant's cooling system, according to Kyodo News. The elevated radiation reading was taken inside the control room of the No. 1 reactor of the Fukushima plant.

Prime Minister Naoto Kan said before boarding a helicopter to visit the plant that the government had expanded the evacuation area around the plant subject to a six-mile from a two-mile radius. Public broadcaster NHK of Japan, quoting nuclear safety officials, said there was "no immediate health hazard" to nearby residents from a possible minute leakage, and people were urged to evacuate the area calmly.

The nuclear plant, known formally as the Fukushima Daiichi Nuclear Power Station, was operating in an emergency, battery-powered cooling mode seventeen hours after the earthquake knocked out its two main sources of the electrical power needed for safe shutdown. But the International Atomic Energy Agency said that "mobile electricity supplies have arrived at the site" to keep the crisis at the crippled plant from worsening.

The Chief Cabinet Secretary of the Japanese government said the plant was releasing steam with a "very small" amount of radioactive material to relieve pressure in one reactor at the. The government had earlier

declared an "atomic power emergency" to begin the evacuation, a difficult challenge in the midst of a natural catastrophe.

"With evacuation in place and the ocean-bound wind, we can ensure the safety," said the official, Yukio Edano, at a news conference early Saturday. It was not clear, however, how long the reactor could continue to function in an emergency mode or when normal power supplies could be restored to the plant.

A pump run by steam, designed to function in the absence of electricity, was adding water to the reactor vessel, and as that water boiled off, it was being released. Such water is usually only slightly radioactive, according to nuclear experts. As long as the fuel stays covered by water, it will remain intact, and the bulk of the radioactive materials will stay inside it. If the fuel is exposed, it could result in a meltdown at the plant.

Three reactors at the plant, run by the Tokyo Electric Power Company, shut down when the earthquake began, at 2:46 PM in Tokyo (or 12:46 AM in New York). As designed, emergency diesel generators started up to provide power for continued operating of cooling functions to ensure a safe shutdown. But they ran for a little less than an hour and then stop functioning, possibly because the tsunami generated by the earthquake took out the diesel-powered generators at the plant. Reactor unit 1 suffered a rise in pressure, leading operators to vent it.

The International Atomic Energy Agency did not say how the power supplies - possibly portable generators or batteries - had arrived. Secretary of State Hillary Clinton, speaking in Washington, said earlier that American military planes had already delivered "coolant," but American military officials indicated that while they were prepared to help Japan grapple with any problems related to its nuclear facilities, but had not been asked to do so.

"To our knowledge, we have not actually carried anything in support in the nuclear facilities," said Lt. Col. John S. Haynes, a spokesman for the Air Force. "We're standing by for full up assistance to the government for whatever they might need. We have civil engineer teams, and airlift capability."

Japan relies heavily on nuclear power, and it generates just over a third of the country's total electricity. The facilities are designed to withstand earthquakes, which are common in Japan, but experts have long expressed concerns about safety standards at the plants, particularly about the impact a major quake could have if it hit close to a reactor.

At least two other Japanese nuclear plants also reported trouble, but there was no radiation leak at either of them, government officials said. A number of nuclear reactors around the hardest-hit area of the country were shut down, and Japanese news media said a fifth of the country's total nuclear generating capacity was offline because of the quake.

One major concern is that while operators can quickly shut down a nuclear reactor in an earthquake or another emergency, they cannot allow the cooling systems to stop working. Even after the plant's chain

reaction is stopped, its fuel rods still produce about six percent as much heat as they did when the plant was running. The production of heat drops off sharply over the following hours, but continued cooling is needed, or the water will boil away and the fuel will melt, releasing the uranium fragments inside.

Heat from the nuclear fuel rods must be removed by water in a cooling system, but that requires power to run the pumps and to align the valves in the pipes, and run the instruments. So the plant requires a continuous supply of electricity even after the reactor stops generating its own power.

- With the steam-driven pump in operation, pressure valves on the reactor vessel would open automatically as pressure rose too high, or could be opened by operators. "It's not like they have a breach, there's no broken pipe venting steam," said Margaret E. Harding, a nuclear safety consultant, who managed a team at General Electric, the reactor's designer, that analyzed pressure build-up in reactor containments. "You're getting pops of release valves, for minutes, not hours, that take pressure back down." Some of the radioactive steam would condense back to liquid in the containment building, she said. An analyst with the World Nuclear Association, a major international nuclear power group, told Reuters that he understood fresh cool water was now being pumped into the cooling system at Fukushima, reducing the threat of a meltdown.

"We understand this situation is under control," the analyst said, adding that he understood that a back-up battery power system had been brought online after about an hour and began pumping water back into the cooling system, where the water level had been falling.

Japanese news media quoted officials in Fukushima Prefecture as saying that water levels were 3.4 meters — about 10 feet — above the fuel rods at the No. 2 reactor at the plant. Tokyo Electrical Power officials confirmed that water levels had been falling but said that fuel rods had not been exposed.

Civilian power reactors are designed with emergency diesel generators to assure the ability to continue cooling even during a blackout. Many reactors have two, assuring redundancy; some have three, so that if one must be taken out of service for maintenance, the plant can still keep running.

It was not immediately clear how many there are at Fukushima, but the operators reported earlier in the day that they were not working, prompting the evacuation.

Fukushima 1, which was designed by General Electric and entered commercial service in 1971, was probably equipped to function for some hours without emergency diesel generators, according to David Lochbaum, who worked at three American reactor complexes that use General Electric technology.

Mr. Lochbaum, who also worked as an instructor for the Nuclear Regulatory Commission on GE reactors, said he did not know the details of Fukushima, but that such reactors were equipped to ride out interruptions in electrical power by using pumps that could be powered by steam, which would still be available in case of electric power failure. Valves can be opened by motors that run off batteries, he said. Older plant designs, of the era of Fukushima, generally have batteries sized to operate for four hours, he said.

After four hours, heat production in the core is still substantial but has been reduced, he said. The heat would boil away the cooling water, raising pressure in the reactor vessel, until automatic relief valves opened to let some of the steam out. Then the valves would close and the pressure would start building again.

If the cooling system remains inoperative for many hours, the water would eventually boil away, he said, and the fuel would begin to melt. That is what happened at Three Mile Island, the reactor near Harrisburg, Pa., that suffered a partial core melt in March 1979. In that case the cause was not an earthquake, but mechanical failure, operator error and poor design, government investigators later found.

Mr. Lochbaum, who now works for the Union of Concerned Scientists, a group that is very often critical of nuclear safety standards, said that if the cooling water in the vessel was boiling away, the process of boiling enough to expose the fuel would take “hours, not minutes.”

The radioactive steam — which would become far more radioactive as the fuel began to melt — would fill the containment building, he said. That building is designed to be cooled, to keep down steam pressure and leaks. But those pumps require the main sources of power at the plant to function properly.

“If they start melting fuel, the containment integrity is going to be the key in terms of what gets out,” Mr. Lochbaum said. “Their focus now has to be on getting back A.C. power” — or the main power supplies for the plant.

From: Caputo, Annie (EPW) [mailto:Annie_Caputo@epw.senate.gov]
Sent: Friday, March 11, 2011 5:06 PM
To: Decker, David
Subject: RE: Update on Japan Nuclear Reactors

What do I do if I need more info over the weekend? And do you have anything about the radiation levels 1000x normal?

From: Decker, David [mailto:David.Decker@nrc.gov]
Sent: Friday, March 11, 2011 4:43 PM
To: Dedrick, Kathy (EPW); Haynes, Laura (Carper); Caputo, Annie (EPW); Clifford, Brian (Barrasso); michael.beckerman@mail.house.gov; Baran, Jeff; mary.neumayr@mail.house.gov; abigail.pinkele@mail.house.gov; david.mccarthy@mail.house.gov; john.marshall@mail.house.gov; chris.sarley@mail.house.gov; maryam.brown@mail.house.gov; Fowler, Sam (Energy); Epstein, Jonathan (Bingaman); Billups, Karen (Energy); Edwards, Isaac (Energy)
Subject: Update on Japan Nuclear Reactors

Attached is updated information regarding the status of the Fukushima reactor in Japan. This is the one that's been having issues with cooling water. Unit 1 apparently did vent steam (underlining below is my change), while a mobile power generator arrived on-site as well.

David

At 1945 UTC (1445 EST), the International Atomic Energy Agency (IAEA) Incident and Emergency Centre released information about the status of the Fukushima Daiichi nuclear power plant. This information was a result of IAEA communications with

Japan's Nuclear and Industrial Safety Agency (NISA) and Ministry of Education, Culture, Sports, Science, and Technology (MEXT). The following information comes from the release:

Unit 1

The reactor is being maintained shutdown. However there is no information regarding the status of the supply of power to Unit 1. The reactor water level is reported to be oscillating. At 15:30 UTC the reactor water was approximately 130 cm above the top of the core. Containment is intact in Unit 1, however due to an increase of pressure within containment the decision has been made to perform a limited controlled venting to avoid over pressurization of the containment.

Unit 2

The reactor is being maintained shutdown. There is currently no supply of power to Unit 2. Work is currently being undertaken to restore power. At 15:30 UTC the reactor water level is reported to be at approximately 350 cm above the top of the core. Containment is intact in Unit 2.

Unit 3

The reactor is being maintained shutdown. Power is being supplied to Unit 3. At 13:00 UTC the reactor water level is reported to be at approximately 450 cm above the top of the core. Containment is intact in Unit 3.

A mobile power generator has arrived at the site of the Fukushima Daiichi nuclear power plant."

David Decker

From: David Decker
Sent: Friday, March 11, 2011 5:33 PM
To: 'Blair, Rob'; 'Berquam, Taunja'
Subject: ARE: Japanese Earthquake/Tsunami Issue

Rob and Taunja,

This is a bit more info regarding the issue of the Japanese earthquake/tsunami. The last part of it is the same as what I just sent, but I thought you might want the whole thing. This is labeled as "OUO" and I'm trying to find out what portion of it is at that level and will let you know.

David

USNRC Emergency Operations Center Status Update (OUO)

March 11, 2011
Earthquake / Tsunami Status Update

Status of NRC and Agreement State Facilities (Update current as of 1600 EST)

Diablo Canyon Power Plant declared a Notice of Unusual Event at 0423 EST based on receipt of a tsunami warning for the local coastal area. The licensee anticipates a maximum wave surge of approximately 3 feet at the intake structure. The licensee does not expect a surge of this magnitude to impact plant operation. The licensee intends to keep both units at full power through the event. As a precaution, the licensee has provided limited staffing of the Technical Support Center. The licensee also sent all nonessential personnel offsite, and placed the circulating water screen wash system into manual operation to provide continuous flushing of the screens to prevent potential fouling. The resident inspectors are on site and monitoring plant conditions and licensee actions from the control room.

At 0946 EST, the NRC entered Monitoring Mode.

At 1130 EST, the licensee observed potential tsunami effects of one foot based on buoy information. The surge expanded to approximately a three foot surge at its peak. This change is within the normal tidal range and did not impact plant operation. The area of the California coast near the plant remains under a tsunami warning.

The effects of the tsunami at San Onofre Nuclear Generating Station were negligible. San Onofre is under a tsunami advisory and has not reached any EAL thresholds. Both units continue to operate at essentially full power.

Region IV has identified 17 licensees in the states of Hawaii and Alaska that possess Category 1 or 2 sources. All of these are sealed-source users, primarily radiographers and irradiators. There is one NRC licensee at Camp McClellan in Sacramento. Region IV has commenced contacting these licensees.

The decommissioned Humboldt Bay nuclear plant has contacted the NRC and reported that they are staffed onsite and preparing for any tsunami effects. The Humboldt Bay fossil plant did shut down in advance of the tsunami arrival. This plant observed a one foot surge from the tsunami. The fossil plant was subsequently restarted once the tsunami passed.

Region IV has been in contact with the Radiation Control Program Director for California. He has identified no Category 1 or 2 licensees that would be threatened. California has fully activated its coastal and southern Regional Operations Centers. The California Emergency Operations Center is partially activated. Region IV has contacted Radiation Control Program Directors in Washington and Oregon. Washington and Oregon did not activate their Emergency Operations Centers.

The state of Hawaii has fully activated its Emergency Operations Center. The state has received Federal support from the Department of Homeland Security, the U.S. Coast Guard and the Federal Emergency Management Agency (FEMA). The highest waves reported in Hawaii were six feet above sea level.

Status of Japanese Facilities

Background:

14 operational BWRs proximal to earthquake zone (3 at Onagawa, 6 at Fukushima Daiichi, 4 at Fukushima Daini and 1 at Tokai).

Situation:

Magnitude 8.9 earthquake struck 80 miles east of Onagawa, 110 miles east-northeast of Fukushima.

All 3 units at Onagawa were operating, all 3 were automatically shutdown. 3 units at Fukushima Daiichi were operating (Units 1 through 3, with Units 4 through 6 in maintenance outage), all 3 were automatically shutdown. All 4 units at Fukushima Daini were operating, all 4 were automatically shutdown. 1 unit operating at Tokai was automatically shutdown.

A fire was confirmed to have occurred in the turbine building (turbine building common to all 3 units) at Onagawa. This fire was extinguished.

At 1945 UTC (1445 EST), the International Atomic Energy Agency (IAEA) Incident and Emergency Centre released information about the status of the Fukushima Daiichi nuclear power plant. This information was a result of IAEA communications with Japan's Nuclear and Industrial Safety Agency (NISA) and Ministry of Education, Culture, Sports, Science, and Technology (MEXT). The following information comes from the release:

"Unit 1

The reactor is being maintained shutdown. However there is no information regarding the status of the supply of power to Unit 1. The reactor water level is reported to be oscillating. At 15:30 UTC the reactor water was approximately 130 cm above the top of the core. Containment is intact in Unit 1, however due to an increase of pressure within containment the decision has been made to perform a limited controlled venting to avoid over pressurization of the containment.

Unit 2

The reactor is being maintained shutdown. There is currently no supply of power to Unit 2. Work is currently being undertaken to restore power. At 15:30 UTC the reactor water level is reported to be at approximately 350 cm above the top of the core. Containment is intact in Unit 2.

Unit 3

The reactor is being maintained shutdown. Power is being supplied to Unit 3. At 13:00 UTC the reactor water level is reported to be at approximately 450 cm above the top of the core. Containment is intact in Unit 3.

A mobile power generator has arrived at the site of the Fukushima Daiichi nuclear power plant."

From: David Decker

Sent: Friday, March 11, 2011 5:27 PM

To: 'Blair, Rob'; 'Berquam, Taunja'

Subject: Japanese Earthquake/Tsunami Issue

Rob and Taunja,

Attached is some information regarding the status of the Fukushima reactor in Japan as a result of the earthquake and tsunami. This reactor has been having trouble recovering from these events and has been having problems with cooling water. Unit 1 apparently did vent steam (underlining below is my change), while a mobile power generator arrived on-site to try to restore on-site power.

David

At 1945 UTC (1445 EST), the International Atomic Energy Agency (IAEA) Incident and Emergency Centre released information about the status of the Fukushima Daiichi nuclear power plant. This information was a result of IAEA communications with Japan's Nuclear and

Industrial Safety Agency (NISA) and Ministry of Education, Culture, Sports, Science, and Technology (MEXT). The following information comes from the release:

Unit 1

The reactor is being maintained shutdown. However there is no information regarding the status of the supply of power to Unit 1. The reactor water level is reported to be oscillating. At 15:30 UTC the reactor water was approximately 130 cm above the top of the core. Containment is intact in Unit 1, however due to an increase of pressure within containment the decision has been made to perform a limited controlled venting to avoid over pressurization of the containment.

Unit 2

The reactor is being maintained shutdown. There is currently no supply of power to Unit 2. Work is currently being undertaken to restore power. At 15:30 UTC the reactor water level is reported to be at approximately 350 cm above the top of the core. Containment is intact in Unit 2.

Unit 3

The reactor is being maintained shutdown. Power is being supplied to Unit 3. At 13:00 UTC the reactor water level is reported to be at approximately 450 cm above the top of the core. Containment is intact in Unit 3.

A mobile power generator has arrived at the site of the Fukushima Daiichi nuclear power plant."

David Decker

From: David Decker
Sent: Friday, March 11, 2011 2:26 PM
To: 'Caputo, Annie (EPW)'
Subject: RE: Japan Update: Water levels at Fukushima; Onagawa fire extinguished

I think Diablo is still up, given this info that just came here out a minute ago. I'll double check to see if anything has changed since the 12:19pm time listed below.

The agency entered Monitoring Mode at 9:46 a.m. EST, on March 11, 2011, in response to a tsunami warning at Diablo Canyon Power Plant, located near San Luis Obispo, California, as a result of the magnitude 8.9 earthquake in Japan. Diablo Canyon declared a Notification of Unusual Event at 4:23 a.m. EST, based on receipt of a tsunami warning from West California Emergency Management. Diablo Canyon anticipates a wave surge of approximately 3 feet at the intake structure. Diablo Canyon is designed to withstand tsunamis to a wave height of 35 feet. The licensee intends to keep both units at full power through the event. The NRC resident inspectors are on site and monitoring plant conditions and licensee actions from the control room.

The effects of the tsunami at San Onofre Nuclear Generating Station are expected to be less severe than at Diablo Canyon. San Onofre is under a tsunami advisory and has not reached any emergency action levels. Both units continue to operate.

The NRC is contacting Program Directors for states impacted by the tsunami. There are no known tsunami impacts to nuclear materials licensees in the affected states or U.S. territories. The NRC is also monitoring the Humboldt Bay spent fuel storage facility. The agency will continue to monitor the situation.

The State of California has been informed. This information is current as of 12:19 p.m. EST.

T T T T / u

David Decker

From: Fischhoff, Ilya [Ilya.Fischhoff@mail.house.gov]
Sent: Friday, March 11, 2011 2:23 PM
To: Decker, David
Subject: RE: Japan Update: Water levels at Fukushima; Onagawa fire extinguished

Thanks, David!

From: Decker, David [mailto:David.Decker@nrc.gov]
Sent: Friday, March 11, 2011 2:11 PM
To: Freedhoff, Michal; Joseph, Avenel; Fischhoff, Ilya
Subject: FW: Japan Update: Water levels at Fukushima; Onagawa fire extinguished

Michal, Avenel and Ilya,

I didn't know if you'd seen this press release from Japan, but I thought it had some useful info. Apparently one of their reactors may have a problem with cooling water. I'll keep trying to find any updated info that may be out on this.

David

From: HOO Hoc
Sent: Friday, March 11, 2011 12:31 PM
To: LIA04 Hoc; LIA02 Hoc; LIA12 Hoc; LIA01 Hoc; LIA11 Hoc
Subject: FW: Japan Update: Water levels at Fukushima; Onagawa fire extinguished

From: Breskovic, Clarence
Sent: Friday, March 11, 2011 12:26 PM
To: Breskovic, Clarence
Subject: Japan Update: Water levels at Fukushima; Onagawa fire extinguished

Update9: 3,000 Ordered To Evacuate Near Quake-hit Fukushima Nuclear Plant

Tokyo, March 12 Kyodo -- (EDS: ADDING FIRE EXTINGUISHED AT ONAGAWA PLANT) Japan declared a state of atomic power emergency Friday after the country, which has about 50 nuclear power reactors, was hit by a magnitude 8.8 earthquake, instructing around 3,000 residents near the Fukushima No. 1 plant to evacuate.

Top government spokesman Yukio Edano told an evening press conference, "We have a situation where one of the reactors (of the plant) cannot be cooled down." But the chief Cabinet secretary said the evacuation instruction was only precautionary.

Edano said, "No radiation has leaked outside the reactor. The incident poses no danger to the environment at the moment." He also said early Saturday in Tokyo the incident was under control.

The post-quake situation prompted the Vienna-based International Atomic Energy Agency to scramble for details from contacts in Japan's industry ministry, while saying in a statement that at least four nuclear power plants "closest to the quake have been safely shut down" after the 2:46 p.m. quake.

Tokyo Electric Power Co., the operator of the Fukushima plant, reported that the water level around fuel rods was falling in the reactor. Radioactive materials could be emitted if part of a fuel rod is exposed to the air.

But officials of the prefectural government dismissed the view that the plant is in a critical situation, saying the top of the water is 3.4 meters above the fuel rods at the troubled No. 2 reactor.

The evacuation advisory was issued for people living within a 3-kilometer radius of the plant, while those living within a 10-kilometer radius were asked to stay home, Edano said.

Prime Minister Naoto Kan declared the emergency, the first in the quake-prone country, so that authorities can easily implement emergency relief measures, Edano said. Defense Minister Toshimi Kitazawa ordered the Self-Defense Forces to act in response to the declaration.

The Defense Ministry dispatched a chemical corps of the Ground Self-Defense Force to the plant and Motohisa Ikeda, senior vice industry minister, also left for Fukushima by an SDF helicopter.

According to the industry ministry, a total of 11 nuclear reactors automatically shut down at the Onagawa plant, the Fukushima No. 1 and No. 2 plants and the Tokai No. 2 plant after the strongest recorded earthquake in the country's history.

A fire started at a building housing the turbine of the Onagawa plant in Miyagi at 3:30 p.m. but was put out before 11 p.m., the operator, Tohoku Electric Power Co., said, denying it had detected any signs of radiation leaks.

Water spilled from pools containing fuel rods at the Kashiwazaki-Kariwa plant on the Sea of Japan coast in Niigata Prefecture and the Onagawa plant, the operators said, saying they saw no signs suggesting radiation leaks.

David Decker

From: David Decker
Sent: Friday, March 11, 2011 3:07 PM
To: Raeann Shane
Subject: RE: USNRC Earthquake/Tsunami Status Update

Thanks Raeann. I know Congressman Markey's office will ask, so if you can find anyone to tell you why is this OUO that would be great.

From: Shane, Raeann
Sent: Friday, March 11, 2011 3:00 PM
To: Schmidt, Rebecca; Powell, Amy; Decker, David; Weil, Jenny; Quesenberry, Jeannette; Belmore, Nancy
Subject: FW: USNRC Earthquake/Tsunami Status Update
Importance: High

FYI, this is the blessed version that can go down to the Hill

From: LIA12 Hoc
Sent: Friday, March 11, 2011 2:58 PM
To: Shane, Raeann
Subject: FW: USNRC Earthquake/Tsunami Status Update
Importance: High

From: Mroz (Sahm), Sara
Sent: Friday, March 11, 2011 2:58 PM
To: Batkin, Joshua; Pace, Patti; Bubar, Patrice; Sosa, Belkys; Nieh, Ho; Sharkey, Jeffrey; Thomas.Hipsch@nrc.gov; Marshall, Michael; Batkin, Joshua; Castleman, Patrick; Snodderly, Michael; Orders, William; Bubar, Patrice; Franovich, Mike; Wittick, Brian; Andersen, James; Trapp, James; Leeds, Eric; Brenner, Eliot; Miller, Charles; James.Wiggins@nrc.gov; Johnson, Michael; Sheron, Brian; Schmidt, Rebecca; Catherine.Hainey@nrc.gov
Cc: LIA12 Hoc; LIA01 Hoc; HOO Hoc
Subject: USNRC Earthquake/Tsunami Status Update
Importance: High

Attached, please find a status update from the US Nuclear Regulatory Commission's Emergency Operations Center regarding the impacts of the earthquake/tsunami on March 11, 2011.

Please call the Headquarters Operations Officer at 301-816-5100 with questions.

-Sara

Sara K. Mroz
Communications and Outreach
Office of Nuclear Security and Incident Response
US Nuclear Regulatory Commission
sara.mroz@nrc.gov

From: Leeds, Eric /
To: Quichocho, Jessie; McGinty, Tim
Cc: Blount, Tom; Boger, Bruce; Weber, Michael; Virgilio, Martin; Borchart, Bill; McDermott, Brian; Evans, Michele; Mamish, Nader; Wittick, Brian
Subject: Status: Naval Assets
Date: Friday, March 11, 2011 10:15:42 AM

All –

Please see below email from Jesse on status of Naval assets. I've requested that Jesse stay in touch with events through the Op Center and continue to coordinate and supply info to our counterparts at Naval reactors.

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
301-415-1270

From: Quichocho, Jessie
Sent: Friday, March 11, 2011 9:52 AM
To: McGinty, Tim
Cc: Blount, Tom; Leeds, Eric; Boger, Bruce
Subject: Status: Naval Assets
Importance: High

I received a call from the Matthew Napoli, Technical Director for Foreign Affairs NAVSEA 08.

Report as follows:

In Japan, all assets are under control. No issues.

In Guam, ships were unmoored no issues on equipment.

They would like open communications with NRC on the status of the plants in Japan. They heard evacuations are occurring and that some facilities do not have cooling. They would like to be aware of any events that occur that may affect their assets.

Would it be possible to include NR in our communications or at a minimum provide them information as part of updates?

Thanks,
Jessie

TTTT/14

David Decker

From: CQ.com Alert [CQCustomAlerts@cq.com]
Sent: Saturday, March 12, 2011 1:15 PM
To: Decker, David
Subject: Energy Top Docs

CQ.com E-MAIL ALERTS

SHAPE OPINIONS

CUSTOM ALERT: Energy Top Docs

1 document found

[Letter from Rep. Markey to Nuclear Regulatory Commission Regarding Japan's Nuclear Facilities \(PDF\)](#)
Rep. Edward J. Markey, D-Mass. Correspondence
Directed to Nuclear Regulatory Commission (NRC)
Subjects: Energy
CQ Hot Docs, 112th Congress (3/11/2011; Posted: 3/11/2011)

About this alert

Sent March 12, 2011

1:13 p.m. ET

created by dld@nrc.gov

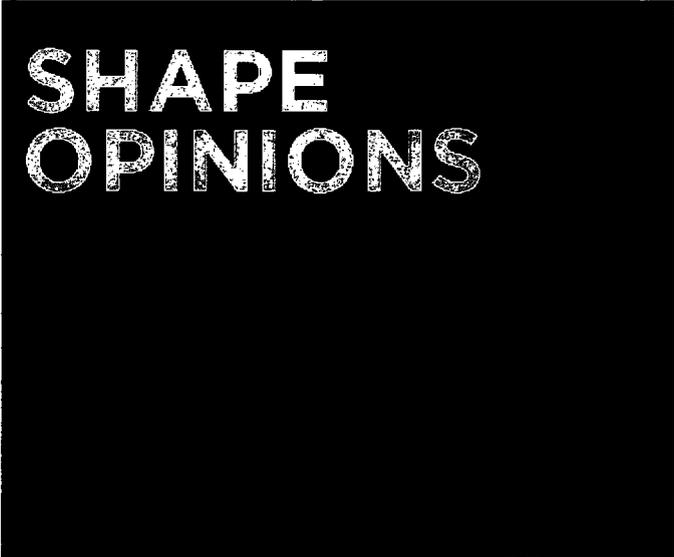
Manage my "Energy Top Docs" alert to edit, delete, change delivery schedule, or to combine this e-mail with others.

CQ Delivery ID: 68256585 (avsvc06.cq.com)

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SHAPE
OPINIONS

David Decker

From: Droggitis, Spiros
Sent: Saturday, March 12, 2011 5:54 PM
To: Schmidt, Rebecca; Powell, Amy; Decker, David
Subject: RE: Update on Japan Nuclear Reactors

I sent him the TP's that you sent out this morning and the 2 press releases. Since Bill Borchardt just briefed everybody using the TEPCO press release, I sent that too, but I now see from below that he's been on that site. I also sent him the IAEA press release, since we are making a big deal of working through them. Don't know what a sitreport is though.

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

From: Schmidt, Rebecca
Sent: Saturday, March 12, 2011 5:51 PM
To: Powell, Amy; Droggitis, Spiros; Decker, David
Subject: Re: Update on Japan Nuclear Reactors

Don't send him the sitreports though. We aren't ending them out

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

From: Powell, Amy
To: Droggitis, Spiros; Decker, David
Cc: Schmidt, Rebecca
Sent: Sat Mar 12 17:48:00 2011
Subject: Fw: Update on Japan Nuclear Reactors

Just caught up with today's email - here is a long chain involving Jon Epstein. Pete Lyons was looped in as well by Jon. Spiros, Jon was NOT on the email list but let's add him. Jonathan_Epstein@bingaman.senate.gov in case you can't view the address from the chain.

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

Sent from my Blackberry

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

From: Lyons, Peter <Peter.Lyons@Nuclear.Energy.gov>
To: Epstein, Jonathan <Alert> <Jonathan_Epstein@bingaman.senate.gov>
Cc: Edwards, Isaac (Energy) <Isaac_Edwards@energy.senate.gov>; Fowler, Sam <sam_fowler@energy.senate.gov>; Simon, Bob <Alert> <Bob_Simon@energy.senate.gov>; Powell, Amy; Decker, David
Sent: Sat Mar 12 13:49:10 2011
Subject: RE: Update on Japan Nuclear Reactors

Tepco site seems consistent with info we are getting from other sources.

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

From: Epstein, Jonathan <Alert>
Sent: Saturday, March 12, 2011 1:48 PM
To: Lyons, Peter

Cc: Edwards, Isaac (Energy); Fowler, Sam; Simon, Bob <Alert>; 'Amy.Powell@nrc.gov';
'David.Decker@nrc.gov'
Subject: Re: Update on Japan Nuclear Reactors

Thanks, the TEPCO web page has been providing regular and detailed updates and world nuclear association web page has been doing it too with necessary graphics. But I think it will be important to have a common set of vetted facts for members and staff.

Sent from my BlackBerry Wireless Handheld - please excuse the typos

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

From: Lyons, Peter [mailto:Peter.Lyons@Nuclear.Energy.gov]
Sent: Saturday, March 12, 2011 01:25 PM
To: Epstein, Jonathan (Bingaman)
Cc: Edwards, Isaac (Energy); Fowler, Sam (Energy); Simon, Bob (Energy); 'Amy.Powell@nrc.gov' <Amy.Powell@nrc.gov>; 'David.Decker@nrc.gov' <David.Decker@nrc.gov>
Subject: RE: Update on Japan Nuclear Reactors

Jonathan

I'm back from White House meeting. Situation, while certainly not good, may be getting closer to a degree of stability. There is an activity now to put in place a Q&A format that should prove useful to you and colleagues. I hope it will be ready in a few hours. Sorry for my frantic response this morning.
pete

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

From: Epstein, Jonathan <Alert>
Sent: Saturday, March 12, 2011 10:24 AM
To: Lyons, Peter
Cc: Edwards, Isaac (Energy); Fowler, Sam; Simon, Bob <Alert>; 'Amy.Powell@nrc.gov'; 'David.Decker@nrc.gov'
Subject: Re: Update on Japan Nuclear Reactors

I suspect we will be asking for some kind of assessment for members and staff next week

Sent from my BlackBerry Wireless Handheld - please excuse the typos

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

From: Lyons, Peter [mailto:Peter.Lyons@Nuclear.Energy.gov]
Sent: Saturday, March 12, 2011 10:07 AM
To: Epstein, Jonathan (Bingaman)
Subject: RE: Update on Japan Nuclear Reactors

Jonathan

We're frantically working towards a WH meeting soon. Doe and NRC are monitoring the situation and trying to help. We haven't had time to put together anything resembling a situation report here.

Sorry

We could not be busier now.

pete

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

From: Epstein, Jonathan <Alert>
Sent: Saturday, March 12, 2011 10:04 AM
To: Lyons, Peter
Subject: Fw: Update on Japan Nuclear Reactors

Fyi

Sent from my BlackBerry Wireless Handheld - please excuse the typos

From: Epstein, Jonathan (Bingaman)
Sent: Saturday, March 12, 2011 09:54 AM
To: 'David.Decker@nrc.gov' <David.Decker@nrc.gov>
Cc: 'Amy.Powell@nrc.gov' <Amy.Powell@nrc.gov>; Edwards, Isaac (Energy)
Subject: Re: Update on Japan Nuclear Reactors

David is there a coordinated monitoring of the Japan reactor situation I'm the USG?

Are their regular situation reports I can have sent to us?

I will probably have to ask you all (or some team) of agencies to come over and give a briefing on what the NRC knows and their assessment next week.

Sent from my BlackBerry Wireless Handheld - please excuse the typos

From: Epstein, Jonathan (Bingaman)
Sent: Friday, March 11, 2011 04:53 PM
To: Decker, David <David.Decker@nrc.gov>
Subject: RE: Update on Japan Nuclear Reactors

that would be good, thank you.

From: Decker, David [mailto:David.Decker@nrc.gov]
Sent: Friday, March 11, 2011 4:53 PM
To: Epstein, Jonathan (Bingaman)
Subject: RE: Update on Japan Nuclear Reactors

Jon,

We had the exact same question! At this point, we're still wondering what she was referring to. My guess is that she's offered to fly over a replacement diesel generator, and that somehow "cooling water" was described? If I find out anything I will let you know.

David

From: Epstein, Jonathan (Bingaman) [mailto:Jonathan_Epstein@bingaman.senate.gov]

Sent: Friday, March 11, 2011 4:48 PM
To: Decker, David
Subject: RE: Update on Japan Nuclear Reactors

David – can you tell me what the shipping of cooling water is that Secretary Clinton talked about?

From: Decker, David [mailto:David.Decker@nrc.gov]
Sent: Friday, March 11, 2011 4:43 PM
To: Dedrick, Kathy (EPW); Haynes, Laura (Carper); Caputo, Annie (EPW); Clifford, Brian (Barrasso); michael.beckerman@mail.house.gov; Baran, Jeff; mary.neumayr@mail.house.gov; abigail.pinkele@mail.house.gov; david.mccarthy@mail.house.gov; john.marshall@mail.house.gov; chris.sarley@mail.house.gov; maryam.brown@mail.house.gov; Fowler, Sam (Energy); Epstein, Jonathan (Bingaman); Billups, Karen (Energy); Edwards, Isaac (Energy)
Subject: Update on Japan Nuclear Reactors

Attached is updated information regarding the status of the Fukushima reactor in Japan. This is the one that's been having issues with cooling water. Unit 1 apparently did vent steam (underlining below is my change), while a mobile power generator arrived on-site as well.

David

At 1945 UTC (1445 EST), the International Atomic Energy Agency (IAEA) Incident and Emergency Centre released information about the status of the Fukushima Daiichi nuclear power plant. This information was a result of IAEA communications with Japan's Nuclear and Industrial Safety Agency (NISA) and Ministry of Education, Culture, Sports, Science, and Technology (MEXT). The following information comes from the release:

"Unit 1

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The reactor is being maintained shutdown. Power is being supplied to Unit 3. At 13:00 UTC the reactor water level is reported to be at approximately 450 cm above the top of the core. Containment is intact in Unit 3.

A mobile power generator has arrived at the site of the Fukushima Daiichi nuclear power plant.”

David Decker

From: Powell, Amy
Sent: Saturday, March 12, 2011 5:48 PM
To: Droggitis, Spiros; Decker, David
Cc: Schmidt, Rebecca
Subject: Fw: Update on Japan Nuclear Reactors

Just caught up with today's email - here is a long chain involving Jon Epstein. Pete Lyons was looped in as well by Jon. Spiros, Jon was NOT on the email list but let's add him.
Jonathan_Epstein@bingaman.senate.gov in case you can't view the address from the chain.

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

Sent from my Blackberry

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

From: Lyons, Peter <Peter.Lyons@Nuclear.Energy.gov>
To: Epstein, Jonathan <Alert> <Jonathan_Epstein@bingaman.senate.gov>
Cc: Edwards, Isaac (Energy) <Isaac_Edwards@energy.senate.gov>; Fowler, Sam <sam_fowler@energy.senate.gov>; Simon, Bob <Alert> <Bob_Simon@energy.senate.gov>; Powell, Amy; Decker, David
Sent: Sat Mar 12 13:49:10 2011
Subject: RE: Update on Japan Nuclear Reactors

Tepco site seems consistent with info we are getting from other sources.

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

From: Epstein, Jonathan <Alert>
Sent: Saturday, March 12, 2011 1:48 PM
To: Lyons, Peter
Cc: Edwards, Isaac (Energy); Fowler, Sam; Simon, Bob <Alert>; 'Amy.Powell@nrc.gov'; 'David.Decker@nrc.gov'
Subject: Re: Update on Japan Nuclear Reactors

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

From: Lyons, Peter [mailto:Peter.Lyons@Nuclear.Energy.gov]
Sent: Saturday, March 12, 2011 01:25 PM
To: Epstein, Jonathan (Bingaman)
Cc: Edwards, Isaac (Energy); Fowler, Sam (Energy); Simon, Bob (Energy); 'Amy.Powell@nrc.gov' <Amy.Powell@nrc.gov>; 'David.Decker@nrc.gov' <David.Decker@nrc.gov>
Subject: RE: Update on Japan Nuclear Reactors

Jonathan

I'm back from White House meeting. Situation, while certainly not good, may be getting closer to a degree of stability. There is an activity now to put in place a Q&A format that should prove useful to you and colleagues. I hope it will be ready in a few hours. Sorry for my frantic response this morning.
pete

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

From: Epstein, Jonathan <Alert>
Sent: Saturday, March 12, 2011 10:24 AM
To: Lyons, Peter
Cc: Edwards, Isaac (Energy); Fowler, Sam; Simon, Bob <Alert>; 'Amy.Powell@nrc.gov'; 'David.Decker@nrc.gov'
Subject: Re: Update on Japan Nuclear Reactors

I suspect we will be asking for some kind of assessment for members and staff next week

Sent from my BlackBerry Wireless Handheld - please excuse the typos

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

From: Lyons, Peter [mailto:Peter.Lyons@Nuclear.Energy.gov]
Sent: Saturday, March 12, 2011 10:07 AM
To: Epstein, Jonathan (Bingaman)
Subject: RE: Update on Japan Nuclear Reactors

Jonathan

We're frantically working towards a WH meeting soon. Doe and NRC are monitoring the situation and trying to help. We haven't had time to put together anything resembling a situation report here.

Sorry

We could not be busier now.

pete

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

From: Epstein, Jonathan <Alert>
Sent: Saturday, March 12, 2011 10:04 AM
To: Lyons, Peter
Subject: Fw: Update on Japan Nuclear Reactors

Fyi

Sent from my BlackBerry Wireless Handheld - please excuse the typos

From: Epstein, Jonathan (Bingaman)
Sent: Saturday, March 12, 2011 09:54 AM
To: 'David.Decker@nrc.gov' <David.Decker@nrc.gov>
Cc: 'Amy.Powell@nrc.gov' <Amy.Powell@nrc.gov>; Edwards, Isaac (Energy)
Subject: Re: Update on Japan Nuclear Reactors

David is there a coordinated monitoring of the Japan reactor situation I'm the USG?

Are their regular situation reports I can have sent to us?

I will probably have to ask you all (or some team) of agencies to come over and give a briefing on what the NRC knows and their assessment next week.

Sent from my BlackBerry Wireless Handheld - please excuse the typos

From: Epstein, Jonathan (Bingaman)
Sent: Friday, March 11, 2011 04:53 PM
To: Decker, David <David.Decker@nrc.gov>
Subject: RE: Update on Japan Nuclear Reactors

that would be good, thank you.

From: Decker, David [mailto:David.Decker@nrc.gov]
Sent: Friday, March 11, 2011 4:53 PM
To: Epstein, Jonathan (Bingaman)
Subject: RE: Update on Japan Nuclear Reactors

Jon,

We had the exact same question! At this point, we're still wondering what she was referring to. My guess is that she's offered to fly over a replacement diesel generator, and that somehow "cooling water" was described? If I find out anything I will let you know.

David

From: Epstein, Jonathan (Bingaman) [mailto:Jonathan_Epstein@bingaman.senate.gov]
Sent: Friday, March 11, 2011 4:48 PM
To: Decker, David
Subject: RE: Update on Japan Nuclear Reactors

David – can you tell me what the shipping of cooling water is that Secretary Clinton talked about?

From: Decker, David [mailto:David.Decker@nrc.gov]
Sent: Friday, March 11, 2011 4:43 PM
To: Dedrick, Kathy (EPW); Haynes, Laura (Carper); Caputo, Annie (EPW); Clifford, Brian (Barrasso); michael.beckerman@mail.house.gov; Baran, Jeff; mary.neumayr@mail.house.gov; abigail.pinkele@mail.house.gov; david.mccarthy@mail.house.gov; john.marshall@mail.house.gov; chris.sarley@mail.house.gov; maryam.brown@mail.house.gov; Fowler, Sam (Energy); Epstein, Jonathan (Bingaman); Billups, Karen (Energy); Edwards, Isaac (Energy)
Subject: Update on Japan Nuclear Reactors

Attached is updated information regarding the status of the Fukushima reactor in Japan. This is the one that's been having issues with cooling water. Unit 1 apparently did vent steam (underlining below is my change), while a mobile power generator arrived on-site as well.

David

At 1945 UTC (1445 EST), the International Atomic Energy Agency (IAEA) Incident and Emergency Centre released information about the status of the Fukushima Daiichi nuclear power plant. This information was a result of IAEA communications with Japan's Nuclear and Industrial Safety Agency (NISA) and Ministry of Education, Culture, Sports, Science, and Technology (MEXT). The following information comes from the release:

"Unit 1

The reactor is being maintained shutdown. However there is no information regarding the status of the supply of power to Unit 1. The reactor water level is reported to be oscillating. At 15:30 UTC the reactor water was approximately 130 cm above the top of the core. Containment is intact in Unit 1, however due to an increase of pressure within containment the decision has been made to perform a limited controlled venting to avoid over pressurization of the containment.

Unit 2

The reactor is being maintained shutdown. There is currently no supply of power to Unit 2. Work is currently being undertaken to restore power. At 15:30 UTC the reactor water level is reported to be at approximately 350 cm above the top of the core. Containment is intact in Unit 2.

Unit 3

The reactor is being maintained shutdown. Power is being supplied to Unit 3. At 13:00 UTC the reactor water level is reported to be at approximately 450 cm above the top of the core. Containment is intact in Unit 3.

A mobile power generator has arrived at the site of the Fukushima Daiichi nuclear power plant."

David Decker

From: Schmidt, Rebecca
Sent: Saturday, March 12, 2011 10:15 AM
To: jeff.baran@mail.house.gov; abigail.pinkele@mail.house.gov; mary.neumayr@mail.house.gov; david.mccarthy@mail.house.gov; JohnM@mail.house.gov; maryam.brown@mail.house.gov; michael.beckerman@mail.house.gov; chris.sarley@mail.house.gov; kathy_dedrick@epw.senate.gov; ruth_vanmark@epw.senate.gov; annie_caputo@epw.senate.gov; laura_haynes@carper.senate.gov; Brian_Clifford@barrasso.senate.gov; elizabeth_craddock@landrieu.senate.gov; Doug_clapp@appro.senate.gov; Carrie_apostolou@appro.senate.gov; Taunja.berquam@mail.house.gov; Rob.blair@mail.house.gov; Karen.Wayland@mail.house.gov; Bettina_Poirier@epw.senate.gov; 'Mary.Frances.Repko@mail.house.gov .
Cc: Powell, Amy; Decker, David; Riley (OCA), Timothy; Shane, Raeann; Droggitis, Spiros
Subject: Japanese Earthquake and Tsunami--10:00 am Saturday

I wanted to pass on the latest info as of this morning. We will continue to update you throughout the day.

- The Nuclear Regulatory Commission has spoken with its counterpart agency in Japan, offering the assistance of U.S. technical experts. Should the Japanese want to make use of U.S. expertise, NRC staffers with extensive background in boiling water reactors are available to assist efforts in Japan.
- The NRC is coordinating its actions with other Federal agencies as part of the U.S. government response.
- The NRC is examining all available information as part of the effort to analyze the event and understand its implications both for Japan and the United States.
- The NRC has regulations in place that require licensees to design their plants to withstand the effects of tsunamis.

(10CFR 50, Appendix A, Criterion 2, “Design bases for protection against natural phenomenon” requires licensees to design structures, systems, and components important to safety to withstand the effects of natural phenomenon, including tsunamis.)

- 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 historical data’s limited accuracy. In other words, U.S. nuclear power plants are designed to be safe based on historical data from the area’s maximum credible earthquake.

David Decker

From: Schmidt, Rebecca
Sent: Saturday, March 12, 2011 8:53 AM
To: Shane, Raeann; Decker, David; Powell, Amy; Droggitis, Spiros; Riley (OCA), Timothy; Dacus, Eugene
Subject: RE: How's it going?

Still don't know anything new. Eliot and I are going to get the CHR's ok on a few bullets--Chr. has contacted his counterparts in Japan and offered help; we have NRC employees on 2 DART teams on the way to Japan; we are monitoring health effects for Hawaii, Alaska, California, Washington, Oregon. Hopefully we will have something I can send out by 10am.

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

From: Shane, Raeann
Sent: Saturday, March 12, 2011 8:46 AM
To: Schmidt, Rebecca
Subject: How's it going?

TTTT/19

From: McDermott, Brian
Sent: Tuesday, March 15, 2011 7:58 PM
To: ET07 Hoc
Subject: FW: USAID deployment

Bill,

Request for action below. Pls share with ET. Recommend assignment to PMT and adding to tracking list.

Pls confirm receipt.

Thx,
Brian

From: Tracy, Glenn
Sent: Tuesday, March 15, 2011 5:52 PM
To: PMT01 Hoc; LIA05 Hoc
Cc: Cohen, Miriam; Buchholz, Jeri; Evans, Michele; McDermott, Brian; Cadoux, Claude
Subject: FW: USAID deployment

PMT/LIA HOC Team Leaders (and Brian/Michele):

I understand from Mike Weber that you may already be addressing these matters. Please note the questions below, sent to Dr. Cadoux from an USAID colleague in support of USAID teams to Japan. They deal with baseline and intake. Request we provide NRC perspective and guidance on these answers to support US AID efforts. We, in NRC, may also need to consider such matters (such as up-to-date baselines) should NRC support extend beyond Tokyo and/or based on feedback from Chuck Casto. Request feedback to Dr. Cadoux and his USAID contact. Thank you, Glenn

From: Cadoux, Claude
Sent: Tuesday, March 15, 2011 5:00 PM
To: Tracy, Glenn
Subject: FW: USAID deployment

Glenn, I'll need a go-to person on queries I receive that have merit. Tom is State's medical director and he's always been there when I've needed ground truth health risk info for employees on overseas travel. I've been in contact with him re: access to KI in Japan (response earlier today: yes NRC employees and provided at embassy).

From: Yun, Thomas W [mailto:YunTW@state.gov]
Sent: Tuesday, March 15, 2011 4:23 PM
To: Cadoux, Claude
Subject: USAID deployment

Claude,
Now I need a favor from you and tap into your expertise. USAID is sending a DART team to Japan and they are asking following questions – all in their words. I don't know what they will be doing and it seems unusual that they'd have to have a dosimeter and have a baseline level checked.

1. Baseline radiation levels for all responders must be recorded prior to deployment. who can do this for our employees and where does this information need to be officially recorded for future use?
2. What is the procedure for measuring radiation levels while deployed? – do we have dosimeters?
3. At what level of contamination will the responder be returned to the US?

These questions don't make sense to me as it takes a while to get the dosimeter read. Your advice would be greatly appreciated.

Tom

This email is UNCLASSIFIED.

Gibson, Kathy

From: Gibson, Kathy
Sent: Wednesday, March 16, 2011 12:59 PM
To: Dehn, Jeff; Santiago, Patricia; Sangimino, Donna-Marie; Scott, Michael; Chang, Richard
Subject: Re: GRS request for MELCOR input deck for Mark 1

I'm doing an interview so I can't engage on this for about a half hour. Please hold the presses until I've had a chance to talk to Brian about Charlie's and Sandia's concerns and come up with a sensible path forward to respond to these requests.

Thanks

From: Dehn, Jeff
To: Santiago, Patricia; Sangimino, Donna-Marie; Scott, Michael; Gibson, Kathy; Chang, Richard
Sent: Wed Mar 16 12:53:04 2011
Subject: FW: GRS request for MELCOR input deck for Mark 1

FYI, this just came in. Brian's already been in touch w/ Diane @ NEA and the Director General of GRS (Dr. Weiss) about providing the SORCA analysis. I'll be following up with OIP shortly.

Thanks,
Jeff

From: Diane.JACKSON@oecd.org [<mailto:Diane.JACKSON@oecd.org>]
Sent: Wednesday, March 16, 2011 12:47 PM
To: Astwood, Heather; Schwartzman, Jennifer; Dehn, Jeff; Sangimino, Donna-Marie
Subject: FYI: GRS request for MELCOR input deck for Mark 1

Dear all –

I want to keep you informed for requests or exchanges with NEA/NRC, especially if it high level.

GRS was asking for fast action to help combat the shutdown of seven reactors in Germany in wake of the Japan events. Dr. Weiss, director general of GRS, (through the German NEA employee in our division) was making the request.

Since it was Director General of GRS and a counterpart of Brian Sheron on the CSNI board, I sent the request directly to Brian and Bill Borchardt.

Brian (below) responded quickly with help for GRS. And they are very grateful to the NRC.

Best regards,

 **Diane Jackson**, Nuclear Safety Specialist
Nuclear Safety Division, OECD Nuclear Energy Agency (NEA)
Tel.: +33 (0)1 45 24 10 55, Diane.Jackson@oecd.org

From: Weiß, Frank-Peter Prof. Dr. [<mailto:Frank-Peter.Weiss@grs.de>]
Sent: Wednesday, March 16, 2011 15:51
To: JACKSON Diane, NEA/SURN; Brian.Sheron@nrc.gov; Jennifer.Uhle@nrc.gov
Cc: BREEST Axel, NEA/SURN
Subject: AW: GRS request for MELCOR input deck for Mark 1

Thank you all!

Yes, we are interested in the results of the Peach Bottom SOARCA results!

Regards

Frank-Peter

Prof. Dr. rer. nat. Frank-Peter Weiss

Wissenschaftlich-technischer Geschäftsführer / Scientific-technical Director

Gesellschaft für Anlagen- und Reaktorsicherheit (GRS) mbH

Forschungszentrum, Boltzmannstr. 14

85748 Garching bei München / near Munich

Deutschland / Germany

Tel.: +49 89 32004-100

Fax: +49 89 32004-500

E-mail: Frank-Peter.Weiss@grs.de

Internet: <http://www.grs.de>

Vorsitzender des Aufsichtsrates: Parl. Staatssekretärin Ursula Heinen-Esser

Geschäftsführer: Prof. Dr. Frank-Peter Weiß, Hans J. Steinhauer

Registergericht: Amtsgericht Koeln, HRB 7665 Sitz der Gesellschaft: Köln

Disclaimer

Von: Diane.JACKSON@oecd.org [<mailto:Diane.JACKSON@oecd.org>]

Gesendet: Mittwoch, 16. März 2011 15:44

An: Brian.Sheron@nrc.gov; Jennifer.Uhle@nrc.gov

Cc: Weiß, Frank-Peter Prof. Dr.; Axel.BREEST@oecd.org

Betreff: RE: GRS request for MELCOR input deck for Mark 1

Dear Brian –

Thank you for the quick response. Yes, Dr. Weiss would very much appreciate the SOARCA results for Peach Bottom.

Best regards,



Diane Jackson, Nuclear Safety Specialist

Nuclear Safety Division, OECD Nuclear Energy Agency (NEA)

Tel.: +33 (0)1 45 24 10 55, Diane.Jackson@oecd.org

From: Sheron, Brian [<mailto:Brian.Sheron@nrc.gov>]

Sent: Wednesday, March 16, 2011 15:21

To: JACKSON Diane, NEA/SURN; Borchardt, Bill; Uhle, Jennifer

Cc: REIG Javier, NEA/SURN; DUNN LEE Janice, NEA

Subject: RE: GRS request for MELCOR input deck for Mark 1

Diane, Kathy Gibson said that we are checking with the Peach Bottom plant to see if we can release the Peach Bottom MELCOR deck, since it is proprietary.

However, we have already completed consequence analyses for Peach Bottom as part of SOARCA. Would GRS be interested in the SOARCA

Results, since the severe accident analyses are already done?

Gibson, Kathy

From: Gibson, Kathy
Sent: Wednesday, March 16, 2011 8:44 AM
To: Santiago, Patricia
Subject: Re: MELCOR input deck for Germany

They want a MELCOR input deck for Mark I containment. Richard can provide it. You will have to do a lot to convince me that Charlie needs to be involved.

From: Santiago, Patricia
To: Gibson, Kathy; Tinkler, Charles; Lee, Richard
Cc: Scott, Michael
Sent: Wed Mar 16 08:39:54 2011
Subject: RE: MELCOR input deck for Germany

Initially I proposed Randy Sullivan however Randy is best suited for results as they apply to EP not a BWR operation and questions that likely will come. I left a message for Richard to also ask. If we have the set in the impact study and it is relatively straightforward, I didn't expect it to take too much of his time. I will talk to Charlie and Richard and make a final recommendation.

thanks

From: Gibson, Kathy
Sent: Wednesday, March 16, 2011 8:37 AM
To: Santiago, Patricia; Tinkler, Charles; Lee, Richard
Cc: Scott, Michael
Subject: Re: MELCOR input deck for Germany
Importance: High

Hold on, is there someone who can do this besides Charlie? Someone in Richard's branch?

From: Santiago, Patricia
To: Tinkler, Charles
Cc: Gibson, Kathy; Scott, Michael
Sent: Wed Mar 16 08:33:11 2011
Subject: FW: MELCOR input deck for Germany

Morning Charlie,

Can you email Diane back with your contact information and cc management.

Thanks again Charlie!

From: Uhle, Jennifer
Sent: Wednesday, March 16, 2011 8:22 AM
To: Santiago, Patricia; Gibson, Kathy; Scott, Michael
Subject: Fw: MELCOR input deck for Germany

We should be able to do this from our aircraft impact SFP work. Charlie knows. J

From: Diane.JACKSON@oecd.org <Diane.JACKSON@oecd.org>
To: Uhle, Jennifer
Sent: Wed Mar 16 08:18:04 2011
Subject: MELCOR input deck for Germany

Hello Jennifer –

How are you? I am sure overly busy with Japan, as many of us are. We have requests for information from all over in many forms.

As I am sure you know, the German government has ordered the shutdown of 7 of their plants that were built before 1980. GRS would like to run MELCOR on Mark 1 containments to fight back with some analysis.

Would NRC/RES be able to share an input deck for Mark 1 containment with GRS? Maybe someone from SOARCA branch could talk with someone in GRS?

If so, I can send along a NRC name and number or I can get my German colleague here to give me the GRS contact, so that NRC can contact GRS directly.



Diane Jackson, Nuclear Safety Specialist
Nuclear Safety Division, OECD Nuclear Energy Agency (NEA)
Tel.: +33 (0)1 45 24 10 55, Diane.Jackson@oecd.org

Update your bookmarks! On 1 December 2010, the NEA is moving to: www.oecd-nea.org

Gibson, Kathy

From: Gibson, Kathy
Sent: Wednesday, March 16, 2011 11:30 AM
To: Sheron, Brian
Cc: Lee, Richard; Santiago, Patricia
Subject: Re: GRS request for MELCOR input deck for Mark 1

Richard is contacting SNL to see if we can provide the MELCOR deck used for NUREG-1465. The one used for SOARCA has proprietary info.

We can send a preliminary draft. This would be an earlier version without the new SRV calculations added because that version has not been reviewed or tech edited - but the results are not much different.

We will work with IPT to follow whatever process is appropriate for transferring the deck and SOARCA reports.

From: Sheron, Brian
To: Gibson, Kathy
Sent: Wed Mar 16 10:45:07 2011
Subject: FW: GRS request for MELCOR input deck for Mark 1

See below. Can we send the Germans the SOARCA results for Peach Bottom?

From: Diane.JACKSON@oecd.org [<mailto:Diane.JACKSON@oecd.org>]
Sent: Wednesday, March 16, 2011 10:44 AM
To: Sheron, Brian; Uhle, Jennifer
Cc: frank-peter.weiss@grs.de; Axel.BREEST@oecd.org
Subject: RE: GRS request for MELCOR input deck for Mark 1

Dear Brian –

Thank you for the quick response. Yes, Dr. Weiss would very much appreciate the SOARCA results for Peach Bottom.

Best regards,

 **Diane Jackson**, Nuclear Safety Specialist
Nuclear Safety Division, OECD Nuclear Energy Agency (NEA)
Tel.: +33 (0)1 45 24 10 55, Diane.Jackson@oecd.org

From: Sheron, Brian [<mailto:Brian.Sheron@nrc.gov>]
Sent: Wednesday, March 16, 2011 15:21
To: JACKSON Diane, NEA/SURN; Borchardt, Bill; Uhle, Jennifer
Cc: REIG Javier, NEA/SURN; DUNN LEE Janice, NEA
Subject: RE: GRS request for MELCOR input deck for Mark 1

Diane, Kathy Gibson said that we are checking with the Peach Bottom plant to see if we can release the Peach Bottom MELCOR deck, since it is proprietary.

However, we have already completed consequence analyses for Peach Bottom as part of SOARCA. Would GRS be interested in the SOARCA Results, since the severe accident analyses are already done?

From: RMTPACTSU_ELNRC
To: Harrington, Holly; McIntyre, David; Burnell, Scott
Subject: RE: DOE Monitoring Teams status
Date: Wednesday, March 16, 2011 5:19:06 PM

AMS – Aerial Measuring System
JST – Japan Standard Time
CM – Consequence Management
USEMB – US Embassy
TCMRT – Tailored Consequence Management Response Team
AB – Air Base

Are you planning on using it for the public or OUO? DOE says their folks would want to see the language of anything that the NRC sends out to the public. Thoughts?

Michael

From: Harrington, Holly [mailto:Holly.Harrington@nrc.gov]
Sent: Wednesday, March 16, 2011 4:01 PM
To: RMTPACTSU_ELNRC; LIA11 Hoc; LIA01 Hoc; LIA07 Hoc; LIA02 Hoc; LIA08 Hoc; Marshall, Jane; Burnell, Scott; McIntyre, David; Hoc, PMT12; PMT01 Hoc; Grant, Jeffery; Gott, William
Subject: RE: DOE Monitoring Teams status

Can we have the below info with acronyms spelled out and permission to mention

From: RMTPACTSU_ELNRC [mailto:RMTPACTSU_ELNRC@ofda.gov]
Sent: Wednesday, March 16, 2011 3:57 PM
To: LIA11 Hoc; LIA01 Hoc; LIA07 Hoc; LIA02 Hoc; LIA08 Hoc; Marshall, Jane; Burnell, Scott; McIntyre, David; Hoc, PMT12; PMT01 Hoc; Grant, Jeffery; Gott, William; Harrington, Holly
Subject: DOE Monitoring Teams status

Subject: DOE Monitoring Teams status

FYI:

AMS has developed a plan for operations. The first flight is scheduled for 0800 JST 17 March 2011. Their Ops Plan includes flights of the areas between Tokyo and Fukushima which will be coordinated with the CM Home Team for the production of monitoring products. There is a two-person monitoring (expert) support at the USEMB TOKYO from the TCMRT. The direction to the TCMRT is not to have a lot of teams just “running” around the country monitoring; we are working up monitoring plans for areas that are to be identified by the Government of Japan and US Forces Japan. Currently there are no field monitoring teams conducting operations off the Yokota AB.

TTTT/24

From: [McIntyre, David](#)
To: [Burnell, Scott](#)
Subject: FW: News Article
Date: Wednesday, March 16, 2011 6:42:38 PM

Your lead ...

From: McNamara, Nancy
Sent: Wednesday, March 16, 2011 6:42 PM
To: McIntyre, David; LIA04 Hoc; Deavers, Ron; Bonaccorso, Amy
Cc: OST05 Hoc; Screnci, Diane; Burnell, Scott
Subject: RE: News Article

Understand. Is there any thinking on responding to it in writing from OPA?

From: McIntyre, David
Sent: Wednesday, March 16, 2011 6:33 PM
To: McNamara, Nancy; LIA04 Hoc; Deavers, Ron; Bonaccorso, Amy
Cc: OST05 Hoc; Screnci, Diane; Burnell, Scott
Subject: RE: News Article

Thanks. OPA folks have been working this piece of junk all day.

From: McNamara, Nancy
Sent: Wednesday, March 16, 2011 6:32 PM
To: LIA04 Hoc; McIntyre, David; Deavers, Ron; Bonaccorso, Amy
Cc: OST05 Hoc; Screnci, Diane
Subject: RE: News Article

It was written by an MSNBC investigative reporter.

From: LIA04 Hoc
Sent: Wednesday, March 16, 2011 6:30 PM
To: McIntyre, David; Deavers, Ron; Bonaccorso, Amy
Cc: OST05 Hoc; Screnci, Diane; McNamara, Nancy
Subject: FW: News Article

This is fyi from RI. I've placed Diane on cc although it was provided to her.

Nancy: What is the source of this article? NYTimes, Web Blog of some kind ????

From: McNamara, Nancy
Sent: Wednesday, March 16, 2011 6:25 PM
To: LIA04 Hoc; OST05 Hoc; Harrington, Holly
Subject: News Article

This is the article that is generating a lot of concern/discussion w/NY. Since this is Region I, I will pass along to Diane Screnci, OPA, Region I. For now, we've talked w/NY and they

TTTT/25

are good.

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

What are the odds that a nuclear emergency like the one at Fukushima Dai-ichi could happen in the central or eastern United States? They'd have to be astronomical, right? As a pro-nuclear commenter on msnbc.com put it this weekend, "There's a power plant just like these in Omaha. If it gets hit by a tsunami...."

It turns out that the U.S. Nuclear Regulatory Commission has calculated the odds of an earthquake causing catastrophic failure to a nuclear plant here. Each year, at the typical nuclear reactor in the U.S., there's a 1 in 74,176 chance that the core could be damaged by an earthquake, exposing the public to radiation. That's 10 times more likely than you winning \$10,000 by buying a ticket in the Powerball multistate lottery, where the chance is 1 in 723,145.

And it turns out that the nuclear reactor in the United States with the highest risk of core damage from a quake is not the Diablo Canyon Power Plant, with its twin reactors tucked between the California coastline and the San Andreas Fault.

It's not the San Onofre Nuclear Generating Station, a four-hour drive down the Pacific coast at San Clemente, surrounded by fault lines on land and under the ocean.

It's not on the Pacific Coast at all. It's on the Hudson River.

One in 10,000

The reactor with the highest risk rating is 24 miles north of New York City, in the village of Buchanan, N.Y., at the Indian Point Energy Center. There, on the east bank of the Hudson, Indian Point nuclear reactor No. 3 has the highest risk of earthquake damage in the country, according to new NRC risk estimates provided to msnbc.com.

So much for San Andreas: Reactors in East, Midwest, South have highest chance of damage

A ranking of the 104 nuclear reactors is shown at the bottom of this article, listing the

NRC estimate of risk of catastrophic failure caused by earthquake.

The chance of a core damage from a quake at Indian Point 3 is estimated at 1 in 10,000 each year. Under NRC guidelines, that's right on the verge of requiring "immediate concern regarding adequate protection" of the public. The two reactors at Indian Point generate up to one-third of the electricity for New York City. The second reactor, Indian Point 2, doesn't rate as risky, with 1 chance in 30,303 each year.

The plant with the second highest risk? It's in Massachusetts. Third? Pennsylvania. Then Tennessee, Pennsylvania again, Florida, Virginia and South Carolina. Only then does California's Diablo Canyon appear on the list, followed by Pennsylvania's Three Mile Island.

Overall, the new estimates mean that nuclear power plants built in the areas usually thought of as earthquake zones, such as the California coastline, are no longer those with the highest risk of damage from an earthquake.

Other plants in the East, South and Midwest, where the design standards may have been lower because the earthquake risk was thought to be low, have moved to the top of the NRC's danger list.

The chance ranges from Indian Point's 1 in 10,000, all the way up to 1 in 500,000 each year at the Callaway plant in Fulton, Missouri.

Playing the odds

The NRC, the federal agency responsible for nuclear power safety, says the odds are in the public's favor. "Operating nuclear power plants are safe," the NRC said when it reported the new risk estimates.

Every plant is designed with a margin of safety beyond the strongest earthquake anticipated in that area, the NRC says.

But the NRC also says the margin of safety has been reduced.

In the 35 years since Indian Point 3 got its license to operate in 1976, the same era when most of today's U.S. nuclear reactors were built, geologists have learned a lot about the dangers of earthquakes in the eastern and central U.S.

No one alive now has memories of the South Carolina quakes of 1886, which toppled 14,000 chimneys in Charleston and were felt in 30 states. Or the New Madrid quakes of 1811-1812 in Missouri and Arkansas — the big one made the Mississippi River run backward for a time.

But the geologists and seismologists remember, learning their history from rocks, and steadily raising their estimates of the risk of severe quakes. New faults are found, and new computer models change predictions for how the ground shakes. The latest estimates are drawn from the 2008 maps of the U.S. Geological Survey. Of special note, the USGS said, was an allowance for waves of large earthquakes in the New Madrid fault area roughly centered on the Missouri Bootheel, as well as inclusion of offshore faults near Charleston, S.C., and new data from the mountains of East Tennessee. With each new map, the areas of negligible risks have receded.

Based on those new maps, the NRC published in August 2010 new estimates of the earthquake risk at nuclear power reactors in the eastern and central states. Besides the proximity, severity and frequency of earthquakes, the new estimates take into account the design standards used at each plant, along with the type of rock or soil it's built on. This week, the NRC provided additional data to msnbc.com for the relatively few reactors in the Western states, allowing a ranking to be made of all 104 reactors with the latest data.

The top 10

Here are the 10 nuclear power sites with the highest risk of suffering core damage from an earthquake, showing their NRC risk estimates based on 2008 and 1989 geological data. (The full list of 104 reactors is below.)

1. Indian Point 3, Buchanan, N.Y.: 1 in 10,000 chance each year. Old estimate: 1 in 17,241. Increase in risk: 72 percent.

advertisement U.S. Geological Survey Based on 1982 data, a map of earthquake damage risk in the continental United States. The highest risk areas are red, yellow and purple. U.S. Geological Survey Based on 1969 data, a map of earthquake damage risk in the continental United States. The highest risk areas are red and yellow.

2. Pilgrim 1, Plymouth, Mass.: 1 in 14,493. Old estimate: 1 in 125,000. Increase in risk: 763 percent.

3. Limerick 1 and 2, Limerick, Pa.: 1 in 18,868. Old estimate: 1 in 45,455. Increase in risk: 141 percent.

4. Sequoyah 1 and 2, Soddy-Daisy, Tenn.: 1 in 19,608. Old estimate: 1 in 102,041. Increase in risk: 420 percent.

5. Beaver Valley 1, Shippingport, Pa.: 1 in 20,833. Old estimate: 1 in 76,923. Increase in risk: 269 percent.

6. Saint Lucie 1 and 2, Jensen Beach, Fla.: 1 in 21,739. Old estimate: N/A.

7. North Anna 1 and 2, Louisa, Va.: 1 in 22,727. Old estimate: 1 in 31,250. Increase in risk: 38 percent.

8. Oconee 1, 2 and 3, Seneca, S.C.: 1 in 23,256. Old estimate: 1 in 100,000. Increase in risk: 330 percent.

9. Diablo Canyon 1 and 2, Avila Beach, Calif.: 1 in 23,810. Old estimate: N/A.

10. Three Mile Island, Middletown, Pa.: 1 in 25,000. Old estimate: 1 in 45,455. Increase in risk: 82 percent.

A rising risk

Northeast of Chattanooga, Tenn., the Tennessee Valley Authority's Sequoyah 1 and 2 nuclear plants had been thought to have a risk of core damage from an earthquake happening once every 102,041 years. The new estimate is once every 19,608 years.

That kind of change was typical. Out of 104 reactors, the risk estimate declined at only eight. (There were 19 for which no older estimate was available for comparison.)

The increase in risk is so rapid that an NRC research task force in September sent two recommendations to NRC management:

First, it is time to move the issue over from the research staff to the regulatory staff, moving from study to action.

Second, start figuring out whether some nuclear power plants need a "backfit," or additional construction to protect them from earthquakes.

Another indication of how fast the risk estimates rose: The median, or middle value out of all 104 reactors, a measure of the risk at the typical plant, is now at a 1 in 74,176 chance each year of core damage from a quake. In the old estimate, it was 1 in 263,158. In other words, the estimated risk, though still low by NRC standards, has more than tripled.

What happens next?

This NRC process began in 2005 when its staff recommended taking a look at updated seismic hazards. It was late 2008 before NRC advertisement

staff started working with a contractor, Electric Power Research Institute, on the design of a study. Overall, it took five years and three months from the staff recommendation until the seismic task force submitted its report in August 2010.

One problem is a lack of data about the nuclear reactors themselves. The NRC task force said the agency has detailed data on what it calls plant fragility — the probability that the expected earthquake would damage the reactor's core — for only one-third of the nation's nuclear plants. That's because only the plants that had been thought to be in areas of higher seismic risk had done detailed studies. For the rest, the scientists had to estimate from other information submitted by plant operators.

Now the NRC is playing catch-up.

An NRC spokesman, Scott Burnell, said Tuesday that the NRC is preparing a letter to send to certain nuclear plants, asking them for the more detailed data on equipment, soil conditions and seismic preparedness. Then the plants and NRC staff will have an opportunity to analyze that data.

That process could stretch into 2012, Burnell said. Then the NRC will have to decide, he said, "where the ability to respond to seismic events can be improved."

In the middle of that process, perhaps late this year, a new round of geologic data will come out. That will be folded into new calculations.

Industry is "addressing that issue"

The nuclear power industry is watching this process. A document distributed to the public by the industry's Nuclear Energy Institute on

Sunday, after the Japanese plant emergency began, referred to this NRC study and the possibility of changes, saying, "The industry is working with the NRC to develop a methodology for addressing that issue."

The industry statement did not mention that the study increased the estimates of earthquake risk for nearly every nuclear power plant in the U.S.

(One of the leading nuclear power companies, General Electric, which designed the reactors at Fukushima, is a part owner of NBCUniversal, which co-owns msnbc.com through a joint venture with Microsoft.)

Good odds or bad?

How much risk is too much? Is a roller coaster safe only if no one ever dies? If one passenger dies every 100 years? Every year?

When the NRC saw that the new earthquake maps had pushed the level of risk into the range between 1 in 100,000 and the more likely 1 in 10,000, that change was enough to study the issue further, the task force said in its report. But because the risks didn't go beyond 1 in 10,000, "there was no immediate concern regarding adequate protection." The advertisement

new estimates put Indian River right at that boundary, and a few others in reach.

By comparison, the chance of winning the grand prize in the next Powerball lottery: 1 in 195,249,054.

Ranking of nuclear reactors by earthquake damage risks

Here are the 104 nuclear power reactors in the United States, ranked by the NRC's estimate of the risk each year that an earthquake would cause damage to the reactor's core, releasing radiation.

Notes: Data come from the NRC's study of August 2010 on reactors in the central and eastern states, supplemented by data provided by the NRC to msnbc.com in March 2011. The table shows the risks calculated separately from 1989 and 2008 earthquake data from the U.S. Geological Survey. Ranks and changes in risk are calculated by msnbc.com. For the reactors in the western states, and a few others, the 1989 estimate was not provided to msnbc.com, so no change is calculated. The

information in this list is also available in an Excel spreadsheet file. (See resources, below.)

Rank. Reactor, nearby city, state: Chance of event each year from 2008 data. Old estimate from 1989. Change in risk.

1. Indian Point 3, Buchanan, N.Y.: 1 in 10,000 chance each year. Old estimate: 1 in 17,241. Change in risk: 72 percent.

2. Pilgrim 1, Plymouth, Mass.: 1 in 14,493 chance each year. Old estimate: 1 in 125,000. Change in risk: 763 percent.

3. Limerick 1, Limerick, Pa.: 1 in 18,868 chance each year. Old estimate: 1 in 45,455. Change in risk: 141 percent.

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5. Sequoyah 1, Soddy-Daisy, Tenn.: 1 in 19,608 chance each year. Old estimate: 1 in 102,041. Change in risk: 420 percent.

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7. Beaver Valley 1, Shippingport, Pa.: 1 in 20,833 chance each year. Old estimate: 1 in 76,923. Change in risk: 269 percent.

8. Saint Lucie 1, Jensen Beach, Fla.: 1 in 21,739 chance each year. Old estimate: N/A. Change in risk: N/A.

8. Saint Lucie 2, Jensen Beach, Fla.: 1 in 21,739 chance each year. Old estimate: N/A. Change in risk: N/A.

10. North Anna 1, Louisa, Va.: 1 in 22,727 chance each year. Old estimate: 1 in 31,250. Change in risk: 38 percent.

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12. Oconee 3, Seneca, S.C.: 1 in 23,256 chance each year. Old estimate: 1 in 100,000. Change in risk: 330 percent.

15. Diablo Canyon 1, Avila Beach, Calif.: 1 in 23,810 chance each year. Old estimate: N/A. Change in risk: N/A.

15. Diablo Canyon 2, Avila Beach, Calif.: 1 in 23,810 chance each year. Old estimate: N/A. Change in risk: N/A.

17. Three Mile Island 1, Middletown, Pa.: 1 in 25,000 chance each year. Old estimate: 1 in 45,455. Change in risk: 82 percent.

18. Palo Verde 1, Wintersburg, Ariz.: 1 in 26,316 chance each year. Old estimate: N/A. Change in risk: N/A.

18. Palo Verde 2, Wintersburg, Ariz.: 1 in 26,316 chance each year. Old estimate: N/A. Change in risk: N/A.

18. Palo Verde 3, Wintersburg, Ariz.: 1 in 26,316 chance each year. Old estimate: N/A. Change in risk: N/A.

18. Summer, Jenkinsville, S.C.: 1 in 26,316 chance each year. Old estimate: 1 in 138,889. Change in risk: 428 percent.

22. Catawba 1, York, S.C.: 1 in 27,027 chance each year. Old estimate: 1 in 33,333. Change in risk: 23 percent.

22. Catawba 2, York, S.C.: 1 in 27,027 chance each year. Old estimate: 1 in 33,333. Change in risk: 23 percent.

24. Watts Bar 1, Spring City, Tenn.: 1 in 27,778 chance each year. Old estimate: 1 in 178,571. Change in risk: 543 percent.

25. Indian Point 2, Buchanan, N.Y.: 1 in 30,303 chance each year. Old estimate: 1 in 71,429. Change in risk: 136 percent.

26. Duane Arnold, Palo, Iowa: 1 in 31,250 chance each year. Old estimate: N/A. Change in risk: N/A.

27. McGuire 1, Huntsville, N.C.: 1 in 32,258 chance each year. Old estimate: 1 in 35,714. Change in risk: 11 percent.

27. McGuire 2, Huntsville, N.C.: 1 in 32,258 chance each year. Old estimate: 1 in 35,714. Change in risk: 11 percent.

29. Farley 1, Columbia, Ala.: 1 in 35,714 chance each year. Old estimate: 1 in 263,158. advertisement Change in risk: 637 percent.

29. Farley 2, Columbia, Ala.: 1 in 35,714 chance each year. Old estimate: 1 in 263,158. Change in risk: 637 percent.

31. Quad Cities 1, Cordova, Ill.: 1 in 37,037 chance each year. Old estimate: 1 in 71,429. Change in risk: 93 percent.

31. Quad Cities 2, Cordova, Ill.: 1 in 37,037 chance each year. Old estimate: 1 in 71,429. Change in risk: 93 percent.

33. River Bend 1, St. Francisville, La.: 1 in 40,000 chance each year. Old estimate: 1 in 370,370. Change in risk: 826 percent.

34. Peach Bottom 2, Delta, Pa.: 1 in 41,667 chance each year. Old estimate: 1 in 120,482. Change in risk: 189 percent.

34. Peach Bottom 3, Delta, Pa.: 1 in 41,667 chance each year. Old estimate: 1 in 120,482. Change in risk: 189 percent.

36. Crystal River 3, Crystal River, Fla.: 1 in 45,455 chance each year. Old estimate: 1 in 192,308. Change in risk: 323 percent.

36. Seabrook 1, Seabrook, N.H.: 1 in 45,455 chance each year. Old estimate: 1 in 114,943. Change in risk: 153 percent.

36. Beaver Valley 2, Shippingport, Pa.: 1 in 45,455 chance each year. Old estimate: 1 in 188,679. Change in risk: 315 percent.

39. Perry 1, Perry, Ohio: 1 in 47,619 chance each year. Old estimate: 1 in 1,176,471. Change in risk: 2371 percent.

39. Columbia 1, Richland, Wash.: 1 in 47,619 chance each year. Old estimate: N/A. Change in risk: N/A.

41. Waterford 3, Killona, La.: 1 in 50,000 chance each year. Old estimate: 1 in 833,333. Change in risk: 1567 percent.

42. Dresden 2, Morris, Ill.: 1 in 52,632 chance each year. Old estimate: 1 in 434,783. Change in risk: 726 percent.

42. Dresden 3, Morris, Ill.: 1 in 52,632 chance each year. Old estimate: 1 in 434,783. Change in risk: 726 percent.

42. Monticello, Monticello, Minn.: 1 in 52,632 chance each year. Old estimate: 1 in 38,462. Change in risk: -27 percent.

45. Wolf Creek 1, Burlington, Kansas: 1 in 55,556 chance each year. Old estimate: 1 in 400,000. Change in risk: 620 percent.

46. San Onofre 2, San Clemente, Calif.: 1 in 58,824 chance each year. Old estimate: N/A. Change in risk: N/A.

46. San Onofre 3, San Clemente, Calif.: 1 in 58,824 chance each year. Old estimate: N/A. Change in risk: N/A.

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48. Millstone 3, Waterford, Conn.: 1 in 66,667 chance each year. Old estimate: 1 in 100,000. Change in risk: 50 percent.

48. Brunswick 1, Southport, N.C.: 1 in 66,667 chance each year. Old estimate: 1 in 263,158. Change in risk: 295 percent.

48. Brunswick 2, Southport, N.C.: 1 in 66,667 chance each year. Old estimate: 1 in 263,158. Change in risk: 295 percent.

48. Robinson 2, Hartsville, S.C.: 1 in 66,667 chance each year. Old estimate: 1 in 370,370. Change in risk: 456 percent.

52. Oyster Creek, Forked River, N.J.: 1 in 71,429 chance each year. Old estimate: 1 in 126,582. Change in risk: 77 percent.

53. Fort Calhoun, Fort Calhoun, Neb.: 1 in 76,923 chance each year. Old estimate: N/A. Change in risk: N/A.

53. Ginna, Ontario, N.Y.: 1 in 76,923 chance each year. Old estimate: 1 in 238,095. Change in risk: 210 percent.

53. Susquehanna 1, Salem Township, Pa.: 1 in 76,923 chance each year. Old estimate: 1 in 416,667. Change in risk: 442 percent.

53. Susquehanna 2, Salem Township, Pa.: 1 in 76,923 chance each year. Old estimate: 1 in 416,667. Change in risk: 442 percent.

57. Calvert Cliffs 2, Lusby, Md.: 1 in 83,333 chance each year. Old estimate: 1 in 116,279. Change in risk: 40 percent.

57. D.C. Cook 1, Bridgman, Mich.: 1 in 83,333 chance each year. Old estimate: N/A. Change in risk: N/A.

57. D.C. Cook 2, Bridgman, Mich.: 1 in 83,333 chance each year. Old estimate: N/A. Change in risk: N/A.

57. Grand Gulf 1, Port Gibson, Miss.: 1 in 83,333 chance each year. Old estimate: 1 in 106,383. Change in risk: 28 percent.

57. Kewaunee, Kewaunee, Wis.: 1 in 83,333 chance each year. Old estimate: 1 in 71,429. Change in risk: -14 percent.

62. Millstone 2, Waterford, Conn.: 1 in 90,909 chance each year. Old estimate: 1 in 156,250. Change in risk: 72 percent.

62. Salem 1, Hancocks Bridge, N.J.: 1 in 90,909 chance each year. Old estimate: 1 in 172,414. Change in risk: 90 percent.

62. Salem 2, Hancocks Bridge, N.J.: 1 in 90,909 chance each year. Old estimate: 1 in 172,414. Change in risk: 90 percent.

62. Point Beach 1, Two Rivers, Wis.: 1 in 90,909 chance each year. Old estimate: 1 in 76,923. Change in risk: -15 percent.

62. Point Beach 2, Two Rivers, Wis.: 1 in advertisement
90,909 chance each year. Old estimate: 1 in 76,923. Change in risk: -15 percent.

67. Turkey Point 3, Homestead, Fla.: 1 in 100,000 chance each year. Old estimate: N/A. Change in risk: N/A.

67. Turkey Point 4, Homestead, Fla.: 1 in 100,000 chance each year. Old estimate: N/A. Change in risk: N/A.

67. Calvert Cliffs 1, Lusby, Md.: 1 in 100,000 chance each year. Old estimate: 1 in 142,857. Change in risk: 43 percent.

70. Vermont Yankee, Vernon, Vt.: 1 in 123,457 chance each year. Old estimate: 1 in 434,783. Change in risk: 252 percent.

71. Braidwood 1, Braceville, Ill.: 1 in 136,986 chance each year. Old estimate: 1 in 1,785,714. Change in risk: 1204 percent.

71. Braidwood 2, Braceville, Ill.: 1 in 136,986 chance each year. Old estimate: 1 in 1,785,714. Change in risk: 1204 percent.

73. Vogtle 1, Waynesboro, Ga.: 1 in 140,845 chance each year. Old estimate: 1 in 384,615. Change in risk: 173 percent.

73. Vogtle 2, Waynesboro, Ga.: 1 in 140,845 chance each year. Old estimate: 1 in 384,615. Change in risk: 173 percent.

75. Cooper, Brownville, Neb.: 1 in 142,857 chance each year. Old estimate: N/A. Change in risk: N/A.

76. Davis-Besse, Oak Harbor, Ohio: 1 in 149,254 chance each year. Old estimate: 1 in 625,000. Change in risk: 319 percent.

77. Palisades, Covert, Mich.: 1 in 156,250 chance each year. Old estimate: N/A. Change in risk: N/A.

78. South Texas 1, Bay City, Texas: 1 in 158,730 chance each year. Old estimate: 1 in 1,298,701. Change in risk: 718 percent.

78. South Texas 2, Bay City, Texas: 1 in 158,730 chance each year. Old estimate: 1 in 1,298,701. Change in risk: 718 percent.

80. FitzPatrick, Scriba, N.Y.: 1 in 163,934 chance each year. Old estimate: 1 in 833,333. Change in risk: 408 percent.

81. Byron 1, Byron, Ill.: 1 in 172,414 chance each year. Old estimate: 1 in 1,470,588. Change in risk: 753 percent.

81. Byron 2, Byron, Ill.: 1 in 172,414 chance each year. Old estimate: 1 in 1,470,588. Change in risk: 753 percent.

83. Surry 1, Surry, Va.: 1 in 175,439 chance each year. Old estimate: 1 in 123,457. Change in risk: -30 percent.

83. Surry 2, Surry, Va.: 1 in 175,439 chance

each year. Old estimate: 1 in 123,457. Change
advertisement
in risk: -30 percent.

85. Nine Mile Point 2, Scriba, N.Y.: 1 in 178,571
chance each year. Old estimate: 1 in
1,000,000. Change in risk: 460 percent.

86. Browns Ferry 2, Athens, Ala.: 1 in 185,185
chance each year. Old estimate: 1 in 625,000.
Change in risk: 238 percent.

86. Browns Ferry 3, Athens, Ala.: 1 in 185,185
chance each year. Old estimate: 1 in 625,000.
Change in risk: 238 percent.

88. Nine Mile Point 1, Scriba, N.Y.: 1 in 238,095
chance each year. Old estimate: 1 in
1,724,138. Change in risk: 624 percent.

88. Fermi 2, Toledo, Ohio: 1 in 238,095 chance
each year. Old estimate: 1 in 625,000. Change
in risk: 163 percent.

90. Arkansas Nuclear 1, London, Ark.: 1 in
243,902 chance each year. Old estimate: 1 in
1,063,830. Change in risk: 336 percent.

90. Arkansas Nuclear 2, London, Ark.: 1 in
243,902 chance each year. Old estimate: 1 in
1,063,830. Change in risk: 336 percent.

92. Comanche Peak 1, Glen Rose, Texas: 1 in
250,000 chance each year. Old estimate: 1 in
833,333. Change in risk: 233 percent.

92. Comanche Peak 2, Glen Rose, Texas: 1 in
250,000 chance each year. Old estimate: 1 in
833,333. Change in risk: 233 percent.

94. Browns Ferry 1, Athens, Ala.: 1 in 270,270
chance each year. Old estimate: 1 in
1,000,000. Change in risk: 270 percent.

95. Prairie Island 1, Welch, Minn.: 1 in 333,333
chance each year. Old estimate: 1 in 714,286.
Change in risk: 114 percent.

95. Prairie Island 2, Welch, Minn.: 1 in 333,333
chance each year. Old estimate: 1 in 714,286.
Change in risk: 114 percent.

97. La Salle 1, Marseilles, Ill.: 1 in 357,143
chance each year. Old estimate: 1 in
1,851,852. Change in risk: 419 percent.

97. La Salle 2, Marseilles, Ill.: 1 in 357,143

chance each year. Old estimate: 1 in 1,851,852. Change in risk: 419 percent.

97. Hope Creek 1, Hancocks Bridge, N.J.: 1 in 357,143 chance each year. Old estimate: 1 in 909,091. Change in risk: 155 percent.

100. Clinton, Clinton, Ill.: 1 in 400,000 chance each year. Old estimate: 1 in 370,370. Change in risk: -7 percent.

101. Shearon Harris 1, New Hill, N.C.: 1 in 434,783 chance each year. Old estimate: 1 in 277,778. Change in risk: -36 percent.

102. Hatch 1, Baxley, Ga.: 1 in 454,545 chance each year. Old estimate: 1 in 1,351,351. Change in risk: 197 percent.
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102. Hatch 2, Baxley, Ga.: 1 in 454,545 chance each year. Old estimate: 1 in 1,351,351. Change in risk: 197 percent.

104. Callaway, Fulton, Mo.: 1 in 500,000 chance each year. Old estimate: N/A. Change in risk: N/A.

A few words about the data (Where's Richter?)

The NRC's risk estimates are not based on the usual layman's language of the magnitude scale (the old Richter scale or its replacement, the moment magnitude scale). Magnitude shows the earthquake's energy released. That is a measure of power.

But a nuclear plant may be close to the epicenter of a quake, or far from it. And some types of seismic waves are more jarring than others.

Instead, these risk estimates consider how violently the ground will shake at the nuclear plant, considered a better indication of how much damage it will cause. That shaking can be affected by the depth, distance from the epicenter, and the frequencies of waves that the quake emits. The shaking is expressed in a unit called peak ground acceleration, in terms of the acceleration caused by the Earth's gravity. This is a measure of intensity.

Often these two ways of measuring earthquakes are roughly in synch, but sometimes not. For example:

The 2010 Haiti earthquake, magnitude

7.0, rated only "severe" on the intensity scale, the third rung from the top, with peak ground acceleration of 0.5 times the Earth's gravity.

The 2010 Chile earthquake, with a much higher magnitude of 8.8, was one step

advertisement How much radiation is dangerous?

higher in terms of intensity, "violent," with peak ground acceleration of 0.65

times gravity.

The 2010 Christchurch or Canterbury earthquake in New Zealand, similar to Haiti at magnitude 7.1, was at the top of the intensity scale, "extreme," with a peak ground acceleration of 1.26 times gravity.

Besides the peak acceleration, the NRC made other estimates for each nuclear plant, based on different types of earthquakes.

From all these estimates, the NRC calculated a worst case, which it called the "weakest link." Msnbc.com ranked the plants by that worst case, which is the same number the NRC staff highlights in its report, and the only number it provided for the reactors in the western states.

Resources

These links open in a new window.

Earthquake history of each state, from the USGS.

A USGS brochure describing the changes in the 2008 seismic hazard maps. PDF file.

The NRC report with new earthquake risk estimates, "Generic Issue 199 (GI-199), Implications of Updated Probabilistic Seismic Hazard Estimates in Central and Eastern United States on Existing Plants, Safety/Risk Assessment," August 2010. PDF file. Note: Data for individual reactors are in appendix D.

An NRC fact sheet from November 2010, "Seismic Issues for Existing Nuclear Power Plants."

The NRC database of active nuclear reactors in the U.S. Each reactor name links to technical and safety documents.

Industry response to questions about the situation in Japan. PDF file.

A scientific paper describing the New Madrid earthquake, and what can be learned by melding modern science with writings from long ago.

A brochure with a table comparing values for magnitude and peak ground acceleration.

The ranking of 104 nuclear plants by risk, by msnbc.com from NRC data, in an Excel spreadsheet file.

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A look at the worst earthquakes in recorded history, in loss of human life. (These figures do not include the March 11, 2011, temblor off eastern Japan, the death toll of which is still not known.) Sources: United States Geological Survey, Encyclopedia Britannica advertisement

1: Shensi, China, Jan. 23, 1556

Magnitude about 8, about 830,000 deaths.

This earthquake occurred in the Shaanxi province (formerly Shensi), China, about 50 miles east-northeast of Xi'an, the capital of Shaanxi. More than 830,000 people are estimated to have been killed. Damage extended as far away as about 270 miles northeast of the epicenter, with reports as far as Liuyang in Hunan, more than 500 miles away. Geological effects reported with this earthquake included ground fissures, uplift, subsidence, liquefaction and landslides. Most towns in the damage area reported city walls collapsed, most to all houses collapsed and many of the towns reported ground fissures with water gushing out.

2: Tangshan, China, July 27, 1976

Magnitude 7.5. Official casualty figure is 255,000 deaths. Estimated death toll as high as 655,000.

Damage extended as far as Beijing. This is probably the greatest death toll from an earthquake in the last four centuries, and the second greatest in recorded history.

3: Aleppo, Syria, Aug. 9, 1138

Magnitude not known, about 230,000 deaths.

Contemporary accounts said the walls of Syria's second-largest city crumbled and rocks cascaded into the streets. Aleppo's citadel collapsed, killing hundreds of residents. Although Aleppo was the largest community affected by the earthquake, it likely did not suffer the worst of the damage. European Crusaders had constructed a citadel at nearby Harim, which was leveled by the quake. A Muslim fort at Al-Atarib was destroyed as well, and several smaller towns and manned forts were reduced to rubble. The quake was said to have been felt as far away as Damascus, about 220 miles to the south. The Aleppo earthquake was the first of several occurring between 1138 and 1139 that devastated areas in northern Syria and western Turkey.

4: Sumatra, Indonesia, Dec. 26, 2004

advertisement Advertise | AdChoices Keystone / Getty Images 1976: Workers start rebuilding work following earthquake damage in the Chinese city of Tangshan, 100 miles east of Pekin, with a wrecked train carriage behind them. (Photo by Keystone/Getty Images)

Magnitude 9.1, 227,898 deaths.

This was the third largest earthquake in the world since 1900 and the largest since the 1964 Prince William Sound, Alaska temblor. In total, 227,898 people were killed or were missing and presumed dead and about 1.7 million people were displaced by the earthquake and subsequent tsunami in 14 countries in South Asia and East Africa. (In January 2005, the death toll was 286,000. In April 2005, Indonesia reduced its estimate for the number missing by over 50,000.)

5: Haiti, Jan 12, 2010

According to official estimates, 300,000 were also injured, 1.3 million displaced, 97,294 houses destroyed and 188,383 damaged in the Port-au-Prince area and in much of southern Haiti. This includes at least 4 people killed by a local tsunami in the Petit Paradis area near Leogane. Tsunami waves were also reported at Jacmel, Les Cayes, Petit Goave, Leogane, Luly and Anse a Galets.

6: Damghan, Iran, Dec. 22, 856

Magnitude not known, about 200,000 deaths.

This earthquake struck a 200-mile stretch of northeast Iran, with the epicenter directly below the city of Demghan, which was at that

point the capital city. Most of the city was destroyed as well as the neighboring areas. Approximately 200,000 people were killed.

7: Haiyuan, Ningxia , China, Dec. 16, 1920

7.8 magnitude, about 200,000 deaths.

This earthquake brought total destruction to the Lijunbu-Haiyuan-Ganyanchi area. Over 73,000 people were killed in Haiyuan County. A landslide buried the village of Sujiahe in Xiji County. More than 30,000 people were killed in Guyuan County. Nearly all the houses collapsed in the cities of Longde and Huining. About 125 miles of surface faulting was seen from Lijunbu through Ganyanchi to Jingtai. There were large numbers of landslides and ground cracks throughout the epicentral area. Some rivers were dammed, others changed course.

advertisement Getty Images / Getty Images MEULABOH, INDONESIA - DECEMBER 29: In this handout photo taken from a print via the Indonesian Air Force, the scene of devastation in Meulaboh, the town closest to the Sunday's earthquake epicentre, is pictured from the air on December 29, 2004, Meulaboh, Aceh Province, Sumatra, Indonesia. The western coastal town in Aceh Province, only 60 kilometres north-east of the epicentre, has been the hardest hit by Sunday's underwater earthquake in the Indian Ocean. Officials expected to find at least 10,000 killed which would amount to a quarter of Meulaboh's population. Three-quarters of Sumatra's western coast was destroyed and some towns were totally wiped out after the tsunamis that followed the earthquake. (Photo by Indonesian Air Force via Getty Images) Advertise | AdChoices

8: Ardabil, Iran, March. 23, 893

Magnitude not known, about 150,000 deaths

The memories of the massive Damghan earthquake (see above) had barely faded when only 37 years later, Iran was again hit by a huge earthquake. This time it cost 150,000 lives and destroyed the largest city in the northwestern section of the country. The area was again hit by a fatal earthquake in 1997.

9: Kanto, Japan, Sept. 1, 1923

7.9 magnitude, 142,800 deaths.

This earthquake brought extreme destruction in the Tokyo-Yokohama area, both from the temblor and subsequent firestorms, which burned about 381,000 of the more than 694,000 houses that were partially or completely destroyed. Although often known as the Great Tokyo Earthquake (or the Great Tokyo Fire), the damage was most severe in Yokohama. Nearly 6 feet of permanent uplift

was observed on the north shore of Sagami Bay and horizontal displacements of as much as 15 feet were measured on the Boso Peninsula.

This earthquake brought extreme destruction in the Tokyo-Yokohama area, both from the temblor and subsequent firestorms, which burned about 381,000 of the more than 694,000 houses that were partially or completely destroyed. Although often known as the Great Tokyo Earthquake (or the Great Tokyo Fire), the damage was most severe in Yokohama. Nearly 6 feet of permanent uplift was observed on the north shore of Sagami Bay and horizontal displacements of as much as 15 feet were measured on the Boso Peninsula.

10: Ashgabat, Turkmenistan, Oct. 5, 1948

7.3 magnitude, 110,000 deaths.

This quake brought extreme damage in Ashgabat (Ashkhabad) and nearby villages, where almost all the brick buildings collapsed, concrete structures were heavily damaged and freight trains were derailed. Damage and casualties also occurred in the Darreh Gaz area in neighboring Iran. Surface rupture was observed both northwest and southeast of Ashgabat. Many sources list the casualty total at 10,000, but a news release from the newly independent government on Dec. 9, 1988, advised that the correct death toll was 110,000. (Turkmenistan had been part of the Soviet Union, which tended to downplay the death tolls from man-made and natural disasters.)

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From: [Screnci, Diane](#)
To: [Burnell, Scott](#)
Subject: FW: responsess
Date: Wednesday, March 16, 2011 5:24:18 PM

Nevermind.

DIANE SCRENCI
SR. PUBLIC AFFAIRS OFFICER
USNRC, RI
610/337-5330

From: Screnci, Diane
Sent: Wednesday, March 16, 2011 4:37 PM
To: Burnell, Scott
Subject: FW: responsess

Can you help?

DIANE SCRENCI
SR. PUBLIC AFFAIRS OFFICER
USNRC, RI
610/337-5330

From: Tom Olson [<mailto:tolson@tribweb.com>]
Sent: Wednesday, March 16, 2011 3:48 PM
To: Screnci, Diane
Subject: RE: responsess

Thanks. Just to follow up:

Did NRC or msnbc.com compute the ratios of chance a quake would cause damage? (Ex: Indian Point 3's 1 in 10,000). I am reporting how remote even the highest chance is, Diane, but I need to know if these are indeed NRC computations.

Your notes said some seismic hazard estimates had changed. When were the previous estimates done?

Do you have the list of the 27 reactors involved in those changes?

I need to file very soon. Thanks.

-Tom

Thomas Olson
Pittsburgh Tribune-Review
412-320-7854

From: Screnci, Diane [<mailto:Diane.Screnci@nrc.gov>]

TTTT/26

Sent: Wednesday, March 16, 2011 3:35 PM

To: Tom Olson

Subject: responsess

Tom,

I did not go through and doublecheck the numbers in the MSNBC story versus the report.

We don't rank plants.. The news article ranked the plants. This wasn't a seismic ranking tool, just an effort to screen for plants needing a further look. The newsreport is a very incomplete look at the overall research and we continue to believe U.S. reactors are capable of withstanding the strongest earthquake their sites could experience

The report shows us that:

Currently the operating nuclear power plants in the US remain safe, with no need for immediate action. Existing plants are designed with considerable margin to be able to withstand the ground motions that accounted for the largest earthquake expected in the area of the plant.

This results of our recent assessment demonstrate that the probability of exceeding the design basis ground motion might have increased at some sites, **BUT ONLY BY A RELATIVELY SMALL AMOUNT.**

Even though the overall seismic risk estimates remain small, we've identified a number of reactors (27 total) where we need to complete additional analysis. That analysis is underway.

Our estimates of seismic hazard represents the chance that a specific level of found shaking could be observed or exceeded at a given location. Our estimates of seismic hazard at some central and Eastern US locations have changed based on results from recent research indicating that earthquakes occurred more often in some locations than previously estimated, and because the models used to predict ground shaking at a site have changed.

You asked whether plants are designed to withstand a tsunami. The answer is yes. All natural phenomena.

DIANE SCRENCI

SR. PUBLIC AFFAIRS OFFICER

USNRC, RI

610/337-5330

From: Screnci, Diane
To: Sheehan, Neil
Cc: Burnell, Scott; Brenner, Eliot
Subject: earthquake in Ontario, Canada
Date: Wednesday, March 16, 2011 5:35:20 PM

Staff tells me....

According to the USGS, there was an earthquake in Ontario today measuring 4.3

None of our plants (NMP, detected it. Plants are safe... no impact on any plants.

DIANE SCRENCI

SR. PUBLIC AFFAIRS OFFICER

USNRC, RI

610/337-5330

TTTT/27

From: Deavers, Ron
To: Harrington, Holly; Akstulewicz, Brenda; Shannon, Valerie; Wittick, Susan; Landau, Mindy; Janbergs, Holly; Taylor, Robert; Sheehan, Neil; Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David
Cc: michael.widomski@dhs.gov; Tobin, Jennifer; Bonaccorso, Amy
Subject: RE: Schedule for Thursday -- please let me know if this does not work for you. Thank you to our loanees!
Date: Wednesday, March 16, 2011 5:35:46 PM

I can be in by 8:30 and Jennifer will be in by 9

From: Harrington, Holly
Sent: Wednesday, March 16, 2011 5:33 PM
To: Akstulewicz, Brenda; Shannon, Valerie; Wittick, Susan; Landau, Mindy; Janbergs, Holly; Taylor, Robert; Sheehan, Neil; Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David
Cc: michael.widomski@dhs.gov; Tobin, Jennifer; Bonaccorso, Amy; Deavers, Ron
Subject: Schedule for Thursday -- please let me know if this does not work for you. Thank you to our loanees!

Eliot: 7:30/8 -- ?
Holly: ??

Op Center:
Dave: 7:30 a.m.- 6:30 p.m.
Rob: noon to 10 p.m.
Michael Widomski: 8-6 (loan from FEMA/general support in Op Center)
Scott: noon-8/9/10

Phones:
Brenda: 7:30 – 6 p.m.
Val: 6:45 – 4:30 p.m.
Munira: 8-6
Deanna Royer: 8-5

Misc.
Susan Wittick: 8:15 a.m. to 5 p.m. (loan from OCA)
Bethany: 9 a.m. – 6 p.m.
Nancy Stills 9-6 (loan from FEMA; working on project with “fact checking”)

Media Desk:

Ivonne: 9-7
Mindy: 8 a.m.- 6 p.m. (backing up Ivonne when necessary)

Public Inquiries (moving to touchdown stations on 17th floor)

Amy Bonaccorso: 8 a.m. - 4:30 p.m.
Ron Deavers/Jenny Tobin – (combined) 8-6:30 (loan)

Overnight Op Center: Neil: 10 p.m. to 8 a.m.

TTTT/28

From: [Landau, Mindy](#)
To: [Burnell, Scott](#)
Subject: FW: Media Inquiry
Date: Wednesday, March 16, 2011 5:45:16 PM

From: Akstulewicz, Brenda
Sent: Wednesday, March 16, 2011 5:39 PM
To: Landau, Mindy
Subject: Media Inquiry

Jim Sciutto
ABC News
202-701-9020
Wants to film training drills at reactors

Brenda Akstulewicz
Administrative Assistant
Office of Public Affairs
301-415-8209
brenda.akstulewicz@nrc.gov



TTTT/29

From: [Landau, Mindy](#)
To: [Burnell, Scott](#)
Subject: FW: Media Inquiry
Date: Wednesday, March 16, 2011 5:45:57 PM

From: Akstulewicz, Brenda
Sent: Wednesday, March 16, 2011 5:43 PM
To: Landau, Mindy
Subject: Media Inquiry

Rene Schoof
McClatchy Washington Bureau
202-383-6004
rschoff@mcclatchydc.com
policy related to spent fuel pools in US

Brenda Akstulewicz
Administrative Assistant
Office of Public Affairs
301-415-8209
brenda.akstulewicz@nrc.gov



TTTT/30

From: [Harrington, Holly](#)
To: [Burnell, Scott](#)
Date: Wednesday, March 16, 2011 5:54:28 PM

From: Davis, Molly [<mailto:MDavis@ap.org>]
Sent: Wednesday, March 16, 2011 4:16 PM
To: Widmayer, Derek
Subject: seeking ACRS subcommittee meeting document

Derek,

Would you help me access the GSI-199 report? It's called "Implications of Updated Probabilistic Seismic Hazard Estimates in Central and Eastern United States on Existing Plants." The ACRS Subcommittee on Siting met to discuss this document on Nov. 30, but I can't find the meeting materials on the schedule page or in ADAMS.

Thanks for any help you can offer,
Molly

Molly Davis
Associated Press
Jackson, MS
(601) 948-5897

TTTTT/31

From: [Burnell, Scott](#)
To: [Raleigh, Deann](#)
Subject: RE: No request at all -- just a word of thanks for all you do.
Date: Wednesday, March 16, 2011 5:56:00 PM

I do appreciate that. :-)

From: Raleigh, Deann [mailto:DRaleigh@CURTISSWRIGHT.com]
Sent: Wednesday, March 16, 2011 5:33 PM
To: Burnell, Scott
Subject: No request at all -- just a word of thanks for all you do.

I'm sure you are burning the midnight oil in wake of the tragedy and the events as they unfold, so this member of the public just wants to say thank you for all you do. It is appreciated.

~ D

Deann Raleigh
Nuclear Regulatory Services
SCIENTECH, a business unit of Curtiss-Wright Flow Control Company
240-626-9556
draleigh@curtisswright.com

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TTTT/32

From: [Akstulewicz, Brenda](#)
To: [Burnell, Scott](#); [Landau, Mindy](#)
Subject: RE: Scott can you handle?
Date: Wednesday, March 16, 2011 6:09:31 PM

Scott – got her phone 202-326-7089

From: Landau, Mindy
Sent: Wednesday, March 16, 2011 5:49 PM
To: Akstulewicz, Brenda
Subject: FW: Scott can you handle?

Brenda – did you get a phone # for her?

From: Burnell, Scott
Sent: Wednesday, March 16, 2011 5:47 PM
To: Landau, Mindy
Subject: RE: Scott can you handle?

e-mail failed. Phone #?

From: Landau, Mindy
Sent: Wednesday, March 16, 2011 5:45 PM
To: Burnell, Scott
Subject: Scott can you handle?

Laura Schenkman

Science Magazine

lschenkma@aaas.org

wants to talk w/someone regarding calculations in last press release

Mindy S. Landau
Deputy Assistant for Operations
Communication and Performance Improvement
Office of the Executive Director for Operations
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555
301-415-8703
mindy.landau@nrc.gov

TTTT/33

From: [Taylor, Robert](#)
To: [Brenner, Eliot](#)
Cc: [Harrington, Holly](#); [McIntyre, David](#); [Burnell, Scott](#); [Coggins, Angela](#); [Powell, Amy](#)
Subject: Updated talking points
Date: Wednesday, March 16, 2011 6:51:57 PM
Attachments: [QUAKE TP 3 16 .docx](#)

Eliot,

We understand from Angela Coggins that the Chairman may be doing press soon. We have updated the attached talking points in response to new media inquires (see bullets 2 and 4 regarding radiation plumes and CBP actions).

Regards,
Rob

TTTT/34

Attachment QUAKE_TP_3_16_.docx (17295 Bytes) cannot be converted to PDF format.

From: [Burnell, Scott](#)
To: [McIntyre, David](#); [Taylor, Robert](#)
Subject: FW: Eric Tyson -King Features -Reporter
Date: Wednesday, March 16, 2011 6:45:00 PM

Not sure what AP article.

From: Ghneim, Munira
Sent: Wednesday, March 16, 2011 4:34 PM
To: Burnell, Scott
Cc: Harrington, Holly; Akstulewicz, Brenda
Subject: Eric Tyson -King Features -Reporter

Good Afternoon,

Eric Tyson would like someone to comment on the recent AP news story. Eric may be reached at 203-221-0630.

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

TTTT/35

From: [Burnell, Scott](#)
To: [McNamara, Nancy](#)
Subject: FW: Questions NRC RI Is Receiving - RESPONSE NEEDED ASAP
Date: Wednesday, March 16, 2011 6:10:00 PM
Importance: High

Nancy;

If you didn't get an answer to this and you're still in the office I can discuss it with you. I'm also available tomorrow, of course.

Scott

From: Bonaccorso, Amy
Sent: Wednesday, March 16, 2011 3:52 PM
To: Burnell, Scott
Cc: Deavers, Ron
Subject: FW: Questions NRC RI Is Receiving - RESPONSE NEEDED ASAP
Importance: High

Scott:

Are you downstairs?

I don't know anyone on the PMT. We're isolated from all of the teams with specialized knowledge up here.

From: LIA04 Hoc
Sent: Wednesday, March 16, 2011 3:49 PM
To: Deavers, Ron; Bonaccorso, Amy
Cc: OST05 Hoc; McNamara, Nancy
Subject: FW: Questions NRC RI Is Receiving - RESPONSE NEEDED ASAP
Importance: High

Ron and Amy:

You may wish to touch base with our PMT folks for insights. I can't help on this.

Richard Turtill
State Liaison – Liaison Team
Incident Response Center

From: McNamara, Nancy
Sent: Wednesday, March 16, 2011 3:24 PM
To: LIA04 Hoc; OST05 Hoc
Subject: Questions NRC RI Is Receiving - RESPONSE NEEDED ASAP
Importance: High

1. How is it that the NRC has always defined the emergency planning zone to be out

TTTT/36

to 10 miles based on worse case scenarios, yet they just recommended a 50 mile evacuation?

2. What does a PAR out to 50 miles say about the current 10 mile EPZ used here in the United States?

From: [McNamara, Nancy](#)
To: [Burnell, Scott](#)
Subject: RE: Questions NRC RI Is Receiving - RESPONSE NEEDED ASAP
Date: Wednesday, March 16, 2011 6:31:04 PM

Thanks, Scott. I think I'm good for now. We will be talking to our States tomorrow and see if they have any additional questions.

From: Burnell, Scott
Sent: Wednesday, March 16, 2011 6:11 PM
To: McNamara, Nancy
Subject: FW: Questions NRC RI Is Receiving - RESPONSE NEEDED ASAP
Importance: High

Nancy;

If you didn't get an answer to this and you're still in the office I can discuss it with you. I'm also available tomorrow, of course.

Scott

From: Bonaccorso, Amy
Sent: Wednesday, March 16, 2011 3:52 PM
To: Burnell, Scott
Cc: Deavers, Ron
Subject: FW: Questions NRC RI Is Receiving - RESPONSE NEEDED ASAP
Importance: High

Scott:

Are you downstairs?

I don't know anyone on the PMT. We're isolated from all of the teams with specialized knowledge up here.

From: LIA04 Hoc
Sent: Wednesday, March 16, 2011 3:49 PM
To: Deavers, Ron; Bonaccorso, Amy
Cc: OST05 Hoc; McNamara, Nancy
Subject: FW: Questions NRC RI Is Receiving - RESPONSE NEEDED ASAP
Importance: High

Ron and Amy:

You may wish to touch base with our PMT folks for insights. I can't help on this.

Richard Turtill
State Liaison – Liaison Team
Incident Response Center

TTTT/37

From: [Burnell, Scott](#)
To: [Brenner, Eliot](#)
Subject: FW: Media Call
Date: Wednesday, March 16, 2011 6:37:00 PM

Still swimming upstream against the deluge – you're in a better position to 'confirm'
Chairman testimony, yes?

From: Shannon, Valerie
Sent: Wednesday, March 16, 2011 4:01 PM
To: Burnell, Scott
Subject: Media Call

Please call Vanessa Peele from MSNBC
Phone: 212-413-6854

Re: She is on deadline and is wanting clarification about what the Chairman said at the hearing
today

TTTT/38

From: [Burnell, Scott](#)
To: [McIntyre, David](#); [Taylor, Robert](#)
Subject: FW: radioactive releases
Date: Wednesday, March 16, 2011 6:58:00 PM

Can you help Prema?

From: Chandrathil, Prema
Sent: Wednesday, March 16, 2011 5:03 PM
To: Harrington, Holly; Burnell, Scott
Cc: Mitlyng, Viktoria
Subject: radioactive releases

Is there any info or a list for what US agencies we are working with to monitor radioactive releases? Is NOAA apart of it?

Thanks

Prema Chandrathil-Yeaman
Public Affairs Officer
U.S. Nuclear Regulatory Commission
Region III
Lisle, IL
(630) 829-9663
prema.chandrathil@nrc.gov

T T T T / 39

From: [Burnell, Scott](#)
To: [McIntyre, David](#); [Taylor, Robert](#)
Subject: Seismic "for the record"
Date: Wednesday, March 16, 2011 7:13:00 PM

Gentlemen;

David should have the language I forwarded earlier today on responding to the GSI-199 brouhaha. Please see if you can craft it into a "for the record" that politely says the reporter is suffering from cranial-rectal inversion (a screening tool only, no ranking of sites, etc). We can polish it in the morning. Thanks ever so much.

Scott

TTTT/40

From: [Burnell, Scott](#)
To: [McIntyre, David](#); [Taylor, Robert](#)
Subject: FW: Mark Benjamin -Time Magazine
Date: Wednesday, March 16, 2011 7:14:00 PM

From: Ghneim, Munira
Sent: Wednesday, March 16, 2011 5:26 PM
To: Burnell, Scott
Subject: Mark Benjamin -Time Magazine

Good Evening,

Mark Benjamin from Time magazine would like someone to call him back regarding the Protective Guidelines for Radioactivity. Mark may be reached at 202-861-4093.

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

TTTT/41

From: james_denn@dps.state.ny.us
To: [Burnell, Scott](#)
Subject: NY PSC contact
Date: Wednesday, March 16, 2011 7:15:16 PM

A pleasure talking to you. I hope your statement is issued soon. Here is the note I got from our staff person who interacts with NRC on a regular basis....

I just got off the phone with the NRC state liaison officer and others. They said that this quote is not an NRC quote and wherever it has been pulled from it is taken out of context. They have been going through NRC documents and so far have not identified this wording.

The NRC is preparing a response to this article that will most likely be released tomorrow, possibly after the 1:30 PM conference call with representatives from several states.

TTTT/42

From: [Burnell, Scott](#)
To: [McIntyre, David](#); [Taylor, Robert](#)
Subject: FW: Media Inquiry
Date: Wednesday, March 16, 2011 7:27:00 PM

Refer to NEI in my opinion, particularly since we don't have b roll

From: Landau, Mindy
Sent: Wednesday, March 16, 2011 5:45 PM
To: Burnell, Scott
Subject: FW: Media Inquiry

From: Akstulewicz, Brenda
Sent: Wednesday, March 16, 2011 5:39 PM
To: Landau, Mindy
Subject: Media Inquiry

Jim Sciutto
ABC News
202-701-9020
Wants to film training drills at reactors

Brenda Akstulewicz
Administrative Assistant
Office of Public Affairs
301-415-8209
brenda.akstulewicz@nrc.gov



TTTT/43

From: [McIntyre, David](#)
To: [Sheehan, Neil](#)
Cc: [Harrington, Holly](#); [Burnell, Scott](#)
Subject: Q&A's from PMT
Date: Wednesday, March 16, 2011 11:18:20 PM
Attachments: [Q&As for DoseAssessment Press Release 3-16-11msc1600.docx](#)

These were developed by the PMT to support today's press release on the 50 mile EPZ.

From: PMTERDS Hoc
Sent: Wednesday, March 16, 2011 10:32 PM
To: LIA06 Hoc; McIntyre, David
Cc: Hoc, PMT12
Subject: White House Q&A's from PMT

Please see the attached Q&A's from the PMT.

Nima Ashkeboussi

TTTT/44

Attachment Q&As for DoseAssessment Press Release 3-16-11.docx (15377 Bytes) cannot be converted to PDF format.

From: Kammerer, Annie
To: Burnell, Scott
Subject: FW: As per MSNBC investigative reporter
Date: Thursday, March 17, 2011 1:15:21 AM

Scott,

Is the text provided the final? I want to make sure as I'm putting it in the Q&As.

Annie

From: Munson, Clifford
Sent: Wednesday, March 16, 2011 3:45 PM
To: Tift, Doug; Manoly, Kamal; Scales, Kerby
Cc: Wilson, George; Beasley, Benjamin; Chokshi, Nilesh; Nguyen, Quynh; McNamara, Nancy; Gray, Mel; Kammerer, Annie; Ake, Jon
Subject: RE: As per MSNBC investigative reporter

Doug,

Below is the response that we provided to OPA – Scott Burnell on the MSNBC report. Hopefully, this will help clarify. Please contact Annie Kammerer if you have further questions. She is currently in the Op Center.

Thanks,
Cliff

Clifford Munson, Ph.D.
Senior Level Advisor
U.S. NRC - Office of New Reactors
Division of Site and Environmental Reviews
301-415-6947
clifford.munson@nrc.gov

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 U.S. (CEUS) are warranted consistent with NRC directives. The results of the GI-199 SRA should not be interpreted as definitive estimates of plant-specific seismic risk. The nature of the information used (both seismic hazard data and plant-level fragility information) make these estimates useful only as a screening tool. The NRC does not rank plants by seismic risk. Currently operating nuclear plants in the United States 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 Generic Issue 199 Screening Panel. Existing 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 earthquake expected in the area around the plant. During the mid-to late-1990s, the NRC staff reassessed the margin beyond the design basis

TTTT/45

as part of the Individual Plant Examination of External Events (IPEEE) program. 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 Safety/Risk Assessment stage results indicate that the probabilities of seismic core damage are lower than the guidelines for taking immediate action.

From: Tift, Doug
Sent: Wednesday, March 16, 2011 3:24 PM
To: Manoly, Kamal; Scales, Kerby
Cc: Wilson, George; Munson, Clifford; Beasley, Benjamin; Chokshi, Nilesh; Nguyen, Quynh; McNamara, Nancy; Gray, Mel
Subject: RE: As per MSNBC investigative reporter

Thanks, that helps.

But is the reporters statement that our data shows that Indian Point Unit 3 is the plant in the US with the highest risk of suffering core damage from an earthquake an accurate conclusion from our data?

I seem to recall discussions where it was mentioned that the GI-199 data is only valid in aggregate for the nuclear industry, and is not enough data to draw any conclusion about any one reactor site. Is that true?

-Doug

From: Manoly, Kamal
Sent: Wednesday, March 16, 2011 3:19 PM
To: Scales, Kerby
Cc: Wilson, George; Munson, Clifford; Beasley, Benjamin; Chokshi, Nilesh; Nguyen, Quynh; Tift, Doug; McNamara, Nancy
Subject: RE: As per MSNBC investigative reporter

Kerby,

The list in GI-199 Comm Plan (Q/A23) identifies the plants by name only that are in the continue category for GI-199 (Delta CDF) to request additional information via a generic communication. The GI-199 applies only to plants in Eastern and Central US. The list provided for the top 10 contains interpretation of **total** CDF based on information provided to the reporter concerning all plants in the US. That is why you see Diablo in the list of 10 even though Diablo is not a GI-199 plant.

Kamal

From: Scales, Kerby
Sent: Wednesday, March 16, 2011 1:47 PM
To: Manoly, Kamal
Cc: Wilson, George; Munson, Clifford; Beasley, Benjamin; Chokshi, Nilesh
Subject: FW: As per MSNBC investigative reporter

Kamal,

Can you review the list below and respond back to George and copy me?

Thanks,

From: Nguyen, Quynh
Sent: Wednesday, March 16, 2011 1:39 PM
To: Scales, Kerby
Cc: Tift, Doug; Meighan, Sean
Subject: FW: As per MSNBC investigative reporter

Can you get somebody to check this quickly?

Thanks,
Q

From: Tift, Doug
Sent: Wednesday, March 16, 2011 12:56 PM
To: OST05 Hoc; LIA04 Hoc; Nguyen, Quynh
Cc: McNamara, Nancy
Subject: FW: As per MSNBC investigative reporter

Please see below list. I think this is referring to GI 199, but the list of plants is completely different from the list in our GI 199 Comm Plan. Did the reporter mis-interpret the GI 199 documents? If so, where did they go wrong?

See Q23:

http://www.internal.nrc.gov/communications/plans/active/CommPlan_Generic_Issue199.pdf

-Doug

From: Giarrusso, John (CDA) [mailto:John.Giarrusso@state.ma.us]
Sent: Wednesday, March 16, 2011 11:48 AM
To: McNamara, Nancy; Tift, Doug
Subject: Fw: As per MSNBC investigative reporter

From: DeNicola, Fran (CDA) [mailto:Fran.Denicola@state.ma.us]
Sent: Wednesday, March 16, 2011 11:00 AM
To: john.giarrusso@state.ma.us <John.Giarrusso@state.ma.us>; Viveiros, John L. (CDA) <John.L.Viveiros@state.ma.us>; peter.judge@state.ma.us <Peter.Judge@state.ma.us>; linda.lecuyer@state.ma.us <Linda.Lecuyer@state.ma.us>
Subject: As per MSNBC investigative reporter

The top 10

Here are the 10 nuclear power sites with the highest risk of suffering core damage from an earthquake, showing their NRC risk estimates based on 2008 and 1989 geological data. (The full list of 104 reactors is below.)

1. Indian Point 3, Buchanan, N.Y.: 1 in 10,000 chance each year. Old estimate: 1 in 17,241. Increase in risk: 72 percent.
2. Pilgrim 1, Plymouth, Mass.: 1 in 14,493. Old estimate: 1 in 125,000. Increase in

risk: 763 percent.

3. Limerick 1 and 2, Limerick, Pa.: 1 in 18,868. Old estimate: 1 in 45,455. Increase in risk: 141 percent.

4. Sequoyah 1 and 2, Soddy-Daisy, Tenn.: 1 in 19,608. Old estimate: 1 in 102,041. Increase in risk: 420 percent.

5. Beaver Valley 1, Shippingport, Pa.: 1 in 20,833. Old estimate: 1 in 76,923. Increase in risk: 269 percent.

6. Saint Lucie 1 and 2, Jensen Beach, Fla.: 1 in 21,739. Old estimate: N/A.

7. North Anna 1 and 2, Louisa, Va.: 1 in 22,727. Old estimate: 1 in 31,250. Increase in risk: 38 percent.

8. Oconee 1, 2 and 3, Seneca, S.C.: 1 in 23,256. Old estimate: 1 in 100,000. Increase in risk: 330 percent.

9. Diablo Canyon 1 and 2, Avila Beach, Calif.: 1 in 23,810. Old estimate: N/A.

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10. Three Mile Island, Middletown, Pa.: 1 in 25,000. Old estimate: 1 in 45,455. Increase in risk: 82 percent.

From: Harrington, Holly
To: Landau, Mindy; Bonaccorso, Amy; Deavers, Ron; Janbergs, Holly; Akstulewicz, Brenda; Shannon, Valerie; Steger (Tucci), Christine; Widomski, Michael; Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David; Chandrathil, Prema; Dricks, Victor; Hannah, Roger; Ledford, Joey; Mityng, Viktoria; Screnci, Diane; Sheehan, Neil; Uselding, Lara
Subject: Permission to forward public inquiries on radiation health questions
Date: Thursday, March 17, 2011 10:45:59 AM

We have permission from the CDC to forward radiation health-related public callers to:

1-800-CDC-INFO

Do not post this, however. Internal use only

TTTTT/46

From: james_denn@dps.state.ny.us
To: [Burnell, Scott](#)
Subject: Earthquake statement
Date: Thursday, March 17, 2011 11:03:24 AM

Scott: let me know if NRC issues corrections to the MSNBC story. Thanks.
Jim Denn, NY PSC

TTTT/47

From: [Burnell, Scott](#)
To: [Harrington, Holly](#); [Brenner, Eliot](#); [Hayden, Elizabeth](#); [Couret, Ivonne](#); [McIntyre, David](#); [Screnci, Diane](#); [Sheehan, Neil](#); [Hannah, Roger](#); [Ledford, Joey](#); [Chandrathil, Prema](#); [Mityng, Viktoria](#); [Uselding, Lara](#); [Dricks, Victor](#)
Subject: SSE numbers
Date: Thursday, March 17, 2011 12:37:00 PM
Attachments: [SSE.xlsx](#)

These safe shutdown earthquake numbers are ground acceleration in terms of "g," the force of gravity.

Again, we DO NOT have Richter or magnitude numbers and we do not translate.

Going off-grid for a couple hours.

TTTT / 48

SEISMIC INFORMATION: SSE

Plant	SSE (g's)
Arkansas 1	0.2
Arkansas 2	0.2
Beaver Valley 1	0.12
Beaver Valley 2	0.12
Braidwood 1	0.2
Braidwood 2	0.2
Browns Ferry 1	0.2
Browns Ferry 2	0.2
Browns Ferry 3	0.2
Brunswick 1	0.16
Brunswick 2	0.16
Byron 1	0.2
Byron 2	0.2
Callaway	0.2
Calvert Cliffs 1	0.15
Calvert Cliffs 2	0.15
Catawba 1	0.15
Catawba 2	0.15
Clinton	0.25
Columbia	0.25
Comanche Peak 1	0.12
Comanche Peak 2	0.12
Cooper	0.2
Crystal River 3	0.1
D.C. Cook 1	0.2
D.C. Cook 2	0.2
Davis Besse	0.15
Diablo Canyon 1	0.75
Diablo Canyon 2	0.75
Dresden 2	0.2
Dresden 3	0.2
Duane Arnold	0.12
Farley 1	0.1
Farley 2	0.1
Fermi 2	0.15
Fitzpatrick	0.15
Fort Calhoun 1	0.17
Ginna	0.2
Grand Gulf	0.15
Hatch 1	0.148
Hatch 2	0.15
Hope Creek	0.2
Indian Point 2	0.15
Indian Point 3	0.15
Kewaunee	0.12
LaSalle 1	0.2
LaSalle 2	0.2
Limerick 1	0.15
Limerick 2	0.15
McGuire 1	0.15
McGuire 2	0.15

Millstone 1	0.254
Millstone 2	0.17
Millstone 3	0.17
Monticello	0.12
Nine Mile Point 1	0.11
Nine Mile Point 2	0.15
North Anna 1	0.12
North Anna 2	0.12
Oconee 1	0.1
Oconee 2	0.1
Oconee 3	0.1
Oyster Creek	0.17
Palisades	0.2
Palo Verde 1	0.258
Palo Verde 2	0.258
Palo Verde 3	0.258
Peach Bottom 2	0.12
Peach Bottom 3	0.12
Perry	0.15
Pilgrim 1	0.15
Point Beach 1	0.12
Point Beach 2	0.12
Prairie Island 1	0.12
Prairie Island 2	0.12
Quad Cities 1	0.24
Quad Cities 2	0.24
River Bend	0.1
Robinson (HR)	0.2
Saint Lucie	0.1
Salem 1	0.2
Salem 2	0.2
San Onofre 2	0.67
San Onofre 3	0.67
Seabrook	0.25
Sequoyah 1	0.18
Sequoyah 2	0.18
Shearon Harris 1	0.15
South Texas 1	0.1
South Texas 2	0.1
Summer	0.15
Surry 1	0.15
Surry 2	0.15
Susquehanna 1	0.1
Susquehanna 2	0.1
Three Mile Island 1	0.12
Turkey Point 3	0.15
Turkey Point 4	0.15
Vermont Yankee	0.14
Vogtle 1	0.2
Vogtle 2	0.2
Waterford 3	0.1
Watts Bar	0.18
Wolf Creek	0.12

25th percentile
min

median
mean
max
75th percentile

From: [Burnell, Scott](#)
To: [Harrington, Holly](#); [Brenner, Eliot](#); [Hayden, Elizabeth](#); [Couret, Ivonne](#); [McIntyre, David](#); [Screnci, Diane](#); [Sheehan, Neil](#); [Hannah, Roger](#); [Ledford, Joey](#); [Chandrathil, Prema](#); [Mitlyng, Viktoria](#); [Uselding, Lara](#); [Dricks, Victor](#)
Subject: SSE numbers
Date: Thursday, March 17, 2011 12:37:00 PM
Attachments: [SSE.xlsx](#)

These safe shutdown earthquake numbers are ground acceleration in terms of "g," the force of gravity.

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SEISMIC INFORMATION: SSE

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Braidwood 2	0.2
Browns Ferry 1	0.2
Browns Ferry 2	0.2
Browns Ferry 3	0.2
Brunswick 1	0.16
Brunswick 2	0.16
Byron 1	0.2
Byron 2	0.2
Callaway	0.2
Calvert Cliffs 1	0.15
Calvert Cliffs 2	0.15
Catawba 1	0.15
Catawba 2	0.15
Clinton	0.25
Columbia	0.25
Comanche Peak 1	0.12
Comanche Peak 2	0.12
Cooper	0.2
Crystal River 3	0.1
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D.C. Cook 2	0.2
Davis Besse	0.15
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Diablo Canyon 2	0.75
Dresden 2	0.2
Dresden 3	0.2
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Fitzpatrick	0.15
Fort Calhoun 1	0.17
Ginna	0.2
Grand Gulf	0.15
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Hatch 2	0.15
Hope Creek	0.2
Indian Point 2	0.15
Indian Point 3	0.15
Kewaunee	0.12
LaSalle 1	0.2
LaSalle 2	0.2
Limerick 1	0.15
Limerick 2	0.15
McGuire 1	0.15
McGuire 2	0.15

Millstone 1	0.254
Millstone 2	0.17
Millstone 3	0.17
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Point Beach 2	0.12
Prairie Island 1	0.12
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Quad Cities 2	0.24
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Robinson (HR)	0.2
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Salem 1	0.2
Salem 2	0.2
San Onofre 2	0.67
San Onofre 3	0.67
Seabrook	0.25
Sequoyah 1	0.18
Sequoyah 2	0.18
Shearon Harris 1	0.15
South Texas 1	0.1
South Texas 2	0.1
Summer	0.15
Surry 1	0.15
Surry 2	0.15
Susquehanna 1	0.1
Susquehanna 2	0.1
Three Mile Island 1	0.12
Turkey Point 3	0.15
Turkey Point 4	0.15
Vermont Yankee	0.14
Vogtle 1	0.2
Vogtle 2	0.2
Waterford 3	0.1
Watts Bar	0.18
Wolf Creek	0.12

25th percentile
min

median
mean
max
75th percentile

From: JEREMY VAN LOON, BLOOMBERG/ NEWSROOM:
To: Burnell, Scott
Subject: UCS report comment/reaction?
Date: Thursday, March 17, 2011 12:46:50 PM

Hi Scott - I'm wondering if the NRC has a comment or reaction to the Union of Concerned Scientists report from today. Kind regards, Jeremy van Loon

TTTT/49

From: Screnci, Diane
To: Chandrathil, Prema; Mitlyng, Viktoria; Uselding, Lara; Sheehan, Neil; Ledford, Joey; Hannah, Roger; Dricks, Victor
Cc: Harrington, Holly; Burnell, Scott; McIntyre, David
Subject: RE: Question about GI-199
Date: Thursday, March 17, 2011 2:09:36 PM
Attachments: Plants needing additional analysis.docx

I typed up the list of plants requiring additional analysis. Thought I'd share.

DIANE SCRENCI

SR. PUBLIC AFFAIRS OFFICER

USNRC, RI

610/337-5330

From: Screnci, Diane
Sent: Thursday, March 17, 2011 12:52 PM
To: Chandrathil, Prema
Subject: RE: Question about GI-199

Yes. I'll send to you once I type it.

DIANE SCRENCI

SR. PUBLIC AFFAIRS OFFICER

USNRC, RI

610/337-5330

From: Chandrathil, Prema
Sent: Thursday, March 17, 2011 1:50 PM
To: Screnci, Diane
Subject: Question about GI-199

Diane,

During the conf call. You had asked about....

Did we got permission to share the plants that warranted further attention...?

Prema Chandrathil-Yeamon
Public Affairs Officer
U.S. Nuclear Regulatory Commission
Region III
Lisle, IL
(630) 829-9663
prema.chandrathil@nrc.gov

TTTT/50

Attachment Plants needing additional analysis.docx (13815 Bytes) cannot be converted to PDF format.

From: McIntyre, David
To: Brenner, Eliot; Harrington, Holly; Burnell, Scott; Couret, Ivonne; Janbergs, Holly; Ledford, Joey; Hannah, Roger; Screni, Diane; Sheehan, Neil; Chandrathil, Prema; Mitlyng, Viktoria; Widomski, Michael; Landau, Mindy; Uselding, Lara
Subject: UCS Talking Point
Date: Thursday, March 17, 2011 2:45:16 PM

All – Rob Taylor developed this talking point for answering questions on the UCS report. Remember to stick one finger in your nose while speaking it, and flick it out with gusto when saying the word “safety” in the final sentence.

Dave

The NRC is aware that UCS issued a report today regarding the safety of U.S. nuclear power plants in 2010. With the NRC responding to events in Japan, we have not had time to review the report in depth. The NRC remains confident that our Reactor Oversight Program, which includes both on-site and region-based inspectors, is effectively monitoring the safety of U.S. nuclear power plants.

TTTT/51

From: [Burnell, Scott](#)
To: [Raleigh, Deann](#)
Subject: RE: And now I have a question but easy one
Date: Thursday, March 17, 2011 3:37:00 PM

You would be sounding about right – please stay tuned. :-)

From: Raleigh, Deann [mailto:DRaleigh@CURTISSWRIGHT.com]
Sent: Thursday, March 17, 2011 3:34 PM
To: Burnell, Scott
Subject: And now I have a question but easy one

Good afternoon,

During yesterday's hearing, Chairman Jaczko mentioned a "public communication" that will likely go out next week reminding licensees of equipment important to safety and NRC regulations. Do you know what form that would be? Sounds like Info Notice or RIS to me.

Thanks!

Deann

Deann Raleigh
Nuclear Regulatory Services
SCIENTECH, a business unit of Curtiss-Wright Flow Control Company
240-626-9556
draleigh@curtisswright.com

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TTTT/52

From: McIntyre, David
To: Couret, Ivonne; Burnell, Scott; Jennifer.M.Pereira@abc.com
Subject: RE: Media - Interview - ABC News Good Morning America
Date: Thursday, March 17, 2011 3:59:16 PM

Jennifer –

I'm afraid we will not have anyone available to go on camera tomorrow. However, we are happy to work with you to make sure you have the information you need to file an accurate report.

Dave McIntyre
NRC Public Affairs

From: Couret, Ivonne
Sent: Thursday, March 17, 2011 2:16 PM
To: Burnell, Scott; McIntyre, David
Subject: FW: Media - Interview - ABC News Good Morning America

This person want to talk to someone who can provide add on information not the chairman.
Ivonne

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
opa.resource@nrc.gov
301-415-8200

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From: Royer, Deanna
Sent: Thursday, March 17, 2011 1:58 PM
To: Couret, Ivonne
Subject: Media - Interview - ABC News Good Morning America

Jennifer Pereira
ABC News – Good Morning America
Jennifer.M.Pereira@abc.com
212-456-5944

Re: Interview today to air tomorrow – Evacuation plans in place in U.S.

Deanna Royer
Contract Secretary
301-415-8200

TTTT/53

From: [Chandrathil, Prema](#)
To: [McIntyre, David](#); [Harrington, Holly](#); [Couret, Ivonne](#); [Burnell, Scott](#); [Screnci, Diane](#); [Taylor, Robert](#); [Sheehan, Neil](#); [Hannah, Roger](#); [Uselding, Lara](#); [Ledford, Joey](#); [Mitlyng, Viktoria](#); [Brenner, Eliot](#)
Cc: [Kammerer, Annie](#)
Subject: RE: Huffington Post correction on MSNBC
Date: Thursday, March 17, 2011 4:01:36 PM

I have to say this---- I LOVE YOU!! Thanks for the great talking point.

From: McIntyre, David
Sent: Thursday, March 17, 2011 1:20 PM
To: Harrington, Holly; Couret, Ivonne; Burnell, Scott; Screnci, Diane; Taylor, Robert; Sheehan, Neil; Hannah, Roger; Uselding, Lara; Ledford, Joey; Mitlyng, Viktoria; Chandrathil, Prema; Brenner, Eliot
Cc: Kammerer, Annie
Subject: Huffington Post correction on MSNBC

I just filed this request for correction with The Huffington Post, which has a report of Cuomo wanting to shut IP based on the MSNBC report:

There is NO SUCH NRC REPORT! The NRC does not rank nuclear power plants according to their vulnerability to earthquakes. This "ranking" was developed by an MSNBC reporter using partial information and an even more partial understanding of how we evaluate plants for seismic risk. Each plant is evaluated individually according to the geology of its site, not by a "one-size-fits-all" model - therefore such rankings or comparisons are highly misleading. Please correct this report.

David McIntyre
NRC Office of Public Affairs

Here's the [HuffPo piece](#) . You'll note the link to "a new report from the NRC" goes to the MSNBC article.

Dave

TTTT/54

From: [Couret, Ivonne](#)
To: [Burnell, Scott](#)
Subject: RE: Edward Klump - Bloomberg News
Date: Thursday, March 17, 2011 4:11:09 PM

Okay then tell me when you are overwhelmed I can't tell.

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
opa.resource@nrc.gov
301-415-8200

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From: Burnell, Scott
Sent: Thursday, March 17, 2011 4:10 PM
To: Couret, Ivonne; McIntyre, David
Subject: RE: Edward Klump - Bloomberg News

Ivonne;

If you send it to only one of us, we don't have to debate who takes it. Thanks.

Scott

From: Couret, Ivonne
Sent: Thursday, March 17, 2011 4:09 PM
To: McIntyre, David; Burnell, Scott
Subject: FW: Edward Klump - Bloomberg News

Let me know who takes it

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
opa.resource@nrc.gov
301-415-8200

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From: Ghneim, Munira
Sent: Thursday, March 17, 2011 3:46 PM
To: Couret, Ivonne
Subject: Edward Klump - Bloomberg News

TTTT/SS

Organization – Bloomberg News

Contact – Edward Klump

Phone -713-651-4607

Email – eklump@bloomberg.net

Request – Would like statistical information on the spent fuel.

Thank you,

Munira Ghneim

Contract Secretary

Office of Information Services

301-415-1170

From: [Screnci, Diane](#)
To: [Brenner, Eliot](#); [Burnell, Scott](#); [Ledford, Joey](#); [McIntyre, David](#); [Harrington, Holly](#); [Courret, Ivonne](#); [Janbergs, Holly](#); [Hannah, Roger](#); [Sheehan, Neil](#); [Chandrathil, Prema](#); [Mitlyng, Viktoria](#); [Widomski, Michael](#); [Landau, Mindy](#); [Uselding, Lara](#)
Subject: RE: Presidential directive
Date: Thursday, March 17, 2011 4:45:50 PM
Attachments: [image001.png](#)

So, yes, we're doing a review?

DIANE SCRENCI

SR. PUBLIC AFFAIRS OFFICER

USNRC, RI

610/337-5330

From: Brenner, Eliot
Sent: Thursday, March 17, 2011 4:45 PM
To: [Burnell, Scott](#); [Ledford, Joey](#); [McIntyre, David](#); [Harrington, Holly](#); [Courret, Ivonne](#); [Janbergs, Holly](#); [Hannah, Roger](#); [Screnci, Diane](#); [Sheehan, Neil](#); [Chandrathil, Prema](#); [Mitlyng, Viktoria](#); [Widomski, Michael](#); [Landau, Mindy](#); [Uselding, Lara](#)
Subject: RE: Presidential directive

To futher elaborate ... we will be undertaking a methodical and systematic review of the information to be gleaned from this to inform a decision as to whether any changes need to be made to strengthen an already strong safety regulatory system. As a first step, the commission will be meeting Monday to begin discussing the form of this review.

Eliot

From: [Burnell, Scott](#)
Sent: Thursday, March 17, 2011 4:25 PM
To: [Ledford, Joey](#); [McIntyre, David](#); [Brenner, Eliot](#); [Harrington, Holly](#); [Courret, Ivonne](#); [Janbergs, Holly](#); [Hannah, Roger](#); [Screnci, Diane](#); [Sheehan, Neil](#); [Chandrathil, Prema](#); [Mitlyng, Viktoria](#); [Widomski, Michael](#); [Landau, Mindy](#); [Uselding, Lara](#)
Subject: RE: Presidential directive

Eliot's OK with this language:

"The NRC has received the President's request and we will be responding to it."

No timelines, no further details at this point.

From: [Ledford, Joey](#)
Sent: Thursday, March 17, 2011 4:02 PM
To: [McIntyre, David](#); [Brenner, Eliot](#); [Harrington, Holly](#); [Burnell, Scott](#); [Courret, Ivonne](#); [Janbergs, Holly](#); [Hannah, Roger](#); [Screnci, Diane](#); [Sheehan, Neil](#); [Chandrathil, Prema](#); [Mitlyng, Viktoria](#); [Widomski, Michael](#); [Landau, Mindy](#); [Uselding, Lara](#)
Subject: Presidential directive

Reuters says the President has directed us to do a systematic review of all plants. True? They want a comment, and I'm not willing to tackle this one blind.

Joey Ledford

TTTT/56

From: [Courret, Ivonne](#)
To: [Burnell, Scott](#)
Subject: Media Request - FW: Xin Wen - Peoples Daily - China
Date: Thursday, March 17, 2011 4:47:32 PM

Ivonne L. Courret
Public Affairs Officer
Office of Public Affairs
Media Desk
opa.resource@nrc.gov
301-415-8200

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From: Ghneim, Munira
Sent: Thursday, March 17, 2011 4:45 PM
To: Courret, Ivonne
Subject: Xin Wen - Peoples Daily - China

Organization - - Peoples Daily - China
Contact - Xin Wen
Phone – 703-698-1298
Email – gjbwx@hotmail.com

Request – Would like the opinion of an NRC spokesperson about the impact of what happened in Japan and the development of nuclear plants.

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

TTTT/57

From: Harrington, Holly
To: Sheehan, Neil; Taylor, Robert; Steger (Tucci), Christine; Deavers, Ron; Ghneim, Munira; Janbergs, Holly; Wittick, Susan; Widomski, Michael; Shannon, Valerie; Bonaccorso, Amy; Deavers, Ron; Ridge, Christianne; Tobin, Jennifer; Medina, Veronika; Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David
Subject: Schedule for Friday
Date: Thursday, March 17, 2011 5:08:06 PM

If anyone has heart burn, please let me know.
We'll work on weekend scheduling tomorrow. I will get it to you much earlier than this . . .

Friday

Eliot: 7:30/?
Holly: 8:30-?
Beth: morning-?

Op Center:
Neil 6 a.m. - ??
Dave: 8 a.m. – 6 p.m
Rob: 11 to 7 p.m.
Michael Widomski: 8-6 (loan from FEMA/general support in Op Center)
Scott: 1 p.m. -9 p.m.

Phones:
Brenda: 7:30 – 6 p.m.
Christine 8-5
Munira: 8-5
Deanna Royer: 8-5 (loan from)

Misc.
Susan Wittick: 8:15 a.m. to 5 p.m. (loan from OCA)
Bethany: 8 a.m. – 6 p.m.
Val: 6:45 – 4:30 p.m

Media Desk:

Ivonne: 9-7
Veronkia:7:15 to noon (loan from ADM)

Public Inquiries Desk (on 17th floor) (times approximate; not sure you schedules)

Amy Bonaccorso: 8 a.m. - 4:30 p.m. (loan)
Ron Deavers 8:30 – 7 pm.
Jenny Tobin – 8:30-6:30 (loan)
Christianne Ridge (loan) ???

TTTT/58

From: [Burnell, Scott](#)
To: [Costello, Tom \(NBC NEWS\)](#)
Subject: RE: Can you confirm?
Date: Thursday, March 17, 2011 5:21:00 PM

Tom;

No member of the public has been injured or killed by radiation associated with a U.S. nuclear power plant. Of course there have been industrial accidents at nuclear power plants, but no worker deaths due to radiation.

Scott

From: Costello, Tom (NBC NEWS) [mailto:Tom.Costello@nbcuni.com]
Sent: Thursday, March 17, 2011 5:18 PM
To: Burnell, Scott
Subject: Can you confirm?

That no one has ever been injured or killed in a U.S. nuclear power plant accident?

TTTT/59

From: Burnell, Scott
To: Batkin, Joshua; Brenner, Eliot; McIntyre, David
Subject: RE: What exactly
Date: Thursday, March 17, 2011 5:26:00 PM

Imperfect recall of Rose Garden event is a request for a "comprehensive safety review of all U.S. nuclear power plants."

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

From: Batkin, Joshua
Sent: Thursday, March 17, 2011 5:25 PM
To: Brenner, Eliot; Burnell, Scott; McIntyre, David
Subject: What exactly

Did POTUS ask us to do?

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

TTTT/60

From: [Burnell, Scott](#)
To: [Eli Kintisch](#)
Subject: RE: Science mag: Are there publicly available
Date: Thursday, March 17, 2011 5:49:00 PM

Hello Eli;

I've most likely missed your deadline anyway, and I apologize – in the future it helps to put a deadline in the subject line to attract attention. In any case, I'm not aware of any publicly available modeling on spent-fuel pool incidents. Please let me know if you need anything else. Thanks.

Scott

From: Eli Kintisch [mailto:ekintisch@aaas.org]
Sent: Thursday, March 17, 2011 2:18 PM
To: Burnell, Scott
Subject: Science mag: Are there publicly available

research studies modeling the loss of coolant from spent nuclear fuel pools that the NRC has done?

Could you send me them or refer me to them?

Deadline: 430pm today; but if we miss that, would still be useful tomorrow.

Thanks, Eli

Eli Kintisch, Reporter
Science Magazine
202 326 6446

TTTT/61

From: [Beasley, Benjamin](#)
To: [Burnell, Scott](#)
Cc: [Coyne, Kevin](#); [Stutzke, Martin](#); [Ake, Jon](#); [Kauffman, John](#)
Subject: Suggested press release on MSNBC article
Date: Thursday, March 17, 2011 5:57:35 PM

Scott,

We (RES) supported Region 1 this afternoon on a conference call with the county executives and state officials for the four counties around Indian Point. The county officials strongly encouraged us to respond to the MSNBC article. Thus, we have drafted a press release for your consideration.

Please let me know if you use this and if we can be of any other assistance.

Regards,
Ben Beasley

Draft Press Release Responding to MSNBC Article

A recent article by MSNBC ("What are the odds? US nuke plants ranked by quake risk", 3/16/2011) cites results of a U.S. Nuclear Regulatory Commission study released in September, 2010. The study investigated the implications of updated seismic hazard estimates in the central and eastern United States.

The study was prepared as a screening assessment to evaluate if further investigations of seismic safety for operating reactors in the central and eastern U.S. are warranted, consistent with NRC directives. The report clearly states that "work to date supports a decision to continue to the [next] stage...; the methodology, input assumptions, and data are not sufficiently developed to support other regulatory actions or decisions." Accordingly, the results were not used to rank or compare plants.

The study produced plant-specific results of the estimated change in risk from seismic hazards. The study did not rely on the absolute value of the seismic risk except to assure that all operating plants are safe. The plant-specific results were used in aggregate to determine the need for continued evaluation and were included in the report for openness and transparency. The use of the absolute value of the seismic hazard-related risk, as done in the MSNBC article, is not the intended use, and the NRC considers it an inappropriate use of the results.

The report reached three main conclusions: 1) Seismic hazard estimates have increased at some operating plants in the central and eastern US; 2) there is no immediate safety concern, plants have significant safety margin and overall seismic risk estimates remain small; and 3) assessment of updated seismic hazards and plant performance should continue.

TTTT/62

From: [Burnell, Scott](#)
To: Victor.Limjoco@nrcuni.com
Subject: RE: Your question on graphics
Date: Thursday, March 17, 2011 5:58:00 PM

Hello Victor;

Please check with the Department of Energy, the NRC has no graphics regarding plume projections. Thanks.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

TTTT/63

From: [Burnell, Scott](#)
To: [Courret, Ivonne](#); [McIntyre, David](#)
Subject: RE: Questions about SAMA
Date: Thursday, March 17, 2011 6:18:00 PM

Neither of us did. Please farm out to Diane/Vika for tomorrow since there's plant-specific stuff in there.

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

From: Courret, Ivonne
Sent: Thursday, March 17, 2011 6:12 PM
To: Burnell, Scott; McIntyre, David
Subject: FW: Questions about SAMA

Did either of you respond to this email cleaning the OPA Box. Ivonne

Ivonne L. Courret
Public Affairs Officer
Office of Public Affairs
Media Desk
opa.resource@nrc.gov
301-415-8200

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/>

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

From: Carl Prine [<mailto:cprine@tribweb.com>]
Sent: Wednesday, March 16, 2011 2:51 PM
To: OPA Resource
Subject: Questions about SAMA

Below is the result of your feedback form. It was submitted by

Carl Prine (cprine@tribweb.com) on Wednesday, March 16, 2011 at 14:51:18

comments: Hello. My name is Carl Prine and I'm a reporter for the Pittsburgh Tribune-Review.

Some questions:

1. I've become intrigued by staffing levels at NRC's nuclear reactor safety program over time. In 1987, for example, there were 1,640 staffers divided between the regional offices and HQ, skewed toward those in the field (850 to 790 at HQ). Cuts in the 1990s reduced that to 679 in the regions and 651 at HQ.

Today, the national staff numbers divide 3:1 HQ to regions. What are the numbers for the Nuclear Reactor Safety division? How many inspectors, for example, do you have at the plants today? And how does that compare to, say, the 1980s?

2. Proponents of the nuclear power industry like to speak of the "gold standard" of safety at the regulators and power companies. But the NRC's own reports seem to dispute this. The NRC IG investigating the oversight of Davis-Besse by NRC and FENOC concluded that financial considerations for the utility overcame safety concerns, to the point that even the back-up systems in the event of reactor

TTTT/64

vessel head failure were unlikely to have worked. Should we be concerned about the "gold standard" of safety in the industry and NRC when he look at Davis-Besse, Millstone and other problem plants?

3. NRC often analyzes "safety culture survey" returns at plants. When certain facilities have shown more than 10 percent of a staff reluctant to share safety concerns with regulators, NRC steps in to bring the culture up to standards. In 2002, half of NRC's own employees voiced concerns about raising safety or security issues without fear of retaliation. Did NRC continue to do these surveys and what are the results for both plants and NRC employees from 2002 through 2010?

4. Given the complex scenario that developed with coastal Japanese nuclear plants, in re earthquake, tsunami, the loss of power and back-up mitigating technologies, do the Severe Accident Mitigation Alternative (SAMA) plans fully take into account a "double whammy" of two or more simultaneous or linked events that could lead to facility failure and core meltdown?

I mention this because in the most recent ACRS report, the panel asked NRC again to develop better SAMA modeling for potentially catastrophic events. Why has NRC had problems doing this?

5. Does NRC have the ability to overwrite "cost-beneficial" decisions when considering SAMA/ worst case scenario implications?

6. Noting that FENOC failed to properly include all relevant information in the 2005 license reapplication for Beaver Valley Power Station Units 1 and 2, critics asked NRC to either fine the utility \$50,000 or move it to the back of the line for renewing its license. But NRC chose not to go down either path. Why not? How satisfied is NRC that BV 1&2 will withstand a serious accident or disaster?

7. In its recent SAMA ER, Besse-Davis owner FENOC on page E-21 wrote that it deleted the reactor vessel rupture event AV because the "event lacks a justifiable frequency." Given LOCA frequencies in NUREG/CR-5750, FENOC concluded that the event should be a "negligible contributor to the total CDF."

But it was at Davis-Besse itself that NRC IG and others realized that the reactor pressure vessel lid had corroded to the point that it nearly led to a loss of coolant accident, one that might not have had the mitigations of the back-up technology, which also likely would've failed.

What has been the role of NRC in ensuring that FENOC and other operators take real world examples into account when developing likely SAMAs and ERs?

organization: Pittsburgh Tribune-Review

address1: 503 Martindale St

address2:

city: Pittsburgh

state: PA

zip: 15212

country: USA

phone: 412-320-7826

From: RMTPACTSU ELNRC
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
Date: Thursday, March 17, 2011 6:51:46 PM

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 I. Dudek

TTTTT/65

From: [Burnell, Scott](#)
To: claytonm@csp.com
Bcc: [Couret, Ivonne](#)
Subject: RE: request for response to UCS report on US nuclear plant safety issues
Date: Thursday, March 17, 2011 7:18:00 PM

Mark;

I apologize that we've missed your deadline – it's just that crushingly busy here. For what it's worth, here's our response:

The NRC is aware that UCS issued a report today regarding U.S. nuclear power plant safety in 2010. The NRC remains focused on responding promptly and effectively to events in Japan. Once we have completed that important task, we'll review the UCS report in depth. At first blush it doesn't seem to contain any new insights. The NRC remains confident that our Reactor Oversight Program, which includes both on-site and region-based inspectors, is effectively ensuring U.S. nuclear power plants are meeting the NRC's strict requirements and are operating safely.

Please let me know if you need anything else. Thanks.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

From: Clayton, Mark [<mailto:claytonm@csp.com>]
Sent: Thursday, March 17, 2011 3:17 PM
To: OPA Resource
Subject: request for response to UCS report on US nuclear plant safety issues

Hi Eliot or Scott,

I'm writing about the Union of Concerned Scientists report on US nuclear plant safety released today. I wondered if you could provide a response or statement on this report. I will be filing this article by 4:30 p.m. - just over an hour from now.

Thanks for your thoughts,

Mark

Mark Clayton
Staff Writer
The Christian Science Monitor
617-450-2672
claytonm@csmonitor.com

TTTT/66

From: [Burnell, Scott](mailto:Burnell.Scott)
To: tony.dokoupil@newsweek.com
Bcc: [Couret, Ivonne](mailto:Couret.Ivonne)
Subject: RE: Newsweek query -- time sensitive
Date: Thursday, March 17, 2011 7:34:00 PM

Hello Tony;

I'm very sorry for the delay, we're working through an incredible backlog of requests. The NRC sets training requirements for plant operators and we set emergency planning standards for the plants, but we don't get into the areas you're examining. I'd suggest reaching out to the Nuclear Energy Institute for any information they might have on these topics. Thanks.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

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

From: tony dokoupil [<mailto:tony.dokoupil@newsweek.com>]
Sent: Wednesday, March 16, 2011 11:56 AM
To: OPA Resource
Subject: Newsweek query -- time sensitive

Below is the result of your feedback form. It was submitted by

tony dokoupil (tony.dokoupil@newsweek.com) on Wednesday, March 16, 2011 at 11:55:42

comments: Dear NRC,

For next week's magazine, I'm working on a piece about nuclear energy's first responders and I was hoping to talk with someone there about the culture of nuclear plant workers and the training required of them. Most of all, I'm interested in the following questions:

1. How have the standards for control room operators and plant managers changed, if at all, since Three Mile Island?
2. To what extent, then and now, is there a culture of self-sacrifice in the nuclear community? In other words, who are the first responders to a nuclear situation -- the local employees or some other specialists?
3. In the event of an emergency are plant workers generally expected to risk their lives to prevent a meltdown? And is that expectation explicit (like telling new Army recruits that they might be killed) or implicit (rooted in the camaraderie of the workers themselves)?

Many thanks in advance -- I'm around all day.

Best,

Tony Dokoupil
Staff Writer
Newsweek
212.445.4430

TTTT/67

From: [Burnell, Scott](#)
To: [Baum, Robin](#)
Subject: RE: FrROBIN-Message
Date: Thursday, March 17, 2011 8:13:00 PM

No – is there a concern?

From: Baum, Robin
Sent: Thursday, March 17, 2011 8:13 PM
To: Brenner, Eliot; Burnell, Scott
Subject: FrROBIN-Message

NBC – did you just see story by chance?

Robin A. Baum
DeputyAsstGC/Special Counsel for Acquisition
Office of the General Counsel
U.S. Nuclear Regulatory Commission
(301) 415-2202
robin.baum@nrc.gov

TTTT/68

From: [Burnell, Scott](#)
To: [Brenner, Eliot](#); [Wald, Matthew](#)
Subject: RE: a request for help on a major story
Date: Thursday, March 17, 2011 8:15:00 PM

Matt's in the database with Eliot as the contact

From: Brenner, Eliot
Sent: Thursday, March 17, 2011 7:20 PM
To: Wald, Matthew
Cc: Burnell, Scott
Subject: RE: a request for help on a major story

Yeah. Let me know when you are coming so I get the guy into my office.

Scott will clear you in.

From: Wald, Matthew [<mailto:mattwald@nytimes.com>]
Sent: Thursday, March 17, 2011 7:18 PM
To: Brenner, Eliot; Burnell, Scott
Subject: RE: a request for help on a major story

Many thanks, Eliot. Just shoot me an e-mail telling me if I should stop at White Flint tomorrow morning.

From: Brenner, Eliot [<mailto:Eliot.Brenner@nrc.gov>]
Sent: Thursday, March 17, 2011 7:17 PM
To: Burnell, Scott; Wald, Matthew
Subject: RE: a request for help on a major story

Scott: I have someone lined up. I am still at work doing something PRA related.

TTTT/69

From: [Erin Thompson](#)
To: [Burnell, Scott](#)
Subject: Re: Media inquiry from Guam
Date: Thursday, March 17, 2011 9:51:32 PM

Thanks!

On 3/18/11 11:35 AM, "Burnell, Scott" <Scott.Burnell@nrc.gov> wrote:

Hello Erin;

I apologize for the delay in getting back to you, it really has been that busy.

All the available information continues to indicate U.S. territories, including Guam, will avoid harmful levels of radiation. It's possible (but unlikely) that today's sensitive equipment might detect very small amounts of radioactive material, but again, Guam is expected to avoid harmful radiation levels. The only thing residents of Guam need to do at this point is stay informed by listening to their local officials.

We're not in a position to comment on snapshots of conditions at Fukushima since events continue to unfold.

Thanks.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

TTTT/70

From: Brenner, Eliot
To: Hayden, Elizabeth; Burnell, Scott; Harrington, Holly; McIntyre, David; Couret, Ivonne; Shannon, Valerie; Janbergs, Holly; Akstulewicz, Brenda; Wittick, Susan; Royer, Deanna; Bonaccorso, Amy; Deavers, Ron; Tobin, Jennifer; Taylor, Robert; Steger (Tucci), Christine; Ghneim, Munira; Widomski, Michael
Subject: kudos to all
Date: Thursday, March 17, 2011 10:04:26 PM

Four hours ago, the chairman called me to tell me to go home and get some rest. So, here I sit in a hotel room finishing up my emails and listening to some guy from Burson-Marstetler hustle me for business. I finally told him I had to get off the line because I had something important to do. (he made some good points that perhaps we can use going forward, but I don't think I'll hire him.)

What I had to do was tell you what the chairman also said to me. He told me that he thought Public Affairs was doing a great job in dealing with all the issues being thrown at us. I always agree with the chairman, well most of the time, and this happens to be one of them.

Not only have OPAers pitched in with long days and long nights, others in the agency have now come to our aid and it is making our collective job much easier. In fact, we are now bringing in some additional help and I suspect when all the paperwork is done you may recognize at least one of the names.

I am so honored to be working with such a bunch of professionals. I can go out with the chairman on his many rounds and know without fail that the job is getting done.

As reporters, many of us had front row seats at history. Today, we are part of making history and it is a time we will never forget. The days will continue to be long, but hopefully we can start giving folks some time off. One thing to remember: This is a marathon, not a sprint. (Yeah, how many times have you heard that metaphore used?) Pace yourself. Take time to go outside and enjoy the spring, feel the sun on your face, and come back knowing you are doing a damn fine job.

I thank you.

Eliot

TTTT/71

From: LIA11 Hoc
To: RMTFACTSU_ELNRC; Harrington, Holly; Burnell, Scott; McIntyre, David; PMT01 Hoc; Marshall, Jane
Subject: RE: HELP: Sen Roberts iodine for AMCITS
Date: Thursday, March 17, 2011 10:51:35 AM

Mike I didn't see your name on the e-mail chain, didn't realize this was your request. International liaison is reaching out to our NRC team in Tokyo to determine the need for KI. I am trying to also determine who can help with the customs issue discussed in the e-mail.

Beth

From: RMTFACTSU_ELNRC [mailto:RMTFACTSU_ELNRC@ofda.gov]
Sent: Thursday, March 17, 2011 10:31 AM
To: LIA11 Hoc; Harrington, Holly; Burnell, Scott; McIntyre, David; PMT01 Hoc; Marshall, Jane
Subject: RE: HELP: Sen Roberts iodine for AMCITS

Beth, I'm the one who is asking for Ops Center help. Have we heard of a need for these pills in Japan?

Thanks!

Michael I. Dudek

From: LIA11 Hoc [mailto:LIA11.Hoc@nrc.gov]
Sent: Thursday, March 17, 2011 10:26 AM
To: Harrington, Holly; RMTFACTSU_ELNRC; Burnell, Scott; McIntyre, David; PMT01 Hoc; Marshall, Jane
Subject: RE: HELP: Sen Roberts iodine for AMCITS

We have talked about this in the LT room and have forwarded this to our liaisons at USAID .

Beth Reed

From: Harrington, Holly
Sent: Thursday, March 17, 2011 10:08 AM
To: RMTFACTSU_ELNRC; Burnell, Scott; McIntyre, David; PMT01 Hoc; Marshall, Jane
Cc: LIA11 Hoc
Subject: RE: HELP: Sen Roberts iodine for AMCITS

Believe this belongs with the federal liaison folks

From: RMTFACTSU_ELNRC [mailto:RMTFACTSU_ELNRC@ofda.gov]
Sent: Thursday, March 17, 2011 10:06 AM
To: Harrington, Holly; Burnell, Scott; McIntyre, David; PMT01 Hoc; Marshall, Jane
Subject: HELP: Sen Roberts iodine for AMCITS

Holly, PMT: Can you help with this?

From: Shane, Lynnea L [mailto:ShaneLL@state.gov]
Sent: Thursday, March 17, 2011 10:03 AM
To: RMT_FACTSU
Cc: Gatz, Karen L

TTTT/72

Subject: Sen Roberts iodine for AMCITS

Hello OFDA colleagues

We are getting a few inquiries from congressional offices regarding requests to get various supplies to Japan. In this case there is a customs issue with the Japanese government to allow this brand of iodine pills into the country. Is this something that we should refer to you? Have you heard of a need for these pills in Japan? Should we refer them to a different office?

Thanks very much for your assistance.

Lynnea Shane

Director, Senate Liaison Office

Bureau of Legislative Affairs

U.S. Department of State

Russell Senate Office Building room 189

Tel. 202-228-1602

This email is UNCLASSIFIED.

From: Owens, Theda (Roberts) [mailto:Theda_Owens@roberts.senate.gov]

Sent: Thursday, March 17, 2011 7:54 AM

To: Shane, Lynnea L

Subject: RE: JAPAN EARTHQUAKE UPDATE 10 - March 16, 2011

Lynnea,

Thank you for taking my call yesterday. Due to the urgency of this request, I was hoping if there was any way to expedite via leg affairs, you might be able to help me do so. If that doesn't make a difference, I understand. But if you can push it faster in any way, that is much appreciated.

Thanks again. If you need anything at all from me, please do not hesitate to ask.

~Theda

Situation:

"We (Beckloff Associates) are a regulatory and scientific consulting firm in Overland Park, KS. We have a client, Fleming Pharmaceuticals, Fenton, MO, that produces a product called ThyroShield[®], which is an oral solution of potassium iodide. This product is an FDA approved drug for the use of protecting an individual from harmful effects from uptake of radioactive iodine. As you can imagine, this drug is of very high value to people in Japan at this time and Fleming Pharmaceuticals has been inundated with interest in this product.

Some of the contacts they have received are from US-based companies that wish to purchase and send the product to their employees that live and work in Japan. The need to receive this medication is quite urgent under the current circumstances. However, this particular medication from Fleming is not approved in Japan. They need to make this shipment (and perhaps later additional shipments) as soon as possible – perhaps within

24 -48 hours.

The issue that we are facing is to get this through the Japanese Customs as well as, and in particular, the Japanese Ministry of Health, Labour and Welfare (MHW) agency when the shipment arrives and to get it quickly to the people that need it. We would like to point out that this will not be distributed to the general Japanese public but only to the employees and presumably their families of the US companies in Japan. Particularly, the shipment requires a Import License from the MHW.

We would be most appreciative if you could provide any assistance in obtaining an Import License from the MHW in an expedited fashion.”

From: Shane, Lynnea L [mailto:ShaneLL@state.gov]
Sent: Wednesday, March 16, 2011 5:39 PM
To: Owens, Theda (Roberts)
Subject: FW: JAPAN EARTHQUAKE UPDATE 10 - March 16, 2011

Hi Ms Owens,

Below is our latest update on the situation in Japan that also includes our contact points including the dedicated email for congressional offices. JapanUSCcongressional@state.gov. You can forward the details of your case directly to that address.

Thanks
Lynnea

Lynnea Shane
Director, Senate Liaison Office
Bureau of Legislative Affairs
U.S. Department of State
Russell Senate Office Building room 189
Tel. 202-228-1602

This email is UNCLASSIFIED.

From: Penoyar, Sandra
Sent: Wednesday, March 16, 2011 1:33 PM
Subject: JAPAN EARTHQUAKE UPDATE 10 - March 16, 2011

In order to focus attention on congressional inquiries and provide you with prompt updates about constituents affected by the March 11 earthquake and tsunami in Japan, **we have created a dedicated email address:** JapanUSCcongressional@state.gov. If you have already been in contact with us via JapanEmergencyUSC@state.gov, there is no need to resend; we have your information on file. In addition, we will add your email address to the State Department Liaison Office's daily

Japan updates. If anyone else on your staff would like to be added to the distribution list for this, please email: PenoyarS@state.gov.

We want to update you on the efforts of U.S. consular officers in the affected areas of Japan. There are currently four consular assistance teams in Miyagi and Ibaraki prefectures; they are using information from our inquiry database to seek out U.S. citizens we believe are in those areas, going door-to-door, talking with local security and healthcare officials, and visiting shelters and evacuation centers. To date, we have not received any reports of U.S. citizen deaths. The Sendai team is providing emergency consular assistance at the Sendai International Relations Association offices (SIRA) in Sendai, and there are also teams at the Narita and Haneda airports to assist U.S. citizens who are seeking to depart Japan.

Regarding the nuclear incidents in and around Fukushima, the Japan Nuclear Industrial Safety Agency (NISA) <http://www.nisa.meti.go.jp/english/> recommends that people who live within 20 kilometers of the Fukushima Nuclear Power Plant in Okumacho evacuate the area immediately, and that people in the zone between 20 and 30 km of the plant stay indoors at home or at work. The Japanese authorities have confirmed that the situation remains serious. The U.S. government and all experts are fully engaged in analyzing the issues, including those regarding Fukushima reactor, in close consultation with the Japanese Government.

We continue to send out updated messages through our Warden network in Japan; these messages, along with other useful information, can be viewed on our website: <http://travel.state.gov> under "Japan Earthquake and Pacific Tsunami." Additional information is available through the U.S. Embassy Tokyo website at: <http://japan.usembassy.gov/>. Japan situation and congressional contact information will be updated regularly on <http://travel.state.gov/congress/>.

How to help: We encourage cash donations. The web site www.interaction.org has a list of organizations accepting contributions. The American Red Cross is accepting donations of \$10 by texting REDCROSS to 90999.

USAID's Office of Foreign Disaster Assistance (OFDA) is coordinating the overall response management and humanitarian assistance effort. AID/OFDA can be reached at RMT_PACTSU@ofda.gov (underscore between RMT and PACTSU), Phone: 202 712 0039.

JAPAN EARTHQUAKE UPDATE 10

Japanese Police reported 3771 dead, 7843 missing, and 2044 injured. Embassy Tokyo has received no reports of U.S. citizen fatalities. Internally displaced persons number 530,000.

In a very rare televised address, the Japanese Emperor told citizens not to give up hope in the face of the earthquake and tsunami. He expressed deep concern about the nuclear situation.

Significant aftershocks continue, including a 6.0 magnitude event 60 miles offshore Tokyo at 2352 EDT March 15.

Most airports continue to operate, but ground transport is erratic due to gas and electricity shortages. Tokyo Metro asked commuters to avoid peak hours.

Currently, TEPCO can only supply 33 million kilowatts, leaving a shortfall of 4 million kilowatts. Several hundred thousand phone and internet connections remain disconnected.

Damage from the earthquake is expected to exceed the \$119 billion damage from the 1995 Kobe earthquake.

FUKUSHIMA DAI-ICHI NUCLEAR POWER PLANT STATUS

A fire at reactor No. 4 led TEPCO to pull workers temporarily from the site, according to press. NRC is working to confirm the status of the fire and cooling water.

Forecasts for March 16 show winds blowing seaward.

Smoke began rising from reactor No. 3. Japanese Chief Cabinet Secretary Edano said the reactor's containment vessel might have been damaged.

Japanese Defense Minister Kitazawa said Self Defense Forces might be deployed to the Fukushima plant. Media report SDF helicopters have aborted water drops over reactor No. 3 due to safety concerns.

Minister Kitazawa said U.S. Forces Japan fire trucks delivered March 14 will be used to pump water to cool reactors No. 3 and No. 4. Trained TEPCO operators are now en route to the site.

Media report failure of containment at reactors No. 2 and 3. NRC is unable to confirm the levels of damage and radiation. Information flow and data gathering remain problematic.

U.S. AND INTERNATIONAL RESPONSE

Japan requested foreign consequence management support, transport of pumps, boron, fresh water, remote cameras, global hawk surveillance, evacuation support, medical support, decontamination, and radiation monitoring. U.S. Forces Japan is evaluating the request.

In a press conference, Ambassador Roos said the U.S. government and people were "stepping up in countless ways for the Japanese people." Recognizing conflicting reports, Amb. Roos committed to providing as much up-to-date information as possible.

U.S. Urban Search and Rescue (USAR) teams concluded their assignment in Iwate Prefecture without finding survivors. The teams will be reassigned to work with Chinese and UK USAR teams.

The Philippines and Malaysia announced they would monitor Japanese food imports for radiation.

To date, 102 countries and 14 international organizations have offered assistance.

CONSULAR ISSUES

Australia updated its travel advisory, noting the government had authorized the voluntary departure of dependants of Australian officials in Tokyo.

France advised its citizens to return home or relocate to the south of Japan. Air France planes are en route to Japan to assist in repatriation.

Austria is moving its embassy to Osaka due to radiation concerns.

The Chinese Embassy is sending buses to move its nationals from Miyagi, Fukushima, Ibaraki, and Iwate prefectures.

In addition to Ibaraki, Miyagi and Iwate prefectures, U.S. consular teams are in Tokyo area airports and Misawa Air Base.

Consulate General Hong Kong and AIT Taipei issued warden messages citing host government reports that there are no local threats from the nuclear situation in Japan.

This email is UNCLASSIFIED.

From: Akstulewicz, Frank
To: Dean Murphy; Burnell, Scott
Subject: RE: Nuclear Construction USA
Date: Thursday, March 17, 2011 12:13:43 PM

Hello Mr. Murphy,

While I would like to respond to your specific questions, the NRC has been responding to all inquiries through our Office of Public Affairs during the events in Japan. I am forwarding your request on to them.

Thank you for your interest.

Frank Akstulewicz

From: Dean Murphy [mailto:dmurphy@eyeforenergy.com]
Sent: Thursday, March 17, 2011 9:04 AM
To: Akstulewicz, Frank
Subject: Nuclear Construction USA

Hi Frank

I was hoping to have a brief telephone conversation with you either this week or next with regards to the nuclear construction work US NRC are involved with.

- How has the nuclear market in the US developed/changed over the past 12months?
- What challenges and opportunities do you see for US NRC for 2011 and beyond?
- How do you see the events in Japan affecting the US nuclear renaissance and the nuclear industry globally?

I am beginning research for the 3rd Annual Nuclear Construction Summit and want to ensure that the program discusses the most topical issues for the US market.

See www.nuclearenergyinsider.com/construction for last year's conference website.

Please let me know a good time to call.

Best Regards

Dean Murphy
Senior Industry Analyst
Nuclear Energy Insider

Tel: +44 (0) 207 375 7204
US TOLL FREE: 1800 814 3459 ext 7204
Address: 7-9 Fashion St, London, E1 6PX, UK
Email: dmurphy@eyeforenergy.com
Website: <http://analysis.nuclearenergyinsider.com/>

TTTT/73

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7-9 Fashion Street, London, E1 6PX, UK

From: [Beattie, Jeff](#)
To: [Burnell, Scott](#)
Date: Thursday, March 17, 2011 2:53:15 PM

Hope you hanging in there ok:

Gotta get you on the record on a few things that are probably rote for you by now:

- 1.) How often does NRC update earthquake analyses for US plants, and do you see a need to re-do such analyses in light of Japan, either for all US plants or select plants.

- 2.) Does the NRC think there is a need to re-evaluate backup power requirements in light of Japan? Lochbaum says most US plants have four hour batteries, and that they should be longer-lived.

TTTT/74

From: [Harrington, Holly](#)
To: [Taylor, Robert](#); [McIntyre, David](#); [Burnell, Scott](#)
Subject: RE: Interview Request: USC NRC Report
Date: Thursday, March 17, 2011 3:26:13 PM

small edits and then run by someone . . . Eliot is busy. ET maybe just so we have someone signing off . . .

The NRC is aware that Union of Concerned Scientists issued a report today regarding the safety of U.S. nuclear power plants in 2010. With the NRC monitoring events in Japan, we have not had the opportunity to review the report in depth. The NRC remains confident that our Reactor Oversight Program, which includes both on-site and region-based inspectors, is effectively monitoring the safety of U.S. nuclear power plants.

From: Taylor, Robert
Sent: Thursday, March 17, 2011 2:12 PM
To: [Harrington, Holly](#); [McIntyre, David](#); [Burnell, Scott](#)
Subject: RE: Interview Request: USC NRC Report

Talking Point for inquiries regarding the latest UCS report on US plants:

The NRC is aware that UCS issued a report today regarding the safety of U.S. nuclear power plants in 2010. With the NRC responding to events in Japan, we have not had time to review the report in depth. The NRC remains confident that our Reactor Oversight Program, which include both on-site and region-based inspectors, is effectively monitoring the safety of U.S. nuclear power plants.

From: [Harrington, Holly](#)
Sent: Thursday, March 17, 2011 1:51 PM
To: [McIntyre, David](#); [Burnell, Scott](#)
Cc: Taylor, Robert
Subject: RE: Interview Request: USC NRC Report

Yes please

From: [McIntyre, David](#)
Sent: Thursday, March 17, 2011 1:49 PM
To: [Harrington, Holly](#); [Burnell, Scott](#)
Cc: Taylor, Robert
Subject: RE: Interview Request: USC NRC Report

If Scott doesn't get here would you like me to put Rob on it?

From: [Harrington, Holly](#)
Sent: Thursday, March 17, 2011 1:19 PM
To: [Burnell, Scott](#); [McIntyre, David](#)
Cc: Taylor, Robert
Subject: FW: Interview Request: USC NRC Report
Importance: High

TTTT/75

I'm assuming we don't have a comment, but just checking to see if anyone has actually read the report enough to say anything.

From: Hannah, Roger
Sent: Thursday, March 17, 2011 12:59 PM
To: Harrington, Holly
Cc: Ledford, Joey
Subject: Fw: Interview Request: USC NRC Report
Importance: High

Do we have an "official" statement?
Roger Hannah, APR
Senior Public Affairs Officer
US Nuclear Regulatory Commission
Region 2, Atlanta, Ga.

This email is being sent from an NRC Blackberry device.

From: Gura, David <dgura@americanpublicmedia.org>
To: Hannah, Roger
Sent: Thu Mar 17 12:56:27 2011
Subject: Interview Request: USC NRC Report

I'm a reporter for Marketplace, the public radio business/economics program.

I'm preparing a report for tomorrow's Marketplace Morning Report on the Union of Concerned Scientists report on The NRC and Nuclear Power Plant Safety in 2010.

Is anyone from the NRC available today, to comment on its findings? In lieu of that, have you issued a statement from which I could quote?

Thanks very much,
David Gura

--

DAVID GURA
Reporter, Marketplace
American Public Media

1750 K Street, NW, Suite 300
Washington, DC 20006

+1 202 263-0201 (office)
+1 202 263-0205 (facsimile)
dgura@marketplace.org
[@davidgura](#)

From: [Harrington, Holly](#)
To: [Bonaccorso, Amy](#); [Burnell, Scott](#); [McIntyre, David](#)
Cc: [Deavers, Ron](#); [Tobin, Jennifer](#); [Ridge, Christianne](#)
Subject: RE: Nuclear contamination of aircraft operating in Northern Japan
Date: Thursday, March 17, 2011 3:28:11 PM

I will send to DHS to chase down.

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

From: Bonaccorso, Amy
Sent: Thursday, March 17, 2011 2:23 PM
To: Burnell, Scott; McIntyre, David
Cc: Deavers, Ron; Harrington, Holly; Tobin, Jennifer; Ridge, Christianne
Subject: FW: Nuclear contamination of aircraft operating in Northern Japan

FOLKS:

I've been working with Todd Barber for two days via phone and I need help. His concerns may merit talking to some technical experts in the Ops Center or forwarding to the military (?). He has reached out to FAA (no response), and Helen (our DHS contact we are referring these concerns to below) and they still don't have any guidance to give him - but took notes off of it.

He is with Gulf Stream Aerospace and they really need to know what danger these exposed aircraft pose once they are back from Japan. They know how to deal with people - but don't know how to address the aircraft. Is the water they use to clean it contaminated, for instance? Someone has to know (maybe the military?). The Japanese are hiring planes to take them out of these locations because the commercial airlines aren't flying, and this company makes some of those planes and are getting questions.

In particular, he wants to know what isotopes are coming out of these reactors and their half-life - this would help them. He has a detailed email that he sent to Helen below.... He said he doesn't necessarily need perfect answers to everything up front - but something to get them started.

His phone number is 912-965-5317. *el*

Thanks,

Amy

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

From: todd.barber@gulfstream.com [<mailto:todd.barber@gulfstream.com>]
Sent: Thursday, March 17, 2011 2:09 PM
To: Bonaccorso, Amy
Subject: Fw: Nuclear contamination of aircraft operating in Northern Japan

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TTTTT/76

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----- Forwarded by Todd Barber/SAV/GAC on 03/17/2011 02:08 PM -----

From: Todd Barber/SAV/GAC

To: Helen.Sterling@DHS.gov

Date: 03/17/2011 10:11 AM

Subject: Nuclear contamination of aircraft operating in Northern Japan

Ms. Sterling,

I am Todd Barber, a Technical Specialist with Gulfstream Aerospace in Savannah, Ga. Gulfstream is a Division of General Dynamics that builds Business Jets. Our aircraft are operated around the world, and have the range and capability to travel over 7000 miles non-stop. In the past 48 hours we have received requests from several aircraft operators regarding exposure to radiation from the Fukushima Daiichi plant disaster. Some of the aircraft travel routinely to the US and are maintained in the US and some are foreign Government aircraft based in Japan with US citizens traveling periodically to the aircraft to maintain them.

As you see US citizens have or could have contact with these airplanes. We (Gulfstream) are not nor do we employ any Nuclear experts as this is not a normal operating environment for any civilian aircraft. We request assistance with the following technical aspects of this disaster.

- What is the life of the harmful isotopes that are in the atmosphere over Northern Japan from the plant disaster?

-Is there a length of Quarantine time that these particles would become safe and be of no risk to personnel operating, Servicing, or Maintaining an aircraft that has come into contact with them?

-Is there an acceptable decontamination procedure for equipment in such an environment?

-If so, who could provide it, is oversight necessary, and how are cleanup products to be disposed of?

-If an operator contacts us that they believe they are contaminated, who should they contact for assistance for safe cleanup of the contaminants

-The ash, dust, and other airborne particulate could be on the outside of the aircraft, inside the fuselage from bleed air used for cabin pressurization, and inside the engines.

-Is the particulate altered by heat from passing thru a jet engine? and will it pose a threat to someone disassembling and maintaining that engine at a later time?

-How high in the atmosphere (Stratosphere and Troposphere) will the plume of debris go, and how long will it be there and be hazardous.

-Is the particulate that is coming out of the reactor and present in the atmosphere corrosive?

-Does it have an impact upon metals such as Aluminum, low and high strength Chromoly steels, Cres Steels, or Inconel.

-Does it impact composite materials such as Carbon Fiber or Fiberglass?

-Does it impact Plastics and lexan materials such as those used for light lenses?

-Does it impact Electrical Wiring, Wire insulation, Solid State Electrical components, or Software

These are the basic questions we are trying to understand at present, but any info you can provide would be greatly appreciated.

Best Regards,

Todd Barber
Gulfstream Aerospace Corporation
Technical Specialist II - Fleet Support
Service Engineering, D468
(912) 965-5317
Todd.Barber@Gulfstream.com

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From: Burnell, Scott
To: JEREMY VAN LOON, BLOOMBERG/ NEWSROOM:
Subject: RE: UCS report comment/reaction?
Date: Thursday, March 17, 2011 3:55:00 PM

Hi Jeremy;

Sorry for the delay in responding.

The NRC is aware that UCS issued a report today regarding U.S. nuclear power plant safety in 2010. The NRC remains focused on responding promptly and effectively to events in Japan. Once we have completed that important task, we'll review the UCS report in depth. At first blush it doesn't seem to contain any new insights. The NRC remains confident that our Reactor Oversight Program, which includes both on-site and region-based inspectors, is effectively ensuring U.S. nuclear power plants are meeting the NRC's strict requirements and are operating safely

Thanks.

Scott

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

From: JEREMY VAN LOON, BLOOMBERG/ NEWSROOM: [<mailto:jvanloon@bloomberg.net>]
Sent: Thursday, March 17, 2011 12:47 PM
To: Burnell, Scott
Subject: UCS report comment/reaction?

Hi Scott - I'm wondering if the NRC has a comment or reaction to the Union of Concerned Scientists report from today. Kind regards, Jeremy van Loon

TTTTT/77

From: McIntyre, David
To: Harrington, Holly; Taylor, Robert; Widomski, Michael; Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; Chandrathil, Prema; Dricks, Victor; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Screnci, Diane; Sheehan, Neil; Uselding, Lara
Subject: RE: Plume Questions
Date: Thursday, March 17, 2011 4:28:35 PM

Yes, in the conference call with the state rad directors, Josie Piccone mentioned that DOE has been designated as lead agency for monitoring effort in the US. I'm updating the Talking Points accordingly and will add this number.

From: Harrington, Holly
Sent: Thursday, March 17, 2011 4:26 PM
To: Taylor, Robert; Widomski, Michael; 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: Plume Questions

Send plume questions to DOE: 202 586 4940

Per DHS! Yah. We finally have some help!!

TTTT/78

From: [Burnell, Scott](#)
To: scott.disavino@thomsonreuters.com; [OPA Resource](#)
Cc: timothy.gardner@thomsonreuters.com
Subject: RE: Two senators ask US to review all nuclear plants
Date: Thursday, March 17, 2011 5:00:00 PM

Don't know if anyone already got back to you, but you probably saw the President in the Rose Garden about a review of all plants. Therefore:

We will be undertaking a methodical and systematic review of the information to be gleaned from this to inform a decision as to whether any changes need to be made to strengthen an already strong safety regulatory system. As a first step, the commission will be meeting Monday to begin discussing the form of this review.

From: scott.disavino@thomsonreuters.com [<mailto:scott.disavino@thomsonreuters.com>]
Sent: Thursday, March 17, 2011 1:00 PM
To: OPA Resource; Burnell, Scott
Cc: timothy.gardner@thomsonreuters.com
Subject: Two senators ask US to review all nuclear plants

Hi,

One more question – any reaction from NRC on the two senators calling for review of all nuclear plants

I realize I am flooding you with requests

Thanks,

Scott

Two senators ask US to review all nuclear plants - RTRS

Today 12:57

WASHINGTON, March 17 (Reuters) - Two Democratic U.S. senators said they have asked the Nuclear Regulatory Commission to review the capacity of the country's nuclear plants to withstand disasters in the wake of the Japan crisis.

Senators Barbara Boxer and Tom Carper asked for the review in a letter to the chairman of the NRC, Gregory Jaczko.

((timothy.gardner@thomsonreuters.com; +1 202-898-8360; timothy.gardner.reuters.com@reuters.net))

Keywords: NUCLEAR US/REVIEW

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TTTT/79

Alerts History

- Today 12:49 - TWO DEMOCRATIC US SENATORS ASK NRC TO REVIEW CAPACITY OF ALL US NUCLEAR FACILITIES TO WITHSTAND DISASTERS

nN17219302

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From: [Bowman, Eric](#)
To: [McDermott, Brian](#)
Cc: [LIA08 Hoc](#); [Rosenberg, Stacey](#); [McGinty, Tim](#); [Burnell, Scott](#); [Williamson, Edward](#); [Morris, Scott](#); [Lew, David](#); [Wert, Leonard](#); [Pederson, Cynthia](#); [Howell, Art](#); [Westreich, Barry](#)
Subject: ACTION REQUESTED: Japanese Earthquake-related Information Notice
Date: Thursday, March 17, 2011 5:04:37 PM
Attachments: [IN 11-xx B5b Earthquake.docx](#)

Brian,

The current version of the IN is attached. We chose to use an IN for this as the fastest generic communications vehicle available in light of our desire to issue it prior to the Commission meeting on the subject scheduled for Monday.

V/R Eric

From: McDermott, Brian
Sent: Thursday, March 17, 2011 2:38 PM
To: McGinty, Tim; Burnell, Scott; Williamson, Edward; Morris, Scott
Cc: LIA08 Hoc; Rosenberg, Stacey; Bowman, Eric
Subject: RE: ACTION REQUESTED: Japanese Earthquake-related Information Notice

Tim,

We've tasked the item for review this evening. With comments due to NRR\Tim McGinty by 0700 on 3/18.

Brian

From: McGinty, Tim
Sent: Thursday, March 17, 2011 12:57 PM
To: Burnell, Scott; Williamson, Edward; McDermott, Brian; Morris, Scott
Cc: LIA08 Hoc; Rosenberg, Stacey; Bowman, Eric
Subject: FW: ACTION REQUESTED: Japanese Earthquake-related Information Notice

We are fast tracking this proposed IN. I will want the ET in the Ops Center to review it. Attached is an early draft. Feedback welcomed. Tim

From: McGinty, Tim
Sent: Thursday, March 17, 2011 12:42 PM
To: Bowman, Eric; Thomas, Eric; Correia, Richard; Mathew, Roy
Cc: Rosenberg, Stacey; Hiland, Patrick; Westreich, Barry; Boger, Bruce; Leeds, Eric; Quay, Theodore; Blount, Tom; Skeen, David
Subject: RE: ACTION REQUESTED: Japanese Earthquake-related Information Notice

My apologies. We have now been tasked to issue the IN tomorrow. Need your comments and concurrence by mid-afternoon today, COB at the latest. Tim

From: Bowman, Eric
Sent: Thursday, March 17, 2011 11:37 AM
To: Thomas, Eric; Correia, Richard; Mathew, Roy
Cc: Rosenberg, Stacey; McGinty, Tim; Hiland, Patrick; Westreich, Barry
Subject: ACTION REQUESTED: Japanese Earthquake-related Information Notice

TTTT/80

Importance: High

All,

We plan to issue the attached Information Notice early next week on the implications of the recent Japanese Earthquake. In support of that effort, your comments and Divisional concurrence are requested by tomorrow afternoon.

Very many thanks in advance for your efforts.

V/R; R/ Eric

Eric E. Bowman
Sr. Project Manager
Generic Communications & Power Uprate Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
301-415-2963
Eric.Bowman@nrc.gov

Attachment IN 11-xx B5b Earthquake_1.docx (29574 Bytes) cannot be converted to PDF format.

From: [Harrington, Holly](#)
To: [Burnell, Scott](#); [Uselding, Lara](#); [McIntyre, David](#)
Cc: [Couret, Ivonne](#); [Screnci, Diane](#); [Sheehan, Neil](#); [Mitlyng, Viktoria](#); [Dricks, Victor](#); [Chandrathil, Prema](#); [Ledford, Joey](#); [Hannah, Roger](#)
Subject: RE: UCS Releases U.S. Nuclear Safety Report
Date: Thursday, March 17, 2011 5:31:03 PM

Thanks scott. We already distributed something earlier. Folks – stay with earlier version.

From: Burnell, Scott
Sent: Thursday, March 17, 2011 5:28 PM
To: Uselding, Lara; Harrington, Holly; McIntyre, David
Cc: Couret, Ivonne; Screnci, Diane; Sheehan, Neil; Mitlyng, Viktoria; Dricks, Victor; Chandrathil, Prema; Ledford, Joey; Hannah, Roger
Subject: RE: UCS Releases U.S. Nuclear Safety Report

In case you all haven't seen anything similar, here's my tweak:

The NRC is aware that UCS issued a report today regarding U.S. nuclear power plant safety in 2010. The NRC remains focused on responding promptly and effectively to events in Japan. Once we have completed that important task, we'll review the UCS report in depth. At first blush it doesn't seem to contain any new insights. The NRC remains confident that our Reactor Oversight Program, which includes both on-site and region-based inspectors, is effectively ensuring U.S. nuclear power plants are meeting the NRC's strict requirements and are operating safely.

From: Uselding, Lara
Sent: Thursday, March 17, 2011 1:38 PM
To: Harrington, Holly; Burnell, Scott; McIntyre, David
Cc: Couret, Ivonne; Screnci, Diane; Sheehan, Neil; Mitlyng, Viktoria; Dricks, Victor; Chandrathil, Prema; Ledford, Joey; Hannah, Roger
Subject: FW: UCS Releases U.S. Nuclear Safety Report

FYI and any word yet?

From: Teri Sforza [<mailto:tsforza@ocregister.com>]
Sent: Thursday, March 17, 2011 12:38 PM
To: Uselding, Lara
Cc: OPA Resource
Subject: FW: UCS Releases U.S. Nuclear Safety Report

Hey Lara -- you guys going to say anything bout this? Thanks --

Teri Sforza
Staff Writer
The Orange County Register
tsforza@ocregister.com
<http://www.ocregister.com/watchdogblog>

From: Sarah Goldberg [<mailto:Sgoldberg@ucsusa.org>]
Sent: Thursday, March 17, 2011 7:09 AM

TTTT/81

To: Teri Sforza

Subject: UCS Releases U.S. Nuclear Safety Report

EMBARGOED UNTIL 11 A.M. EDT TODAY, MARCH 17, 2011

CONTACT: media@ucsusa.org or 202-331-5420

UNION OF CONCERNED SCIENTISTS RELEASES REPORT ON THE NRC AND U.S. NUCLEAR PLANT SAFETY IN 2010; AGENCY OVERSIGHT GETS MIXED REVIEWS

WASHINGTON (March 17, 2011) -- Many of the serious safety or security lapses at U.S. nuclear power plants in 2010 happened because plant owners -- and often the Nuclear Regulatory Commission (NRC) -- failed to address known safety problems, according to a report released today by the Union of Concerned Scientists (UCS). Below is the executive summary of the report.

UCS Releases U.S. Nuclear Safety Report

TELEPRESSER TODAY AT 11 A.M.

Report author David Lochbaum, the director of UCS's Nuclear Safety Program, will present an overview of the report this morning at 11 a.m. during a telephone press briefing for reporters. The call-in number in the United States is 866-861-4873. The international number is 703-639-1464. The password is "Japan Nuclear Reactor Update." UCS Senior Scientist Edwin Lyman also will be on the call to talk about recent developments in Japan.

THE NRC AND NUCLEAR POWER PLANT SAFETY IN 2010: A BRIGHTER SPOTLIGHT NEEDED

David Lochbaum, Union of Concerned Scientists

EXECUTIVE SUMMARY

This report is the first in an annual series on the safety-related performance of the owners of U.S. nuclear power plants and the Nuclear Regulatory Commission (NRC), which regulates the plants. The NRC's mission is to protect the public from the inherent hazards of nuclear power.

In 2010, the NRC reported on 14 special inspections it launched in response to troubling events, safety equipment problems, and security shortcomings at nuclear power plants. This report provides an overview of each of these significant events -- or near-misses.

This overview shows that many of these significant events occurred because reactor owners, and often the NRC, tolerated known safety problems. For example, the owner of the Calvert Cliffs plant in Maryland ended a program to routinely replace safety components before launching a new program to monitor degradation of those components. As a result, an electrical device that had been in use for longer than its service lifetime failed, disabling critical safety components.

In another example, after declaring an emergency at its Brunswick nuclear plant in North Carolina, the owner failed to staff its emergency response teams within the required amount of time. That lapse occurred because workers did not know how to activate the automated system that summons emergency workers to the site.

OUTSTANDING CATCHES BY THE NRC

This report also provides three examples where onsite NRC inspectors made outstanding catches of safety problems at the Oconee, Browns Ferry, and Kewaunee nuclear plants—before these impairments could lead to events requiring special inspections, or to major accidents.

At the Oconee plant in South Carolina, the owner fixed a problem with a vital safety system on Unit 1 that had failed during a periodic test. However, the owner decided that identical components on Units 2

and 3 could not possibly have the same problem. NRC inspectors persistently challenged lame excuse after lame excuse until the company finally agreed to test the other two units. When it did so, their systems failed, and NRC inspectors ensured that the company corrected the problems.

POOR NRC OVERSIGHT

However, the NRC did not always serve the public well in 2010. This report analyzes serious safety problems at Peach Bottom, Indian Point, and Vermont Yankee that the NRC overlooked or dismissed. At Indian Point, for example, the NRC discovered that the liner of a refueling cavity at Unit 2 has been leaking since at least 1993. By allowing this reactor to continue operating with equipment that cannot perform its only safety function, the NRC is putting people living around Indian Point at elevated and undue risk.

The NRC audits only about 5 percent of activities at nuclear plants each year. Because its spotlight is more like a strobe light -- providing brief, narrow glimpses into plant conditions -- the NRC must focus on the most important problem areas. Lessons from the 14 near-misses reveal how the NRC should apply its limited resources to reap the greatest returns to public safety.

Because we have not reviewed all NRC actions, the three positive and three negative examples do not represent the agency's best and worst performances in 2010. Instead, the examples highlight patterns of NRC behavior that contributed to these outcomes. The positive examples clearly show that the NRC can be an effective regulator. The negative examples attest that the agency still has work to do to become the regulator of nuclear power that the public deserves.

FINDINGS

Overall, our analysis of NRC oversight of safety-related events and practices at U.S. nuclear power plants in 2010 suggests these conclusions:

- Nuclear power plants continue to experience problems with safety-related equipment and worker errors that increase the risk of damage to the reactor core -- and thus harm to employees and the public.
- Recognized but misdiagnosed or unresolved safety problems often cause significant events at nuclear power plants, or increase their severity.
- When onsite NRC inspectors discover a broken device, an erroneous test result, or a maintenance activity that does not reflect procedure, they too often focus just on that problem. Every such finding should trigger an evaluation of why an owner failed to fix a problem before NRC inspectors found it.
- The NRC can better serve the U.S. public and plant owners by emulating the persistence shown by onsite inspectors who made good catches while eliminating the indefensible lapses that led to negative outcomes.
- Four of the 14 special inspections occurred at three plants owned by Progress Energy. While the company may simply have had an unlucky year, corporate-wide approaches to safety may have contributed to this poor performance. When conditions trigger special inspections at more than one plant with the same owner, the NRC should formally evaluate whether corporate policies and practices contributed to the shortcomings.

The chances of a disaster at a nuclear plant are low. When the NRC finds safety problems and ensures that owners address them -- as happened last year at Oconee, Browns Ferry, and Kewaunee -- it keeps the risk posed by nuclear power to workers and the public as low as practical. But when the NRC tolerates unresolved safety problems -- as it did last year at Peach Bottom, Indian Point, and Vermont Yankee -- this lax oversight allows that risk to rise. The more owners sweep safety problems under the rug and the longer safety problems remain uncorrected, the higher the risk climbs.

While none of the safety problems in 2010 caused harm to plant employees or the public, their frequency -- more than one per month -- is high for a mature industry. The severe accidents at Three Mile Island in 1979 and Chernobyl in 1986 occurred when a handful of known problems -- aggravated by a few worker miscues -- transformed fairly routine events into catastrophes. That plant owners could have avoided nearly all 14 near-misses in 2010 had they corrected known deficiencies in a timely manner suggests that our luck at nuclear roulette may someday run out.

###

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.

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ReThink Media, 2550 9th Street, Berkeley, CA 94710 United States

From: [McIntyre, David](#)
To: [Burnell, Scott](#); [Uselding, Lara](#); [Harrington, Holly](#)
Cc: [Courlet, Ivonne](#); [Screnci, Diane](#); [Sheehan, Neil](#); [Mitlyng, Viktoria](#); [Dricks, Victor](#); [Chandrathil, Prema](#); [Ledford, Joey](#); [Hannah, Roger](#)
Subject: RE: UCS Releases U.S. Nuclear Safety Report
Date: Thursday, March 17, 2011 5:35:37 PM

As Holly tweaked earlier, "monitoring" rather than "responding" ...

From: Burnell, Scott
Sent: Thursday, March 17, 2011 5:28 PM
To: Uselding, Lara; Harrington, Holly; McIntyre, David
Cc: Courlet, Ivonne; Screnci, Diane; Sheehan, Neil; Mitlyng, Viktoria; Dricks, Victor; Chandrathil, Prema; Ledford, Joey; Hannah, Roger
Subject: RE: UCS Releases U.S. Nuclear Safety Report

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From: Uselding, Lara
Sent: Thursday, March 17, 2011 1:38 PM
To: Harrington, Holly; Burnell, Scott; McIntyre, David
Cc: Courlet, Ivonne; Screnci, Diane; Sheehan, Neil; Mitlyng, Viktoria; Dricks, Victor; Chandrathil, Prema; Ledford, Joey; Hannah, Roger
Subject: FW: UCS Releases U.S. Nuclear Safety Report

FYI and any word yet?

From: Teri Sforza [<mailto:tsforza@ocregister.com>]
Sent: Thursday, March 17, 2011 12:38 PM
To: Uselding, Lara
Cc: OPA Resource
Subject: FW: UCS Releases U.S. Nuclear Safety Report

Hey Lara -- you guys going to say anything bout this? Thanks --

Teri Sforza
Staff Writer
The Orange County Register
tsforza@ocregister.com
<http://www.ocregister.com/watchdogblog>

From: Sarah Goldberg [<mailto:Sgoldberg@ucsusa.org>]
Sent: Thursday, March 17, 2011 7:09 AM
To: Teri Sforza

From: Batkin, Joshua
To: McIntyre, David; Burnell, Scott; Brenner, Eliot; Coggins, Angela
Subject: Re: What exactly
Date: Thursday, March 17, 2011 5:41:51 PM

Oh, I think that's totally fine. Good, thanks.

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

From: McIntyre, David
To: Batkin, Joshua; Burnell, Scott; Brenner, Eliot; Coggins, Angela
Sent: Thu Mar 17 17:34:48 2011
Subject: RE: What exactly

Here's the quote from the White House transcript:

Here at home, nuclear power is also an important part of our own energy future, along with renewable sources like wind, solar, natural gas and clean coal. 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.

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

From: Batkin, Joshua
Sent: Thursday, March 17, 2011 5:31 PM
To: Burnell, Scott; Brenner, Eliot; McIntyre, David; Coggins, Angela
Subject: Re: What exactly

And it was 'ask' not 'direct'?

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

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

From: Burnell, Scott
To: Batkin, Joshua; Brenner, Eliot; McIntyre, David
Sent: Thu Mar 17 17:26:19 2011
Subject: RE: What exactly

Imperfect recall of Rose Garden event is a request for a "comprehensive safety review of all U.S. nuclear power plants."

TTTT/82

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

From: Batkin, Joshua

Sent: Thursday, March 17, 2011 5:25 PM

To: Brenner, Eliot; Burnell, Scott; McIntyre, David

Subject: What exactly

Did POTUS ask us to do?

Joshua C. Batkin

Chief of Staff

Chairman Gregory B. Jaczko

(301) 415-1820

From: [Burnell, Scott](#)
To: [Bauer, Laurel](#); [Chokshi, Niles](#)
Cc: [Karas, Rebecca](#); [Li, Yong](#); [Munson, Clifford](#)
Subject: RE: For your review: SSA session on nuclear power plants
Date: Thursday, March 17, 2011 5:43:00 PM
Importance: High

Hi Laurel;

Sorry for the delay. At this point I would strongly suggest, after conferring with your management, that all of you politely back out of any commitments as soon as possible.

Most importantly, I would think all of our seismic-related staff could be involved in the President-requested "comprehensive safety review" by that point. Also, it's inevitable you'll be asked policy-related questions that simply can't be addressed right now.

Scott

From: Bauer, Laurel
Sent: Thursday, March 17, 2011 2:12 PM
To: Chokshi, Niles; Burnell, Scott
Cc: Karas, Rebecca; Li, Yong; Munson, Clifford
Subject: FW: For your review: SSA session on nuclear power plants

Scott / Niles,

I am forwarding you this request from SSA. Yong and I are scheduled to lead an oral session at the annual Seismological Society of America Meeting next month, April 13-16. The title of the session is: Seismic Siting for Nuclear Power Plants. The session is scheduled for Friday, April 15 in the afternoon. Hosung and Cliff will also be presenting in this session. We received the following request from their press officer who is putting together a tip sheet. How should this be handled? I have attached the SSA Meeting Program as the talks listed are only a few that are scheduled. I would not exactly call what she has provided a tip sheet.

Scott, the OPA staff that I spoke with directed me by phone to forward to you.

Thanks,

Laurel Bauer
(301) 415-3210 (HQ)

From: Nan BROADBENT [mailto:nan0604@msn.com]
Sent: Thursday, March 17, 2011 1:47 PM
To: Li, Yong; Bauer, Laurel
Subject: For your review: SSA session on nuclear power plants

Dr. Li and Dr. Bauer:

I am preparing a media tip sheet that highlights selected talks and posters at the upcoming SSA annual meeting. I don't know if there have been additional talks added to your session since the earthquake in Japan. Based on the submitted abstracts I have drafted the following text and would appreciate feedback from either of you. Please let me know how to improve it.

TTTT/83

Thank you,

Nan Broadbent
SSA, press officer
408-431-9885

Seismic Siting for Nuclear Power Plants
Ballroom D, 1:30 – 3 p.m.

Developing and implementing a real-time earthquake notification system for nuclear power plant site using ShakeCast (Poster)

The IAEA International Seismic Safety Centre (ISSC) and the U. S. Nuclear Regulatory Commission (NRC), in collaboration with the U. S. Geological Survey (USGS), are developing and implementing a custom ShakeCast system for discovery, processing, and notification of real-time ground shaking information at nuclear power plant (NPP) sites. ShakeCast takes freely available, post-earthquake data and compares intensity measures against nuclear power plants, sends notifications of potential damage to responsible parties, and generates facility damage maps. [K. Lin, U.S. Geological Survey, klin@usgs.gov]

Geomorphic assessment of past extreme ground motion on Yucca Mountain, Southern Nevada (poster)

Analysis of rock fall along the cliffs near Yucca Mountain, Nevada, a long-proposed nuclear waste storage site, helps to date past extreme ground motions in the area. The researchers say that the rock fall data show no evidence that Yucca Mountain cliffs have been shattered in response to extreme ground motions for at least 250,000 years. [J.W. Whitney, U.S. Geological Survey, jwhitney@usgs.gov]

Unanticipated Exceptional Ground Motions at a Nuclear Power Plant during the 2007 Chuetsu-Oki, Japan, Earthquake

The 2007 Chuetsu-oki, Japan, earthquake occurred on July 16 with a moment magnitude (M_w) of 6.6. This event is significant as the world's first major earthquake upon a source fault that extends beneath a nuclear power plant (until the March 2011 earthquake/tsunami). The researchers looked at several models to find out why their previous models of ground shaking for the area underpredicted how severe the actual shaking was in 2007. [K. Koketsu, University of Tokyo, koketsu@eri.u-tokyo.ac.jp]

From: [Burnell, Scott](#)
To: eklump@bloomberg.net
Bcc: [Couret, Ivonne](#)
Subject: RE: Edward Klump - Bloomberg News
Date: Thursday, March 17, 2011 6:11:00 PM

Hello Edward;

Sorry for the delay in responding. If you're asking about the Fukushima reactors the NRC has no statistical information available. Thanks.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

Subject: Edward Klump - Bloomberg News

Organization – Bloomberg News
Contact – Edward Klump
Phone -713-651-4607
Email – eklump@bloomberg.net
Request – Would like statistical information on the spent fuel.

TTTT/84

From: [McClain, Dylan](#)
To: [Burnell, Scott](#)
Subject: Re: How much fuel in the reactors?
Date: Thursday, March 17, 2011 6:18:33 PM

I understand. Thank you.

--

Dylan McClain
The New York Times

From: "Burnell, Scott" <Scott.Burnell@nrc.gov>
Date: Thu, 17 Mar 2011 18:15:35 -0400
To: Dylan McClain <mcclaind@nytimes.com>
Subject: RE: How much fuel in the reactors?

Hi Dylan;

We're just not in a position to discuss anyone's snapshots of conditions at Fukushima. Chairman Jaczko provided the best information available yesterday morning to the House and Senate hearings, but apart from that we're not commenting on other groups' statements.

Scott

From: McClain, Dylan [<mailto:mcclaind@nytimes.com>]
Sent: Thursday, March 17, 2011 6:12 PM
To: Burnell, Scott
Subject: Re: How much fuel in the reactors?

Scott,

Actually there is something else. The NEI has a report about the spent fuel pools on its Web site. Is there any way to confirm anything about what the report says? Here is the statement:

"Reactor 3 is in stable condition with seawater injection continuing. The primary containment is believed to be intact. Pressure in the containment has fluctuated due to venting of the reactor containment structure.

TEPCO officials say that although one side of the concrete wall of the reactor 4 fuel pool structure has collapsed, the steel liner of the pool remains intact, based on aerial photos of the reactor taken on March 17. The pool still has water providing some cooling for the fuel; however, helicopters dropped water on the reactor four times during the morning (Japan time) on March 17. Water also was sprayed at reactor 4 using high-pressure water cannons."

Thank you.

--

Dylan McClain
The New York Times

TTTT/85

From: "Burnell, Scott" <Scott.Burnell@nrc.gov>
Date: Thu, 17 Mar 2011 18:04:56 -0400
To: "Brenner, Eliot" <Eliot.Brenner@nrc.gov>, Dylan McClain <mcclaind@nytimes.com>
Subject: RE: How much fuel in the reactors?

Hi Dylan;

There just isn't anything available on that, I'm sorry.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

From: McClain, Dylan [<mailto:mcclaind@nytimes.com>]
Sent: Thursday, March 17, 2011 4:08 PM
To: Brenner, Eliot
Subject: Re: How much fuel in the reactors?

(212) 556-7027

--

Dylan McClain
The New York Times

From: "Brenner, Eliot" <Eliot.Brenner@nrc.gov>
Date: Thu, 17 Mar 2011 16:03:04 -0400
To: Dylan McClain <mcclaind@nytimes.com>
Subject: RE: How much fuel in the reactors?

Send me your number again.

From: McClain, Dylan [<mailto:mcclaind@nytimes.com>]
Sent: Thursday, March 17, 2011 1:09 PM
To: Brenner, Eliot
Subject: How much fuel in the reactors?

Eliot,

On deep, deep, deep background, we are trying to get specific information on how much fuel was in the reactors and how much was in the spent fuel pools at the plants. Can you help us?

--

Dylan McClain
The New York Times

From: [Couret, Ivonne](#)
To: [Burnell, Scott](#)
Subject: FW: Guardian query / Fukushima 50 mile exclusion zone.
Date: Thursday, March 17, 2011 6:19:36 PM

From OPA inbox

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
opa.resource@nrc.gov
301-415-8200

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/>

From: Ian Sample [<mailto:ian.sample@guardian.co.uk>]
Sent: Wednesday, March 16, 2011 4:13 PM
To: OPA Resource
Subject: Guardian query / Fukushima 50 mile exclusion zone.

Dear NRC folks,

I'm the science correspondent at the Guardian newspaper in London.

Might you help me out with a query?

I am looking at your data via the document here (<http://www.nrc.gov/>) for working out the 50 mile exclusion zone the US has adopted around Fukushima.

Am I right that your calculations show that today, the max total EDE at 0.5 miles from the plant, was 5400 rems, or 54 sieverts?

Wouldn't a dose that high would be lethal to anyone on the site?

It would be great to have some clarification.

With best regards,

--

Ian Sample
Science correspondent
The Guardian
Kings Place
90 York Way
London N1 9GU
Direct: +44(0)203 353 4752

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TTTT/86

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From: [Burnell, Scott](#)
To: csorrell@aiha.org
Bcc: [Courret, Ivonne](#)
Subject: RE: interview for the American Industrial Hygiene Association
Date: Thursday, March 17, 2011 7:39:00 PM

Hello Craig;

I sincerely apologize for the delay in getting back to you, we're dealing with a truly astounding crush of calls and e-mails. Unfortunately we've missed your deadline, and I'm also afraid we wouldn't have been able to break anyone away to talk with you in any case. Again, my apologies, and thank you for considering us for your podcast.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

From: Craig Sorrell [<mailto:csorrell@aiha.org>]
Sent: Wednesday, March 16, 2011 12:32 PM
To: OPA Resource
Subject: Possible interview for the American Industrial Hygiene Association

To Whom It May Concern:

I am contacting you to see if anyone from the Nuclear Regulatory Commission (NRC) would like to talk about nuclear safety and the dangers that can happen from a reactor meltdown as well as other safety concerns that are being media generated with the current events occurring in Japan. I run a weekly, informative, podcast for the American Industrial Hygiene Association (AIHA) where we talk about current topics, and appeal to health and safety professionals as well as general public information. I would like to know if a representative would be able to take about 15 – 20 minutes to record a taped interview today or tomorrow to be released on Friday March 18 while the topic is still on everyone's mind. Please let me know in order that I can book the guest. If you need to know more information about the AIHA or the podcast, please contact me. Thank you.

.....
Craig Sorrell
Project Coordinator, Strategic Communications

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Protecting Worker Health (R)

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AIHce 2011 — Innovate. Integrate. Inspire.
Portland, Oregon | May 14-19, 2011 | www.aihce2011.org
PCIH 2011 — Navigating New Opportunities.
Baltimore, Maryland | November 5-8, 2011 | www.pcih2011.org

TTTT/87

From: [Burnell, Scott](mailto:Burnell.Scott)
To: taylor.nicola@abc.net.au
Bcc: [Courret, Ivonne](mailto:Courret.Ivonne)
Subject: RE: ABC News Breakfast interview request
Date: Thursday, March 17, 2011 7:12:00 PM

Hello Nicola;

Obviously we've missed your deadline and I apologize we couldn't respond sooner, I'm sure you can understand the volume of calls and e-mails. In any case, we're really focused on responding to the Japanese request and don't have the ability to break technical people away for interviews. Please keep us in mind later on once the situation stabilizes in Japan. Thanks very much.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

From: ABC2 Breakfast [<mailto:breakfast@your.abc.net.au>]
Sent: Wednesday, March 16, 2011 9:58 PM
To: OPA Resource
Subject: ABC News Breakfast interview request

Dear Sir/Madame,

I understand the US Nuclear Regulatory Commission is assisting the Japanese with getting the situation at the Fukushima nuclear power plant under control.

I am writing to see if someone from the US Nuclear Regulatory Commission is available for an interview with the hosts of our television show.

Ideally – we would be keen to speak to them for a five minute interview between 1500 to 1800hrs on Thursday the 17th of March.

We have a television studio in Washington from which we could conduct the interview.

I am writing to you as a producer from an Australian news/current affairs television show called ABC News Breakfast. Our program airs nationally each week day morning in Australia on the ABC, and across Asia on the Australia Network,

If you could let me know if someone is available for an interview it would be greatly appreciated.

Kind regards,

Nicola Taylor

TTTT/88 }

Planning Producer
ABC TV News Breakfast
+613 9626 1570
taylor.nicola@abc.net.au

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From: [Burnell, Scott](mailto:Burnell.Scott)
To: Ray.Tuttle@journalrecord.com
Bcc: [Couret, Ivonne](mailto:Couret.Ivonne)
Subject: RE: Media Print - FW: State of the U.S. nuclear sector
Date: Thursday, March 17, 2011 8:01:00 PM

Hello Ray;

I really apologize for the extreme delay, we're just that busy with the backlog. The NRC is monitoring events in Japan, but we're not in a position to analyze things since it's all still developing. Japanese plants have the same age ranges as U.S. plants, essentially. All U.S. plants are meeting the NRC's strict safety requirements regardless of their age. At this point we're focused on dealing with the ongoing events, we'll consider long-term implications later. Thanks.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

From: Ray Tuttle [<mailto:Ray.Tuttle@journalrecord.com>]
Sent: Wednesday, March 16, 2011 3:12 PM
To: OPA Resource
Subject: State of the U.S. nuclear sector

Hi:

I am with a Tulsa business paper. A company, Enercon, is based here and works in the nuclear power generation sector.

I am talking to Enercon executives and at the same time would like to see if the NRC would mind commenting about the state of the industry in light of the current Japanese nuclear crisis?

My reason for the inquiry:

Switzerland freezes plans to build new nuclear plants; Germany raises questions about its nuclear future; and opposition to atomic reactor construction mounts from Turkey to South Africa.

Will explosions and other worries at a tsunami-stricken Japanese nuclear plant halt what has come to be known as the nuclear renaissance?

Fears about nuclear safety that took a generation to overcome after the accidents at Chernobyl and Three-Mile Island are resurfacing around the globe. They are casting new doubt on a controversial energy source that has seen a resurgence in recent years, amid worries over volatile oil prices and global warming.

- 1) Are current events in Japan overblown? Or, is there enough information coming out to make a judgment?
- 2) Aren't the n-plants there older? And, newer plants have greater safety?
- 3) What is your assessment of the U.S. industry today, in light of the events in Japan?
- 4) Outlook for rest of 2011?
- 5) Is the anticipated revival of the industry on hold? Dead?

My deadline is 3p.m. Friday (EDT)

TUTTLE/89

D. Ray Tuttle | Tulsa Bureau

The Journal Record Publishing Company | ray.tuttle@journalrecord.com |
www.journalrecord.com

401 South Boston Avenue, Suite 105 | Tulsa 74103 | t 918.295.0257 | f 918.295.0031 | c
918.639.7808

From: [Burnell, Scott](mailto:Burnell.Scott)
To: ian.sample@guardian.co.uk
Bcc: [Couret, Ivonne](mailto:Couret.Ivonne)
Subject: RE: Guardian query / Fukushima 50 mile exclusion zone.
Date: Thursday, March 17, 2011 8:29:00 PM

Hello Ian;

I sincerely apologize for the delay in responding, we're really just that swamped. The document we provided in support of our press release represents projections based on the best available data we had at the time regarding conditions at the site. They do not represent actual measurements on the ground. As Chairman Jaczko said in his congressional testimony, the NRC does believe there are high radiation levels in some sections of the Fukushima site. Please let me know if you need anything else, and I'll do my best to respond promptly this time.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

From: Ian Sample [<mailto:ian.sample@guardian.co.uk>]
Sent: Wednesday, March 16, 2011 4:13 PM
To: OPA Resource
Subject: Guardian query / Fukushima 50 mile exclusion zone.

Dear NRC folks,

I'm the science correspondent at the Guardian newspaper in London.

Might you help me out with a query?

I am looking at your data via the document here (<http://www.nrc.gov/>) for working out the 50 mile exclusion zone the US has adopted around Fukushima.

Am I right that your calculations show that today, the max total EDE at 0.5 miles from the plant, was 5400 rems, or 54 sieverts?

Wouldn't a dose that high would be lethal to anyone on the site?

It would be great to have some clarification.

With best regards,

--

Ian Sample
Science correspondent
The Guardian
Kings Place
90 York Way
London N1 9GU
Direct: +44(0)203 353 4752

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From: [Burnell, Scott](mailto:Burnell.Scott)
To: amaba@ntvic.com
Bcc: [Couret, Ivonne](mailto:Couret.Ivonne)
Subject: RE: NipponTV(NTV); Inquiry on new data about Indian point power plant in NY
Date: Thursday, March 17, 2011 9:51:00 PM

Hello Ayano;

I sincerely apologize for the delay in responding.

The MSNBC report grossly misinterprets preliminary information from GI-199, an NRC research project (we issued a press release in September 2010 <http://adamswebsearch2.nrc.gov/idmws/ViewDocByAccession.asp?AccessionNumber=ML102510123>). The NRC does NOT rank plants according to seismic risk, since each plant is subject to NRC requirements particular to its site. Every U.S. nuclear power plant, including Indian Point, is meeting those strict requirements to be able to withstand the strongest earthquake considered possible at a site, based on examination of tens of thousands of years of the geologic record. The numbers listed by MSNBC are derived from a "screening" process that postulates earthquakes much larger than any that could be expected at a given site, simply to determine which plants warrant a more detailed review. A cooperative effort between the NRC, USGS and the Electric Power Research Institute is creating a more detailed seismic analysis model. Once that effort is finished later this year, several plants in the Central and Eastern U.S. will be asked to use the model to re-examine their site-specific information. The outcome of all that work is expected to "tweak" the plants to improve their already acceptable earthquake resistance.

Thank you.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

From: Ayano Amaba : NTV NY [mailto:amaba@ntvic.com]
Sent: Thursday, March 17, 2011 3:35 PM
To: OPA Resource
Subject: NipponTV(NTV); Inquiry on new data about Indian point power plant in NY

To Office of Public Affairs,

My name is Ayano Amaba, news producer for Nippon TV (NTV) New York News Bureau. Nippon TV (NTV) is the oldest TV network and a news affiliate of NBC in the United States. I've been covering issues of Japanese nuclear plant since the earthquake happened.

I've read some articles that NY Gov. Cuomo yesterday called for shutting down the Indian Point nuclear plant (Entergy) because the plant is most susceptible to an earthquake. The articles says that Gov. Cuomo spoke about it after new data from NRC show the plant was the most vulnerable to a quake.

Could you let me know about the new data that Gov. Cuomo referred?
Did you release the new data on Indian Point yesterday?

TTTT/91

I thank you very much for your time and help.
I appreciate your cooperation.

Best regards,

Ayano Amaba
Nippon TV (NTV)
645 5th Avenue, Suite 303
New York, NY 10022
Tel 212-660-6961
Fax 212-265-8495
E-mail amaba@ntvic.com

From: [Burnell, Scott](#)
To: G.Zakaib@us.nature.com
Bcc: [Couret, Ivonne](#)
Subject: RE: Questions from Nature Magazine
Date: Thursday, March 17, 2011 9:54:00 PM

Hello Gwyneth;

I apologize for the delay in responding. The NRC does not have any available first-hand information on radiation levels at the site. Thank you.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

From: Zakaib, Gwyneth [<mailto:G.Zakaib@us.nature.com>]
Sent: Thursday, March 17, 2011 3:57 PM
To: OPA Resource
Subject: Questions from Nature Magazine

Hello,

I am seeking information about the latest amounts and types of radiation being detected by monitors in Japan. Is there an expert I can speak with who knows where the best information is located and is perhaps in touch with people deployed to monitor radiation in Japan? I am seeking information on the following:

- levels of radioactivity being detected at sample sites
- types of radionuclides being detected
- status of monitoring equipment there
- ways in which the data will be compiled and disseminated

Thank you very much,

Gwyneth Dickey Zakaib, Nature News
g.zakaib@us.nature.com
968 National Press Building, 529 14th Street, NW Washington, DC 20045
phone: 202.626.2512
fax: 202.628.1609

TTTT/92

From: [Burnell, Scott](#)
To: [Sheehan, Neil](#); [McIntyre, David](#); [Brenner, Eliot](#); [Hayden, Elizabeth](#); [Harrington, Holly](#)
Subject: FW: ACTION REQUESTED: Japanese Earthquake-related Information Notice
Date: Friday, March 18, 2011 12:03:00 AM
Attachments: [IN 11-xx B5b Earthquake.docx](#)
[Quake IN.docx](#)

All;

I've started a draft press release for the Information Notice so that we can keep track with changes and hopefully issue it as soon as the IN (or Bulletin or whatever it turns out to be) goes out. The "Quake_IN" document is in the "G" drive, the Crisis Communication\Japan Quake Tsunami folder.

Scott

From: Bowman, Eric
Sent: Thursday, March 17, 2011 5:02 PM
To: McDermott, Brian
Cc: LIA08 Hoc; Rosenberg, Stacey; McGinty, Tim; Burnell, Scott; Williamson, Edward; Morris, Scott; Lew, David; Wert, Leonard; Pederson, Cynthia; Howell, Art; Westreich, Barry
Subject: ACTION REQUESTED: Japanese Earthquake-related Information Notice

Brian,

The current version of the IN is attached. We chose to use an IN for this as the fastest generic communications vehicle available in light of our desire to issue it prior to the Commission meeting on the subject scheduled for Monday.

V/R Eric

From: McDermott, Brian
Sent: Thursday, March 17, 2011 2:38 PM
To: McGinty, Tim; Burnell, Scott; Williamson, Edward; Morris, Scott
Cc: LIA08 Hoc; Rosenberg, Stacey; Bowman, Eric
Subject: RE: ACTION REQUESTED: Japanese Earthquake-related Information Notice

Tim,

We've tasked the item for review this evening. With comments due to NRR\Tim McGinty by 0700 on 3/18.

Brian

From: McGinty, Tim
Sent: Thursday, March 17, 2011 12:57 PM
To: Burnell, Scott; Williamson, Edward; McDermott, Brian; Morris, Scott
Cc: LIA08 Hoc; Rosenberg, Stacey; Bowman, Eric
Subject: FW: ACTION REQUESTED: Japanese Earthquake-related Information Notice

We are fast tracking this proposed IN. I will want the ET in the Ops Center to review it. Attached is an early draft. Feedback welcomed. Tim

TTTT / 93

From: McGinty, Tim
Sent: Thursday, March 17, 2011 12:42 PM
To: Bowman, Eric; Thomas, Eric; Correia, Richard; Mathew, Roy
Cc: Rosenberg, Stacey; Hiland, Patrick; Westreich, Barry; Boger, Bruce; Leeds, Eric; Quay, Theodore; Blount, Tom; Skeen, David
Subject: RE: ACTION REQUESTED: Japanese Earthquake-related Information Notice

My apologies. We have now been tasked to issue the IN tomorrow. Need your comments and concurrence by mid-afternoon today, COB at the latest. Tim

From: Bowman, Eric
Sent: Thursday, March 17, 2011 11:37 AM
To: Thomas, Eric; Correia, Richard; Mathew, Roy
Cc: Rosenberg, Stacey; McGinty, Tim; Hiland, Patrick; Westreich, Barry
Subject: ACTION REQUESTED: Japanese Earthquake-related Information Notice
Importance: High

All,

We plan to issue the attached Information Notice early next week on the implications of the recent Japanese Earthquake. In support of that effort, your comments and Divisional concurrence are requested by tomorrow afternoon.

Very many thanks in advance for your efforts.

V/R; R/ Eric

Eric E. Bowman
Sr. Project Manager
Generic Communications & Power Uprate Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
301-415-2963
Eric.Bowman@nrc.gov

Attachment IN 11-xx B5b Earthquake_2.docx (29574 Bytes) cannot be converted to PDF format.

Attachment Quake_IN.docx (16513 Bytes) cannot be converted to PDF format.

From: [Harrington, Holly](#)
To: [Burnell, Scott](#)
Cc: [McIntyre, David](#)
Subject: RE: Suggested press release on MSNBC article
Date: Friday, March 18, 2011 10:32:17 AM

Dave's working on something

From: Burnell, Scott
Sent: Thursday, March 17, 2011 7:41 PM
To: Harrington, Holly
Subject: FW: Suggested press release on MSNBC article

Sounds like the start of a blog post...

From: Beasley, Benjamin
Sent: Thursday, March 17, 2011 5:58 PM
To: Burnell, Scott
Cc: Coyne, Kevin; Stutzke, Martin; Ake, Jon; Kauffman, John
Subject: Suggested press release on MSNBC article

Scott,

We (RES) supported Region 1 this afternoon on a conference call with the county executives and state officials for the four counties around Indian Point. The county officials strongly encouraged us to respond to the MSNBC article. Thus, we have drafted a press release for your consideration.

Please let me know if you use this and if we can be of any other assistance.

Regards,
Ben Beasley

Draft Press Release Responding to MSNBC Article

A recent article by MSNBC ("What are the odds? US nuke plants ranked by quake risk", 3/16/2011) cites results of a U.S. Nuclear Regulatory Commission study released in September, 2010. The study investigated the implications of updated seismic hazard estimates in the central and eastern United States.

The study was prepared as a screening assessment to evaluate if further investigations of seismic safety for operating reactors in the central and eastern U.S. are warranted, consistent with NRC directives. The report clearly states that "work to date supports a decision to continue to the [next] stage...; the methodology, input assumptions, and data are not sufficiently developed to support other regulatory actions or decisions." Accordingly, the results were not used to rank or compare plants.

The study produced plant-specific results of the estimated change in risk from seismic hazards. The study did not rely on the absolute value of the seismic risk except to assure that all operating plants are safe. The plant-specific results were used in aggregate to

TTTT/94

determine the need for continued evaluation and were included in the report for openness and transparency. The use of the absolute value of the seismic hazard-related risk, as done in the MSNBC article, is not the intended use, and the NRC considers it an inappropriate use of the results.

The report reached three main conclusions: 1) Seismic hazard estimates have increased at some operating plants in the central and eastern US; 2) there is no immediate safety concern, plants have significant safety margin and overall seismic risk estimates remain small; and 3) assessment of updated seismic hazards and plant performance should continue.

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: FW: Transcript - NRC - Jaczko
Date: Friday, March 18, 2011 10:41:26 AM
Attachments: [0317nrc-jaczko.doc](#)

Getting posted shortly

From: Brenner, Eliot
Sent: Thursday, March 17, 2011 6:31 PM
To: Harrington, Holly
Subject: FW: Transcript - NRC - Jaczko

Please post tomorrow, and do a short blog post from me...perhaps pegged off the POTUS comment.

Thanks.

eliot

From: Brenner, Eliot
Sent: Thursday, March 17, 2011 5:38 PM
To: Batkin, Joshua; Schmidt, Rebecca; Powell, Amy; Loyd, Susan
Subject: FW: Transcript - NRC - Jaczko

Transcript from yesterday on the house side.

From: Jordan White [<mailto:Jordan.White@fednews.com>]
Sent: Thursday, March 17, 2011 3:03 PM
To: Shannon, Valerie; Brenner, Eliot
Subject: Transcript - NRC - Jaczko

Hi Valerie,

Please find attached the transcript of the Jaczko panel. If you have any difficulties with the attachment or any further questions, do not hesitate to contact us. We look forward to hearing from you.

With no objections, this will also appear on our newswire.

Thanks!

Jordan D. White,
Director, Transcription Services,
Federal News Service
202-216-2707
1000 Vermont Ave., NW, Ste. 500
Washington, D.C., 20005
<http://www.fednews.com>

TTTT/95

Attachment 0317nrc-jaczko.doc (135168 Bytes) cannot be converted to PDF format.

From: [Harrington, Holly](#)
To: [Brenner, Eliot](#); [Burnell, Scott](#); [Courret, Ivonne](#); [Hayden, Elizabeth](#); [McIntyre, David](#); [Chandraithil, Prema](#); [Dricks, Victor](#); [Hannah, Roger](#); [Ledford, Joey](#); [Mitlyng, Viktoria](#); [Screnci, Diane](#); [Sheehan, Neil](#); [Uselding, Lara](#)
Subject: FW: FEMA EPZ Fact Sheet
Date: Friday, March 18, 2011 11:04:55 AM
Attachments: [Emergency Planning Zones.pdf](#)

This are blessed by NSIR to use . . .

From: McIntyre, David
Sent: Friday, March 18, 2011 10:22 AM
To: Harrington, Holly; Widomski, Michael; Brenner, Eliot; Burnell, Scott; Sheehan, Neil; Screnci, Diane; Courret, Ivonne; Hayden, Elizabeth
Subject: FW: FEMA EPZ Fact Sheet

Those nice Public Affairs folks over at FEMA (I've heard good things about them!) have prepared the attached fact sheet on EPZs.

From: OST05 Hoc
Sent: Friday, March 18, 2011 10:20 AM
To: McIntyre, David; Barker, Allan; Browder, Rachel; Erickson, Randy; Logaras, Herral; Maier, Bill; McNamara, Nancy; Tift, Doug; Trojanowski, Robert; Woodruff, Gena; Collins, Elmo; Dean, Bill; Heck, Jared; McCree, Victor; Pederson, Cynthia; Satorius, Mark; Easson, Stuart; Flannery, Cindy; LIA04 Hoc; Lukes, Kim; Maupin, Cardelia; Noonan, Amanda; OST05 Hoc; Rautzen, William; Rivera, Alison; Ryan, Michelle; Turtill, Richard; Virgilio, Rosetta
Subject: FEMA EPZ Fact Sheet

FYI –

Attached is a FEMA-generated fact sheet on EPZs that can be used for immediate use.

Kim Lukes
State Liaison – Liaison Team
Incident Response Center

TTTT/96

EMERGENCY PLANNING ZONES

EPZs in Brief

Federal Emergency Management Agency (FEMA) and Nuclear Regulatory Commission (NRC) emergency preparedness planning guidance provides for two emergency planning zones (EPZs) for U.S. commercial nuclear power plants (NPPs):

- **Plume** Exposure Pathway (apx. 10 Miles in radius)
 - Designed to safeguard the population most at risk from **direct exposure** to radiation levels in excess of Environmental Protection Agency Protective Action Guidelines (PAGs)
- **Ingestion** Exposure Pathway (apx. 50 Miles in radius)
 - **Designed to protect** the public from **secondary exposure** to radiation through the food chain or public water supplies

The planning zones are intended to be scalable over time to account for changing conditions that could possibly extend outside the initial EPZ.

Specifically, NUREG-0654/FEMA-REP-1 states: "In a particular emergency, protective actions might well be restricted to a small part of the planning zone. On the other hand, for the worst possible accidents, protective actions would need to be taken outside the planning zones" (I.D., p.11) **i.e., the EPZs are the base areas requiring emergency planning – they are designed to be expanded (beyond the base of 10, 50 miles), as necessary, during emergencies.**

Note: The 10 & 50 mile EPZs are the Federally required minimum. FEMA and NRC regulations state that the exact size and shape of the EPZs shall be determined by the State and local governments – in consultation with FEMA and the NRC, taking into account such local conditions as demography, topography, land characteristics, access routes and local jurisdiction boundaries.(44 CFR § 350.7).

EPZ Evacuations

FEMA affirms that evacuation of the public is the preferred initial protective action in the event of a severe (core damage) emergency occurring (or likely to occur) at NPPs. Federal requirements for NPPs include the establishment of EPZs at 10 and 50-mile distances surrounding the site that detail evacuation routes. Evacuation planning includes the development and incorporation of periodic evacuation time estimate studies to inform evacuation strategies such that prompt and effective actions can be taken by offsite response organizations to protect the public in the event of a radiological emergency. This includes accounting for both permanent and transient populations, persons with disabilities and access/functional needs, those whose mobility may be impaired because of institutional or other confinement as well as provisions for the monitoring, decontamination and congregate care of evacuees, as necessary.

Where immediate evacuation of an affected population within the EPZ is not practical due to impediments (e.g., debris blocking evacuation routes, severe weather, etc.) or where evacuation could pose a greater potential health risk, temporary sheltering-in-place of the public is the preferred protective action. State, Tribal and local evacuation plans and

procedures for NPP communities are reviewed and approved by FEMA. While actual evacuations of the public are not required in biennial FEMA evaluations, appropriate demonstrations by State, Tribal and local response agencies to direct and control a public evacuation is assessed.

EPZs in Detail

The Emergency Planning Zone (EPZ) is the area surrounding an commercial nuclear power plant (NPP) for which plans/procedures have been made to ensure that prompt and effective actions are taken to protect the health and safety of the public in case of an incident at the NPP. The Federal Emergency Management Agency (FEMA) recognizes two types of EPZs for planning purposes: the plume exposure pathway EPZ and the ingestion exposure pathway EPZ. The characteristics of these two types of EPZs are summarized in Exhibit I. Each EPZ is a roughly circular area, with the NPP at the center.

The EPZs sizes represent a technical judgment based on the type and quantity of hazardous materials present (source term) and the potential risks where detailed planning is needed to ensure adequate response to an emergency. An EPZ may include more than one State. "Split" jurisdictions (i.e., part of the jurisdiction is included in the EPZ and part is not) also exist. In these cases, EPZ boundaries are determined based on consultation with all parties involved, including OROs, FEMA, and the NRC. In some cases, a conservative option is taken and the entire jurisdiction is included in the EPZ.

Exhibit I: Plume and Ingestion EPZ Characteristics

Type of EPZ	Exposure Sources	Size
Plume Exposure Pathway	<ul style="list-style-type: none"> • Whole-body external exposure to gamma radiation from the passing plume and from deposited material • Thyroid exposure through inhalation from the passing plume • Committed effective dose equivalent exposure to other critical organs through inhalation 	Approximately 10-mile radius
Ingestion Exposure Pathway	<ul style="list-style-type: none"> • Ingestion of contaminated water or foods, such as milk, fresh vegetables, and aquatic foodstuffs, may result in increased risk of radiation-induced cancer to the thyroid, bone marrow, and other organs 	Approximately 50-mile radius

The size of the **plume exposure pathway EPZ**, about 10 miles in radius, is based on the following considerations from NUREG-0654/FEMA-REP-1:

- Projected doses from traditional design-basis accidents/incidents would not exceed the Environmental Protection Agency Protective Action Guideline (PAG) levels outside the zone;
- Projected doses from most core damage sequences would not exceed PAG levels outside the zone;
- For the worst-case core damage sequences, immediate life-threatening doses would generally not occur outside the zone; and

- **Detailed planning within approximately 10 miles would provide a substantial base for expansion of response efforts to a larger area, if necessary.**

The size of the **ingestion exposure pathway** EPZ, about 50 miles in radius, including the 10-mile radius plume exposure pathway EPZ, is based on the following considerations:

- The downwind range within which contamination may potentially exceed the PAGs is limited to about 50 miles from an NPP because of wind shifts during the release and travel periods;
- Atmospheric iodine (i.e., iodine suspended in the atmosphere for long periods) may be converted to chemical forms that do not readily enter the ingestion pathway; and
- Much of the particulate material in a radioactive plume would have been deposited on the ground within about 50 miles from the NPP.

The likelihood of exceeding ingestion exposure pathway PAG levels at 50 miles is comparable to the likelihood of exceeding plume exposure pathway PAG levels at 10 miles.

From: [Burnell, Scott](#)
To: [Waymer, Jim](#)
Cc: [Hannah, Roger](#); [Ledford, Joey](#)
Subject: RE: FLORIDA TODAY interview request
Date: Friday, March 18, 2011 11:10:00 AM

Hello Jim;

Try starting at this link:

<http://wba.nrc.gov:8080/ves>

Click the "simple search" tab and enter the ML# -- the documents should come up. Please check with my co-workers Roger and Joey in Atlanta first with any additional questions. Thanks.

Scott

From: Waymer, Jim [mailto:jwaymer@floridatoday.com]
Sent: Friday, March 18, 2011 11:08 AM
To: Burnell, Scott
Subject: RE: FLORIDA TODAY interview request

How do I find this: "Generic Issue 199 (GI-199), Implications of Updated Probabilistic Seismic Hazard Estimates in Central and Eastern United States on Existing Plants, Safety/Risk Assessment, " Aug. 2010."

When I went to the ADAMS database online mentioned in the press release (I entered the # given in the press release: ML101970221), and no documents were found? I also searched several terms in the title, and nothing came up. Maybe I'm doing it wrong, but is there a better, easier way to find this document and/or related ones?

From: Burnell, Scott [mailto:Scott.Burnell@nrc.gov]
Sent: Thursday, March 17, 2011 9:11 PM
To: Waymer, Jim
Subject: RE: FLORIDA TODAY interview request

Hello Jim;

I sincerely apologize for the delay in responding.

The MSNBC report grossly misinterprets preliminary information from GI-199, an NRC research project (we issued a press release in September 2010 <http://adamswebsearch2.nrc.gov/idmws/ViewDocByAccession.asp?AccessionNumber=ML102510123>). The NRC does NOT rank plants according to seismic risk, since each plant is subject to NRC requirements particular to its site. Every U.S. nuclear power plant is meeting those strict requirements to be able to withstand the strongest earthquake considered possible at a site, based on examination of tens of thousands of years of the geologic record. The numbers listed by MSNBC are derived from a "screening" process that postulates earthquakes much larger than any that could be expected at a given site, simply to determine which plants warrant a more detailed review.

TTTT/97

A cooperative effort between the NRC, USGS and the Electric Power Research Institute is creating a more detailed seismic analysis model. Once that effort is finished later this year, several plants in the Central and Eastern U.S. will be asked to use the model to re-examine their site-specific information. The outcome of all that work is expected to "tweak" the plants to improve their already acceptable earthquake resistance.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

From: Waymer, Jim [mailto:jwaymer@floridatoday.com]
Sent: Wednesday, March 16, 2011 5:07 PM
To: OPA Resource
Subject: FLORIDA TODAY interview request

Can I please get someone to comment regarding the NRC report mentioned in this MSNBC story today, as it relates to the FL nuclear plants mentioned? Are they interpreting the NRC report properly? The story is here:

http://www.msnbc.msn.com/id/42103936/ns/world_news-asia-pacific/

A Scott Burnell at NRC was mentioned in the MSNBC story. Would he be the best person to talk to?

Also, can someone send me a link to or PDF file of the actual NRC study? They cite it as -- "Generic Issue 199 (GI-199), Implications of Updated Probabilistic Seismic Hazard Estimates in Central and Eastern United States on Existing Plants, Safety/Risk Assessment, " Aug. 2010."

Thank you,

Jim Waymer

FLORIDA TODAY

P.O. Box 419000

Melbourne, FL 32941-9000

Phone: (321) 242-3663

Fax: (321) 242-6620

jwaymer@floridatoday.com

www.floridatoday.com

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From: [Burnell, Scott](#)
To: [Ramsey, Jack](#)
Subject: RE: Washington Post question
Date: Friday, March 18, 2011 3:18:00 PM

She's tied up in response mode – any other names come to mind? Do you know the specific document we'd provide the events in? Thanks!

From: Ramsey, Jack
Sent: Friday, March 18, 2011 3:17 PM
To: Burnell, Scott
Subject: Re: Washington Post question

Sorry, just got out of mtg.

NSIR does event reports and NRC reports to INES. Would suggest Cyndi Jones as starting point.

From: Burnell, Scott
To: Karen Yourish <YourishK@washpost.com>
Sent: Fri Mar 18 14:00:15 2011
Subject: RE: Washington Post question

Yes, I'm checking to see what we've got, please bear with us.

From: Karen Yourish [<mailto:YourishK@washpost.com>]
Sent: Friday, March 18, 2011 1:26 PM
To: Burnell, Scott
Subject: RE: Washington Post question

Just to be clear: I don't necessarily need them to do it for me. Just need guidance on how to do it using the LERs database.

Thanks,

Karen

Karen Yourish
Deputy Graphics Director
The Washington Post
202-334-6396

"Burnell, Scott" <Scott.Burnell@nrc.gov>

03/18/11 12:54 PM

To Karen Yourish <YourishK@washpost.com>
cc
Subject RE: Washington Post question

Hello Karen;

I'm checking with some staff who I hope aren't totally engaged in our response. What's your overall deadline? Thanks.

TTTT/98

Scott

From: Karen Yourish [mailto:YourishK@washpost.com]
Sent: Friday, March 18, 2011 12:35 PM
To: Burnell, Scott
Subject: Washington Post question

Is it possible to filter licensee event reports by those that were given an INES rating?

Karen Yourish
Deputy Graphics Director
The Washington Post
202-334-6396

From: [Burnell, Scott](#)
To: [Cullingford, Michael](#)
Subject: FW: Washington Post question
Date: Friday, March 18, 2011 12:37:00 PM
Importance: High

Hi Mike;

Hope you're not too caught up in the insanity – where might I find information on what the NRC's submitted for INES events over the past 10 years or so? Might OIP have a contact? Thanks.

Scott

From: Karen Yourish [<mailto:YourishK@washpost.com>]
Sent: Friday, March 18, 2011 12:35 PM
To: Burnell, Scott
Subject: Washington Post question

Is it possible to filter licensee event reports by those that were given an INES rating?

Karen Yourish
Deputy Graphics Director
The Washington Post
202-334-6396

TTTT/99

From: [Burnell, Scott](#)
To: [Koller, Greg L](#)
Subject: RE: Nature magazine inquiry
Date: Friday, March 18, 2011 1:59:00 PM

She called just as I was finishing my voicemail – all set. Thanks!

From: Koller, Greg L [mailto:greg.koller@pnl.gov]
Sent: Friday, March 18, 2011 1:27 PM
To: Burnell, Scott
Subject: Nature magazine inquiry

Scott, just got your voice mail message. I'm sorry, I don't have more details other than she said she saw Rajiv's name on a report – I'm assuming it's the one you mentioned but I'm not sure.

Here's some background on the Nature reporter:

<http://www.nature.com/news/author/Nicola+Jones/index.html>

She's now based on the West Coast. Phone: 604-894-5590

Greg Koller
Manager, NEWS & MEDIA RELATIONS
(509) 372-4864
greg.koller@pnl.gov
Find PNNL news and information at:
www.pnl.gov/news
<https://twitter.com/PNNLNews>

TTTT/100

From: [Burnell, Scott](#)
To: [Chandrathil, Prema](#)
Cc: [Mitlyng, Viktoria](#)
Subject: RE: Statement Review-Seismic Study
Date: Friday, March 18, 2011 3:00:00 PM

Tweaks in red

From: Chandrathil, Prema
Sent: Friday, March 18, 2011 2:49 PM
To: Burnell, Scott
Cc: Mitlyng, Viktoria
Subject: Statement Review-Seismic Study

Scott,

Can you review this statement in response to a reporter question about "what does 2.7 e - 05 in the weakest link column for Quad Cities mean?" This info he dug up is in table D-1 of the GI-199 report. Got a cig?? Thanks.

In response to the MSNBC report- The "ranking" was developed by an MSNBC reporter using partial information and a partial understanding of how we evaluate plants for seismic risk. Each plant is evaluated individually according to the geology of its site therefore a such data/rankings or comparisons are highly misleading.

The number you were talking about for Quad Cities indicates one of several models used to screen plants against a wide range of potential earthquakes, including events far stronger than those quakes shown to be possible at a given site. The results are complex and not finalized. The objective of the NRC study was to perform this ultra conservative screening-level assessment of earthquake risk. They are not definitive estimates of seismic risk. The nature of the information used to make these estimates are useful only as a screening tool.

The next step include: (can't speculate on the dates)
Developing unified methodology for plants to use for further assessment.
Provide this method to plants to perform specific analysis
Get results to the NRC
NRC will review for need for further action

-some seismic estimates have increased. The term slightly is not accurate—increased is correct

Prema Chandrathil-Yeamon
Public Affairs Officer
U.S. Nuclear Regulatory Commission
Region III
Lisle, IL
(630) 829-9663

TTTT/101

prema.chandrathil@nrc.gov

From: [Burnell, Scott](#)
To: [Taylor, Robert](#); [Brenner, Eliot](#)
Subject: RE: Press Release for Information Notice
Date: Friday, March 18, 2011 3:11:00 PM
Importance: High

Eliot;

NRR wants to get the IN out – do we need Chairman approval since the ET has signed off?

Scott

From: Taylor, Robert
Sent: Friday, March 18, 2011 2:04 PM
To: Brenner, Eliot
Cc: Burnell, Scott
Subject: Press Release for Information Notice

Eliot,

Attached in the press release Scott drafted last night. It has been blessed by Ops Center ET and is ready for the next step (your review?). NRR is still driving to issue the IN today.

Regards,
Rob

TTTT/102

From: [Burnell, Scott](#)
To: [Ostroff, James](#)
Bcc: [Brenner, Eliot](#)
Subject: RE: NY AG filing to amend Part 54
Date: Friday, March 18, 2011 3:16:00 PM

Hi Jim;

Not having seen the AG's correspondence, we're not in a position to say much. Generally, the NRC reviews petitions for rulemaking (necessary to amend NRC regulations) to determine whether they require formal action. Such action generally takes months if not years, and it is the NRC's usual policy to continue any agency actions already underway – see the agency's refusal to halt the Seabrook renewal reviews following a rulemaking petition from groups concerned with submerged cables, etc. Thanks.

Scott

TTTT/103

From: [Burnell, Scott](#)
To: [PDR Resource](#)
Cc: [Couret, Ivonne](#)
Subject: FW: Media Q - FW: Response from "Contact the NRC Web Site Staff"
Date: Friday, March 18, 2011 3:20:00 PM

Could you help this reporter? Sounds like a microfiche search in any case. Thanks!

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

From: Bob Watson [<mailto:bwatson@newstribune.com>]
Sent: Friday, March 18, 2011 9:52 AM
To: NRCWEB Resource
Subject: Response from "Contact the NRC Web Site Staff"

Below is the result of your feedback form. It was submitted by

Bob Watson (bwatson@newstribune.com) on Friday, March 18, 2011 at 09:52:03

comments: To NRC Public Affairs:

On April 16, 1976, the NRC issued Construction Permits CPPR-139 and CPPR-140 to the St. Louis-based Union Electric Co., for Callaway Power Plants 1 and 2 in Callaway County, Missouri.

As you may know, for business and political reasons, UE only built Callaway I, which began operating in the early 1980s.

Now, UE's successor corporation, Ameren Missouri, is talking about asking the NRC for an Early Site Permit for a second reactor at the same location (the site originally was planned for four (4) total reactors).

My newspaper, the Jefferson City (MO) News Tribune, wants to look at the site permit (or whatever it was called in the 1970s and 80s) that was approved for Callaway I -- -- but I'm having trouble finding it on your ADAM website, because I'm not certain what to ask ADAM for ..

Can you please help me know what document I'm trying to find? (I've also asked Ameren, but they say it may take awhile to find it in their files).

Thank You for your assistance.

Bob Watson
Jefferson City (MO) News Tribune
573/761-0245 (after 9:30 a.m. Central time)
bwatson@newstribune.com

8:55 a.m. CDT
3-18-2011

organization: Jefferson City News Tribune

address1: Box 420

address2: 210 Monroe Street

TTTT/104

city: Jefferson City

state: MO

zip: 65102

country:

phone: 573-761-0245

From: [Couret, Ivonne](#)
To: [Burnell, Scott](#)
Subject: FW: Media - Question USA TODAY on UCS
Date: Friday, March 18, 2011 3:22:27 PM

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
opa.resource@nrc.gov
301-415-8200

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/>

From: Royer, Deanna
Sent: Friday, March 18, 2011 1:12 PM
To: Couret, Ivonne
Subject: Media - Question

Wendy Coch
USA Today
703-854-3648
wkoch@usatoday.com
Re: USC report..what is NRC's response

TTTT/105

From: [Burnell, Scott](#)
To: [Taylor, Robert](#); [Brenner, Eliot](#); [Akstulewicz, Brenda](#)
Subject: FW: Press Release for Information Notice
Date: Friday, March 18, 2011 3:23:00 PM
Attachments: [Quake IN.docx](#)
Importance: High

Rob;

We're good with ET approval, so tell NRR to push its buttons.

Brenda, please make this final and we'll wait for Rob to tell us NRR has sent the IN out.
Thanks.

Scott

From: Taylor, Robert
Sent: Friday, March 18, 2011 2:04 PM
To: Brenner, Eliot
Cc: Burnell, Scott
Subject: Press Release for Information Notice

Eliot,

Attached in the press release Scott drafted last night. It has been blessed by Ops Center ET and is ready for the next step (your review?). NRR is still driving to issue the IN today.

Regards,
Rob

TTTT/106

Attachment Quake_IN_2.docx (16738 Bytes) cannot be converted to PDF format.

From: [Couret, Ivonne](#)
To: [Burnell, Scott](#)
Subject: MEDIA - CNN - Called NRC STAFF
Date: Friday, March 18, 2011 3:23:12 PM
Importance: High

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
opa.resource@nrc.gov
301-415-8200

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/>

From: Akstulewicz, Brenda
Sent: Friday, March 18, 2011 1:18 PM
To: Couret, Ivonne
Subject: CNN

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



TTTTT/107

From: [Burnell, Scott](#)
To: ["wkoch@usatoday.com"](mailto:wkoch@usatoday.com)
Bcc: [Courret, Ivonne](#)
Subject: RE: request for response to UCS report on US nuclear plant safety issues
Date: Friday, March 18, 2011 3:26:00 PM
Attachments: [RE request for response to UCS report on US nuclear plant safety issues.msg](#)
[RE request for response to UCS report on US nuclear plant safety issues.msg](#)

Hello Wendy;

The NRC is aware that UCS issued a report regarding U.S. nuclear power plant safety in 2010. The NRC remains focused on responding promptly and effectively to events in Japan. Once we have completed that important task, we'll review the UCS report in depth. At first blush it doesn't seem to contain any new insights. The NRC remains confident that our Reactor Oversight Program, which includes both on-site and region-based inspectors, is effectively ensuring U.S. nuclear power plants are meeting the NRC's strict requirements and are operating safely.

Please let me know if you need anything else. Thanks.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

TTTT/108

Attachment RE request for response to UCS report on US nu.msg (2560 Bytes) cannot be converted to PDF format.

Attachment RE request for response to UCS report on US nu_1.msg (2560 Bytes) cannot be converted to PDF format.

From: [Burnell, Scott](#)
To: [Ramsey, Jack](#); [Stransky, Robert](#)
Subject: RE: Washington Post question
Date: Friday, March 18, 2011 3:30:00 PM

Bob;

Jack suggests you might know where to track down this sort of document/data? Thanks for anything you can provide!!

Scott Burnell
OPA

From: Ramsey, Jack
Sent: Friday, March 18, 2011 3:24 PM
To: Burnell, Scott
Subject: Re: Washington Post question

Maybe Bob Stransky.

Sorry, this is all I know.

From: Karen Yourish [<mailto:YourishK@washpost.com>]
Sent: Friday, March 18, 2011 1:26 PM
To: Burnell, Scott
Subject: RE: Washington Post question

Just to be clear: I don't necessarily need them to do it for me. Just need guidance on how to do it using the LERs database.

Thanks,

Karen

Karen Yourish
Deputy Graphics Director
The Washington Post
202-334-6396

"Burnell, Scott" <Scott.Burnell@nrc.gov>

03/18/11 12:54 PM

To: Karen Yourish <YourishK@washpost.com>
cc
Subject: RE: Washington Post question

Hello Karen;

I'm checking with some staff who I hope aren't totally engaged in our response. What's your overall deadline? Thanks.

Scott

TTTT/109

From: Karen Yourish [mailto:YourishK@washpost.com]
Sent: Friday, March 18, 2011 12:35 PM
To: Burnell, Scott
Subject: Washington Post question

Is it possible to filter licensee event reports by those that were given an INES rating?

Karen Yourish
Deputy Graphics Director
The Washington Post
202-334-6396

From: Annys Shin
To: Burnell, Scott
Subject: 50 mi evac zone question
Date: Friday, March 18, 2011 3:30:33 PM

Hi Scott: Had a follow up on the 50 mile evac radius.

Does the number of people being evacuated affect the total circumference of area being cleared?

One person was arguing to me evacuating a smaller number of americans from a 50 mi zone is not the same things as trying to evacuate the entire native population of a 10 mile zone.

let me know! thanks.

Annys Shin
Staff Writer
Washington Post
1150 15th St. NW
Washington, DC 20071
o. (202) 334-5465

TTTT/110

From: [Lee, Richard](#)
To: [Burnell, Scott](#)
Cc: [Bonaccorso, Amy](#); [Wagner, Katie](#)
Subject: FW: Spent fuel q's deadline 1pm EST Fri
Date: Friday, March 18, 2011 3:41:04 PM

Scott:

Please discuss this with Charlie Tinkler or Ghani Zigh on this matter.

Thanks, Richard

From: Bonaccorso, Amy
Sent: Friday, March 18, 2011 3:33 PM
To: Lee, Richard
Subject: FW: Spent fuel q's deadline 1pm EST Fri

Can you help Scott Burnell with this?

Thanks,

Amy

From: Rini, Brett
Sent: Friday, March 18, 2011 3:32 PM
To: Bonaccorso, Amy
Subject: RE: Spent fuel q's deadline 1pm EST Fri

Check with DSA, probably Richard Lee's branch.

From: Bonaccorso, Amy
Sent: Friday, March 18, 2011 2:27 PM
To: Rini, Brett
Subject: FW: Spent fuel q's deadline 1pm EST Fri

Brett...

Any idea who could help with this? Scott Burnell (OPA) is checking who in our research

TTTT/III

office would coordinate spent fuel studies.

Thanks,

Amy

From: Burnell, Scott
Sent: Friday, March 18, 2011 2:26 PM
To: Bonaccorso, Amy
Subject: RE: Spent fuel q's deadline 1pm EST Fri

Please!

From: Bonaccorso, Amy
Sent: Friday, March 18, 2011 2:20 PM
To: Burnell, Scott
Subject: RE: Spent fuel q's deadline 1pm EST Fri

Do you need me to reach out to research POCs? I don't know exactly who the right person would be – but I could tap some people to find out.

From: Burnell, Scott
Sent: Friday, March 18, 2011 2:17 PM
To: Eli Kintisch
Subject: RE: Spent fuel q's deadline 1pm EST Fri

My apologies once again, Eli, it just doesn't seem to slow down...

Don't have any names @ Sandia, I'll keep checking

I'm checking who in our research office would coordinate spent fuel studies

Our Licensee Event Reports (<https://lersearch.inl.gov/Entry.aspx>) would include spent fuel-related events.

Here's Diaz's letter:

<http://www.nrc.gov/reading-rm/doc-collections/congress->

<docs/correspondence/2005/domenici-03142005.pdf>

Thanks.

Scott

From: Eli Kintisch [mailto:ekintisch@aaas.org]
Sent: Friday, March 18, 2011 1:29 PM
To: Burnell, Scott
Subject: RE: Spent fuel q's deadline 1pm EST Fri

Any luck? Eli .

Eli Kintisch, Reporter
Science Magazine
202 326 6446

>>> "Burnell, Scott" <Scott.Burnell@nrc.gov> 3/17/2011 6:19 PM >>>

I'll see what I can track down, thanks.

From: Eli Kintisch [mailto:ekintisch@aaas.org]
Sent: Thursday, March 17, 2011 6:17 PM
To: Burnell, Scott
Subject: Spent fuel q's deadline 1pm EST Fri

Scott:

1. Which researchers at Sandia perform work for NRC in this area?
2. Who is the program manager on this research, and may I speak to them for an interview?
3. Are there any publically available reports on spent fuel pool incidents that are available?
4. I was unable to find Nils Diaz response in 2004 to NAS report on spent fuel pools risk. Could you send?

thanks, e

Eli Kintisch, Reporter
Science Magazine
202 326 6446

>>> "Burnell, Scott" <Scott.Burnell@nrc.gov> 3/17/2011 5:49 PM >>>

Hello Eli;

I've most likely missed your deadline anyway, and I apologize – in the future it helps to put a deadline in the subject line to attract attention. In any case, I'm not aware of any publicly available modeling on spent-fuel pool incidents. Please let me know if you need anything else. Thanks.

Scott

From: Eli Kintisch [mailto:ekintisch@aaas.org]
Sent: Thursday, March 17, 2011 2:18 PM
To: Burnell, Scott
Subject: Science mag: Are there publicly available

research studies modeling the loss of coolant from spent nuclear fuel pools that the NRC has done?

Could you send me them or refer me to them?

Deadline: 430pm today; but if we miss that, would still be useful tomorrow.

Thanks, Eli

Eli Kintisch, Reporter
Science Magazine
202 326 6446

From: [Burnell, Scott](#)
To: johnsaginario@foxnews.com
Subject: RE: your question
Date: Friday, March 18, 2011 3:43:00 PM

Hello John;

I'm sorry we've missed your 2 p.m. deadline – just that busy around here. I believe you're referring to the UCS report? In that case:

The NRC is aware that UCS issued a report regarding U.S. nuclear power plant safety in 2010. The NRC remains focused on responding promptly and effectively to events in Japan. Once we have completed that important task, we'll review the UCS report in depth. At first blush it doesn't seem to contain any new insights. The NRC remains confident that our Reactor Oversight Program, which includes both on-site and region-based inspectors, is effectively ensuring U.S. nuclear power plants are meeting the NRC's strict requirements and are operating safely.

Please let me know if you need anything else. Thanks.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

TTTTT/112

From: [Burnell, Scott](mailto:Burnell.Scott)
To: [Ostroff, James](mailto:Ostroff.James)
Subject: RE: A.G. SCHNEIDERMAN TO FEDS: INDIAN POINT RELICENSING PROCESS MUST ACCOUNT FOR SEISMIC & OTHER SAFETY RISKS
Date: Friday, March 18, 2011 3:44:00 PM

Thanks.

From: Ostroff, James [mailto:james_ostroff@platts.com]
Sent: Friday, March 18, 2011 3:44 PM
To: Burnell, Scott
Subject: RE: A.G. SCHNEIDERMAN TO FEDS: INDIAN POINT RELICENSING PROCESS MUST ACCOUNT FOR SEISMIC & OTHER SAFETY RISKS

Thanks. Yes, I have noted such NRC officials comments during the past few days. They're in the public record and can be cited.

From: Burnell, Scott [<mailto:Scott.Burnell@nrc.gov>]
Sent: Friday, March 18, 2011 3:41 PM
To: Ostroff, James
Subject: RE: A.G. SCHNEIDERMAN TO FEDS: INDIAN POINT RELICENSING PROCESS MUST ACCOUNT FOR SEISMIC & OTHER SAFETY RISKS

Jim;

Off the record, I'm certain you can find lots of our quotes over the past few days that ALL U.S. plants continue to meet strict NRC requirements to withstand a give site's strongest possible earthquake derived from examination of thousands of years of that site's geologic record. So that we're not directly responding to the AG, of course.

Scott

From: Ostroff, James [mailto:james_ostroff@platts.com]
Sent: Friday, March 18, 2011 3:37 PM
To: Burnell, Scott
Subject: FW: A.G. SCHNEIDERMAN TO FEDS: INDIAN POINT RELICENSING PROCESS MUST ACCOUNT FOR SEISMIC & OTHER SAFETY RISKS

I'm sending along NY AG Schneiderman's press release, including a letter he sent today to the Chairman and the four other NRC commissioners. It's sent "FYI," unless you want to comment further. I'm using your comment sent a little bit ago.
Thank you,
--Jim

From: NYAG PressOffice [<mailto:NYAG.PressOffice@ag.ny.gov>]
Sent: Friday, March 18, 2011 2:17 PM
To: NYAG PressOffice
Subject: A.G. SCHNEIDERMAN TO FEDS: INDIAN POINT RELICENSING PROCESS MUST ACCOUNT FOR SEISMIC & OTHER SAFETY RISKS

TTTT/113

News from Attorney General Eric T Schneiderman

FOR IMMEDIATE RELEASE

March 18, 2011

New York City Press Office / 212-416-8060

Albany Press Office / 518-473-5525

nyag.pressoffice@ag.ny.gov

A.G. SCHNEIDERMAN TO FEDS: INDIAN POINT RELICENSING PROCESS MUST ACCOUNT FOR SEISMIC & OTHER SAFETY RISKS

*Federal Process to Determine Whether Indian Point Power Plant Should Be
Relicensed & Kept Open is Currently Underway*

*While Federal Analysis Reveals Increase in Seismic Risk at Some US Nuclear
Power Plants, This Issue is Not Currently Considered in the Indian Point
Relicensing Process*

*Schneiderman: Amend Relicensing Process to Require Answers to Basic Health &
Safety Questions at Indian Point That Have Been Previously Excluded*

NEW YORK – In the wake of the unfolding nuclear crisis in Japan, Attorney General Eric T. Schneiderman today said that the federal government must incorporate an immediate, full and open assessment of all public health and safety risks posed by the Indian Point nuclear energy plant, including those posed by potential natural disasters such as seismic activity, into its relicensing process for the New York plant.

Schneiderman's call comes as the Indian Point power plant near New York City is being considered for relicensing, but without an open assessment of public health and safety risks posed to this facility -- just as a report by the federal Nuclear Regulatory Commission reveals that some US power plants are more vulnerable to increased seismic risks than previously believed.

“It is beyond troubling that at the same time the federal government acknowledges increased seismic safety risk at some nuclear power plants in this country, it refuses to fully and openly assess these specific risks to Indian Point as part of its relicensing process,” **Attorney General Schneiderman** said. “Before any conversation about relicensing is concluded, the Nuclear Regulatory Commission must answer basic health and safety questions.”

In a letter to the Nuclear Regulatory Commission (NRC), Attorney General Schneiderman today declared that the federal agency must amend its regulations (for example, 10 C.F.R. Part 54), to include seismicity in the scope of review for relicensing, meaning it would be required to fully examine how seismic activity

would impact Indian Point as part of its relicensing proceeding. Seismic activity is a factor that the NRC has repeatedly refused not to take into consideration in its review of the relicensing application to extend Indian Point's operation.

Indian Point's older reactor, Unit 1, was built in the 1950s prior to any specific requirement for earthquake protection. Although no longer operational, many of Unit 1's system, structures, and components were conjoined to Indian Point's other two reactors which are now up for relicensing. The aging Unit 1 systems, structures, and components were built to outdated seismic specifications, and Unit 2 and Unit 3's continued reliance on these systems in accordance with poses significant safety questions.

In October 2007, New York called on the NRC to expand its relicensing criteria to include seismic analysis so that any decision to keep Indian Point operating for another 20 years would consider the threat of an earthquake. The NRC rejected the request.

"Whether or not you support the relicensing of Indian Point, we can all agree that we must answer the health, safety, and environmental questions affecting the nearly 20 million people living in close proximity to the facility, before making any relicensing decisions," **Attorney General Schneiderman** added.

A full copy of the Attorney General's letter to the NRC is available below.

March 18,

2011

Chairman Gregory B. Jaczko
Commissioner Kristine L. Svinicki
Commissioner George Apostolakis
Commissioner William D. Magwood, IV
Commissioner William C. Ostendorff
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555
Via electronic and U.S. Mail

Re: Seismic Risk at Indian Point Nuclear Generating Station

Dear Chairman Jaczko and Commissioners Svinicki, Apostolakis, Magwood, and Ostendorff:

I am writing you as a nuclear crisis, initiated by the March 11 earthquake and subsequent tsunami in Northern Japan, is still unfolding. In addition to its potentially devastating impact on the people of Japan, this crisis serves as a graphic demonstration that nuclear power facilities in the U.S. may be vulnerable to seismic activity and experience catastrophic failures that compromise their ability to control and cool multiple nuclear reactors. Data from your staff analysis (GS-199), which

demonstrates an increased risk of seismic activity at some nuclear power plants in the country add to my concern.

These factors underscore the importance of a fair, open, and full assessment of seismic risks in the relicensing of Indian Point.

New York State has raised concerns about seismic risk and other issues in relation to the relicensing of Indian Point with your staff on numerous occasions. At each turn, however, the NRC has refused to consider these critical issues in the relicensing review process.

As you know, the Indian Point nuclear power station in Buchanan, New York sits 24 miles from New York City. Of all the power reactors in the United States, the two operating Indian Point reactors have the highest surrounding population both within a 50-mile radius and a 10-mile radius. Seventeen million people live within 50 miles of these reactors. Indian Point Units 2 and 3, which initially came on line in 1973 and 1975, are currently the subject of an adjudicatory proceeding to extend their license by another 20 years (Unit 1 ceased generating in the 1970s).

As the NRC has acknowledged, Indian Point Unit 1, which was authorized in 1956, was built prior to any specific requirement for earthquake protection. Although the NRC revoked the operating license for the Indian Point Unit 1 power reactor in 1980, many of Unit 1's system, structures, and components were conjoined to Unit 2 and Unit 3 and are still in use today. These aging Unit 1 systems, structures, and components were built to inferior seismic specifications, and Unit 2 and Unit 3's continued reliance on these systems today poses significant safety questions.

The NRC has consistently blocked consideration of New York's seismic concerns, as well as related concerns about population, emergency evacuation, fire safety, and site security.

In November of 2007, the Attorneys General of New York, Connecticut, Delaware, Illinois, Kentucky, and Vermont submitted a letter to the NRC which expressed the states' serious concerns about the NRC's failure to confront issues such as local seismic activity when deciding whether to renew the operating license of a nuclear power plant beyond its initial forty-year term. The states requested that the NRC expand relicensing criteria to include seismic analysis. On December 30, 2007, the NRC rejected this request.

The NRC also disregarded New York's "scoping" comments in 2007, which noted that the Indian Point operator's Environmental Report and Updated Final Safety Analysis Reports do not reflect seismic information developed after the early 1980s, and which asked the NRC to require the owner to revise those outdated documents. The NRC subsequently issued a Draft Environmental Impact Statement (DSEIS) based on this out-of-date information. The DSEIS failed to mention new information regarding seismic activity developed recently by the United States

Geological Survey (USGS) that included the area around Indian Point or to account for the findings of Columbia's Lamont-Doherty Earth Observatory 2008 study. In fact, the NRC has not revised any of its Indian Point-related environmental analyses to take into account findings from this important independent study.

Perhaps most egregious is the NRC Staff's issuance of the Final Supplemental Environmental Impact Statement (FSEIS) for Indian Point, which it issued three months after Staff issued the GS-199 analysis on seismic activity. The FSEIS did not make any reference to the NRC's own findings of increased seismic risk at Indian Point.

In November of 2007, the state submitted two contentions in the license renewal proceeding arguing that the applicant's "Updated" Safety Evaluation Report and Environmental Report insufficiently analyzed alternatives for mitigation of severe accidents like earthquakes in that it (1) failed to include recent information regarding the type, frequency, and severity of potential earthquakes and (2) failed to include an analysis of mitigation measures which could reduce the effects of an earthquake damaging the parts of inactive Indian Point Unit 1 which are currently in use at Units 2 and 3. The NRC Staff opposed acceptance of these contentions, and the Atomic Safety and Licensing Board excluded them from consideration in the adjudicatory proceeding because, it said, the state did not suggest feasible alternatives to address risks posed by the new data, or estimate the cost of the increased margin of safety that would result from any severe accident mitigation action. This burden is clearly not the public's to bear and these contentions were excluded in error

Earlier this week, in testimony before the Senate Committee on Environment and Public Works, Chairman Jaczko stated the NRC's intention to conduct a review of the earthquake-related risks faced by nuclear power facilities operating in the central and eastern U.S. He stated that this review would take one to two years to complete, followed by a similar period of time to consider and implement mitigation measures. Indian Point Units 2 and 3 are currently the subject of a proceeding to extend their licenses by another 20 years – a proceeding in which the NRC has consistently ignored serious consideration of the risks that earthquakes and related issues pose to the Indian Point facility.

NRC should not contemplate relicensing Indian Point without first completing an open and public review of earthquake-related risks faced by this facility.

For this reason, the NRC must undertake an immediate, full, fair, and open assessment of all public health and safety risks that earthquakes pose to this facility, and provide the public an opportunity to fully review and comment on all phases of this review.

In addition, the NRC must take the following actions:

1. Promulgate an amendment to Part 54 and any other relevant regulations, which exclude seismicity analysis from the scope of safety review in relicensing proceedings, to specifically require the preparation of a public site-specific seismic analysis for the Indian Point and other reactors;
2. Open up the GS-199 seismic analysis proceeding for meaningful participation by states and the public so that all assumptions can be identified and tested and ensure that all information used in this proceeding is made available in the public record;
3. Address the risk posed by the Indian Point Unit 1 facilities, which share many common components and systems with the other Indian Point units, in a complete and transparent way;
4. Incorporate USGS findings and Columbia Lamont-Doherty's findings into the Indian Point FSEIS for license renewal and re-issue the document for additional public review and comment;
5. Make public immediately the Commission's plans, in their entirety, for addressing seismic risk at all three Indian Point plants; and
6. Maximize public involvement in the Commission's and the NRC Staff's actions regarding seismic risk at Indian Point.

Whether or not one supports the re-licensing of Indian Point Units 2 and 3, we can all agree that we must protect the health, safety, and environment of the nearly 20 million people living in close proximity to the facility. Only through a full, fair, and open assessment of the earthquake and related security risks surrounding this uniquely-situated plant – one that precedes any consideration of approving an extension of the Indian Point facility for another 20 years – can we provide these fundamental protections.

I thank you for your attention this request, and please do not hesitate to contact me at any time if I can provide additional information or you would like discuss this matter in greater detail.

Sincerely,

Eric T. Schneiderman
Attorney General

###

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From: [Burnell, Scott](#)
To: [Courret, Ivonne](#)
Subject: RE: Henry Fountain - NY Times - 3PM DEADLINE
Date: Friday, March 18, 2011 3:50:00 PM

Called – he's all set

From: Courret, Ivonne
Sent: Friday, March 18, 2011 3:39 PM
To: Burnell, Scott
Subject: FW: Henry Fountain - NY Times - 3PM DEADLINE
Importance: High

This is different than the graphic person

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
opa.resource@nrc.gov
301-415-8200

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

From: Ghneim, Munira
Sent: Friday, March 18, 2011 1:45 PM
To: Courret, Ivonne
Subject: Henry Fountain - NY Times - 3PM DEADLINE

Organization– NY Times
Contact – Henry Fountain
Phone – 212-556-3930
Email – fountain@nytimes.com
Request – Has questions about the international Nuclear Event Scale – 3PM DEADLINE

TTTT/114

From: [Couret, Ivonne](#)
To: [Burnell, Scott](#)
Subject: FW: Media - Question - LONDON
Date: Friday, March 18, 2011 4:04:52 PM

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
opa.resource@nrc.gov
301-415-8200

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

From: Royer, Deanna
Sent: Friday, March 18, 2011 2:38 PM
To: Couret, Ivonne
Subject: Media - Question

Jonathan Leake
Sunday Times Newspaper in London
jleake@sunday-times.co.uk
011442077825662
Re: To what extent in NRC helping Japan and sending people over?

Deanna Royer

TTTT/115

From: [Taylor, Robert](#)
To: [Burnell, Scott](#)
Subject: FW: Media - Question
Date: Friday, March 18, 2011 4:15:29 PM

From: Couret, Ivonne
Sent: Friday, March 18, 2011 4:04 PM
To: Taylor, Robert
Subject: FW: Media - Question

Can you help with this...

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
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: Friday, March 18, 2011 2:24 PM
To: Couret, Ivonne
Subject: Media - Question

Troy Anderson
Riverside Press Enterprise
tanderson@pe.com
951-368-9406
Re: would like us to email him the report we have on the safety of reactors in the U.S.

Deanna Royer

TTTTT/116

From: [Bowman, Eric](#)
To: [Taylor, Robert](#); [Rosenberg, Stacey](#)
Cc: [McGinty, Tim](#); [Burnell, Scott](#); [Akstulewicz, Brenda](#)
Subject: RE: Press Release for Information Notice
Date: Friday, March 18, 2011 4:58:59 PM

It's just been declared and is going on the internet site now.

Thanks!

Eric

From: Taylor, Robert
Sent: Friday, March 18, 2011 4:44 PM
To: Rosenberg, Stacey; Bowman, Eric
Subject: RE: Press Release for Information Notice

Any word on the IN status?

From: Rosenberg, Stacey
Sent: Friday, March 18, 2011 3:30 PM
To: Taylor, Robert
Subject: RE: Press Release for Information Notice

Thanks so much Rob!!

From: Taylor, Robert
Sent: Friday, March 18, 2011 3:27 PM
To: Bowman, Eric
Cc: Rosenberg, Stacey; McGinty, Tim; Burnell, Scott; Akstulewicz, Brenda
Subject: FW: Press Release for Information Notice
Importance: High

Eric,

You are a go for issuing the IN. Please reply to all when the IN is out to let us know we can go with the press release. Thanks for your patience.

Regards,
Rob

From: Burnell, Scott
Sent: Friday, March 18, 2011 3:24 PM
To: Taylor, Robert; Brenner, Eliot; Akstulewicz, Brenda
Subject: FW: Press Release for Information Notice
Importance: High

Rob;

We're good with ET approval, so tell NRR to push its buttons.

Brenda, please make this final and we'll wait for Rob to tell us NRR has sent the IN out.

TTTT/117

Thanks.

Scott

From: Taylor, Robert
Sent: Friday, March 18, 2011 2:04 PM
To: Brenner, Eliot
Cc: Burnell, Scott
Subject: Press Release for Information Notice

Eliot,

Attached in the press release Scott drafted last night. It has been blessed by Ops Center ET and is ready for the next step (your review?). NRR is still driving to issue the IN today.

Regards,
Rob

From: [Burnell, Scott](#)
To: [Anderson, Troy](#)
Subject: RE: Media - Question
Date: Friday, March 18, 2011 4:59:00 PM

Hi Troy;

The NRC is aware that UCS issued a report regarding U.S. nuclear power plant safety in 2010. The NRC remains focused on responding promptly and effectively to events in Japan. Once we have completed that important task, we'll review the UCS report in depth. At first blush it doesn't seem to contain any new insights. The NRC remains confident that our Reactor Oversight Program, which includes both on-site and region-based inspectors, is effectively ensuring U.S. nuclear power plants are meeting the NRC's strict requirements and are operating safely.

Apart from that, President Obama has asked the NRC to do a comprehensive safety review of U.S. nuclear power plants, and we're responding to that request.

Please let me know if you need anything else. Thanks.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

From: Anderson, Troy [<mailto:tanderson@pe.com>]
Sent: Friday, March 18, 2011 4:52 PM
To: Burnell, Scott
Subject: RE: Media - Question

Hi Scott,

Actually, do you have a response you can send me to the Union of Concerned Scientists report entitled "The NRC and Nuclear Power Plant Safety in 2010."

I'm writing an editorial for the Riverside Press-Enterprise about what steps officials in the U.S. should take to ensure the nuclear power plants, dams and other infrastructure are safe in the event of a large earthquake or tsunami in Southern California.

It would be helpful if you could send me any reports you have that outline the kinds of things that need to be done to improve nuclear power plant safety here in the U.S.

Thank you,

Troy Anderson
Editorial Writer
The Press-Enterprise
tanderson@pe.com

TTTT/118

From: Burnell, Scott [mailto:Scott.Burnell@nrc.gov]
Sent: Friday, March 18, 2011 1:47 PM
To: Anderson, Troy
Cc: Couret, Ivonne
Subject: FW: Media - Question

Hello Troy;

I got a note that you're looking for "the report we have on the safety of reactors in the U.S.," but I need more information. Which report are you looking for? Thanks.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

From: [Burnell, Scott](#)
To: james_denn@dps.state.ny.us
Subject: RE: Earthquake statement
Date: Friday, March 18, 2011 5:02:00 PM

Hi Jim;

You'll be interested in our latest official NRC blog post:

<http://public-blog.nrc-gateway.gov/>

Sorry it took so long. Have a good night.

Scott

TTTTT/119

From: Hayden, Elizabeth
To: Weber, Michael; LIA05 Hoc; RST01 Hoc
Cc: Bowman, Gregory; Wittick, Brian; Virgilio, Martin; Johnson, Michael; Brenner, Eliot; McIntyre, David; Burnell, Scott; OST02 HOC
Subject: RE: FYI - Fact Sheet on NRC Seismic Regulation
Date: Friday, March 18, 2011 5:07:08 PM

Where did these documents come from? The Fact Sheet is different from the one on our external website. Can these documents be posted to the Website under a special Key Topic we're creating to pull all relevant information into one area on the web?

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

From: Weber, Michael
Sent: Friday, March 18, 2011 4:55 PM
To: LIA05 Hoc; RST01 Hoc
Cc: Bowman, Gregory; Wittick, Brian; Virgilio, Martin; Johnson, Michael; Brenner, Eliot; Hayden, Elizabeth; McIntyre, David; Burnell, Scott; OST02 HOC
Subject: FYI - Fact Sheet on NRC Seismic Regulation

Provided the attached to DOE in response to a request from the Secretary of Energy.

From: Case, Michael
To: peter.lyons@nuclear.energy.gov <peter.lyons@nuclear.energy.gov>
Cc: Sheron, Brian; Uhle, Jennifer; Munson, Clifford; Kammerer, Annie; Khanna, Meena; Chokshi, Nilesh; Wilson, George
Sent: Fri Mar 18 13:30:51 2011
Subject: Fact Sheet on NRC Seismic Regulation

Dr. Lyons:

Per your discussions with Brian, please find attached a one-page fact sheet on the NRC's Seismic Regulations (same information, one narrative, one bulletized).

TTTTT/120

From: [Taylor, Robert](#)
To: [Couret, Ivonne](#); [Burnell, Scott](#)
Subject: RE: Copy of Information Notice Reporters are requesting it
Date: Friday, March 18, 2011 6:44:36 PM

Link below:

<http://www.nrc.gov/reading-rm/doc-collections/gen-comm/info-notices/2011/ML110760432.pdf>

From: Couret, Ivonne
Sent: Friday, March 18, 2011 6:43 PM
To: Taylor, Robert; Burnell, Scott
Subject: Copy of Information Notice Reporters are requesting it
Importance: High

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
opa.resource@nrc.gov
301-415-8200

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

TTTT / 121

From: [Schwartz, Noaki F.](#)
To: [Burnell, Scott](#)
Cc: [Couret, Ivonne](#)
Subject: RE: Media Request - FW: Associated Press questions
Date: Friday, March 18, 2011 6:50:31 PM

Hi Scott,

Thank you so much.

Take care,
Noaki

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

From: Burnell, Scott [<mailto:Scott.Burnell@nrc.gov>]
Sent: Friday, March 18, 2011 3:44 PM
To: Schwartz, Noaki F.
Cc: Couret, Ivonne
Subject: RE: Media Request - FW: Associated Press questions

Hi Noaki;

The NRC has the relevant expertise to model reactor accidents and project their consequences on the surrounding population. We have therefore run our models and provided our analysis based on the best available information from the site. This analysis, combined with how contamination would dissipate over the thousands of miles between the site and U.S. territory, continues to indicate U.S. soil will avoid harmful levels of radiation -- that is, levels high enough to require protective actions under EPA guidelines. The EPA remains the lead agency for monitoring conditions on U.S. soil. EPA equipment is sensitive enough to detect staggeringly small amounts of contamination; those small amounts would not lead to any appreciable doses.

The NRC's regulations continue to be based on the linear no dose threshold concept; that is, any exposure larger than zero has a theoretical chance of leading to cancer.

Please let me know if you have any additional questions. Thank you.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

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

From: Schwartz, Noaki F. [<mailto:NSchwartz@ap.org>]
Sent: Friday, March 18, 2011 5:56 PM
To: OPA Resource
Subject: Associated Press questions

Greetings,

I'm a reporter with the Associated Press in Los Angeles working on a story on the radiation concerns in California. I was hoping someone could answer the questions below as soon as possible.

T T T T / 122

Thank you,
Noaki

Noaki Schwartz
Associated Press
213-346-3115

* What does the NRC mean when it says there are no harmful radiation levels will reach US shores? How are they defining and measuring this?

* Does this statement by NRC that no harmful radiation will reach the US mean it's reversing the long-standing position that there is no safe level of radiation?

* Why is the NRC the lead agency on this issue and not the EPA? Has a decision been made to reverse the guidance that would normally put the EPA in charge? If so who made that decision and when?

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From: [Burnell, Scott](#)
To: [Vartabedian, Ralph](#)
Cc: [Brenner, Eliot](#)
Subject: RE: Your call this afternoon
Date: Friday, March 18, 2011 8:13:00 PM

Hi Ralph;

I'm not aware of the Chairman having spoken publicly, Eliot's in the best position to know (if he's monitoring his BlackBerry he'll reply promptly). I don't have any info at all on the second item.

For what it's worth, we did formally notify all U.S. plants of the basics on the Japan event and reminded them of their requirements to be able to withstand the loss of large areas of their plants:

<http://www.nrc.gov/reading-rm/doc-collections/news/2011/11-052.pdf>

<http://www.nrc.gov/reading-rm/doc-collections/gen-comm/info-notices/2011/ML110760432.pdf>

Scott

From: Vartabedian, Ralph [mailto:Ralph.Vartabedian@latimes.com]
Sent: Friday, March 18, 2011 8:06 PM
To: Burnell, Scott
Subject: RE: Your call this afternoon

Did the chairman make any public announcements today? Have NRC staffers offered any advice on preventing a criticality event? Thanks.

From: Burnell, Scott [mailto:Scott.Burnell@nrc.gov]
Sent: Friday, March 18, 2011 5:05 PM
To: Vartabedian, Ralph
Subject: RE: Your call this afternoon
Importance: High

Hi Ralph;

As always, sorry for the delay – what can I do for you?

Scott

TTTT/123

From: [Burnell, Scott](#)
To: [Brenner, Eliot](#); [Hayden, Elizabeth](#)
Subject: Events
Date: Friday, March 18, 2011 9:26:00 PM

Eliot, Beth;

The Chairman and Chuck had a basic conversation about 9 – 9:10 p.m. and Chuck spoke with the ET for another 10 minutes, all of which leads toward a significant mission shift -- much more involvement on our part. It's all strategy at this point but I spoke with Angela, and there's a significant possibility of needing a press release this weekend. Angela and I agreed it wasn't worth waking anyone up. I'll be in at 8 along with Diane and we'll get caught up so I can brief you later tomorrow morning.

Scott

TTTT/124

From: [Ian Sample](#)
To: [Burnell, Scott](#)
Subject: Re: Guardian query / Fukushima 50 mile exclusion zone.
Date: Friday, March 18, 2011 6:26:29 AM

Dear Scott,

Thanks so much for getting back to me, and I do apologise for adding my queries to your in-tray, which must be creaking under the strain these days. One more thing would be a huge help - can you clarify how the NRC / US know that the storage pool at reactor four is empty? Keen to know if this is from some kind of aerial/sat instrumentation, which would presumably be possible.

I really appreciate your help with this,

With best regards, Ian

On 18 March 2011 00:29, Burnell, Scott <Scott.Burnell@nrc.gov> wrote:

Hello Ian;

I sincerely apologize for the delay in responding, we're really just that swamped. The document we provided in support of our press release represents projections based on the best available data we had at the time regarding conditions at the site. They do not represent actual measurements on the ground. As Chairman Jaczko said in his congressional testimony, the NRC does believe there are high radiation levels in some sections of the Fukushima site. Please let me know if you need anything else, and I'll do my best to respond promptly this time.

Scott Burnell

Public Affairs Officer

Nuclear Regulatory Commission

From: Ian Sample [<mailto:ian.sample@guardian.co.uk>]
Sent: Wednesday, March 16, 2011 4:13 PM
To: OPA Resource
Subject: Guardian query / Fukushima 50 mile exclusion zone.

Dear NRC folks,

I'm the science correspondent at the Guardian newspaper in London.

TTTT/125

Might you help me out with a query?

I am looking at your data via the document here (<http://www.nrc.gov/>) for working out the 50 mile exclusion zone the US has adopted around Fukushima. Am I right that your calculations show that today, the max total EDE at 0.5 miles from the plant, was 5400 rems, or 54 sieverts?

Wouldn't a dose that high would be lethal to anyone on the site?

It would be great to have some clarification.

With best regards,

--

Ian Sample
Science correspondent
The Guardian
Kings Place
90 York Way
London N1 9GU
Direct: +44(0)203 353 4752

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From: [Couret, Ivonne](#)
To: [Conatser, Richard](#); [Harrington, Holly](#)
Cc: [Shoop, Undine](#); [Burnell, Scott](#); [Taylor, Robert](#)
Subject: RE: Japan -- Radiological Environmental Monitoring Capability in the United States
Date: Friday, March 18, 2011 7:45:42 AM

Richard,
Thanks for sending you the email. I'm forwarding it to Holly Harrington to follow up on your suggestions. Currently strictly trying to punt media in the right direction. Thanks for your support! Ivonne

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
opa.resource@nrc.gov
301-415-8200

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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: Conatser, Richard
Sent: Friday, March 18, 2011 7:04 AM
To: Couret, Ivonne
Cc: Shoop, Undine
Subject: Japan -- Radiological Environmental Monitoring Capability in the United States

Ivonne,

I know you are very busy, and I'm sorry to bother you, but I saw the question and response (below) in the "Questions and Answers for OPA: March 15, 2011; 8:50 pm."
(You can find it by clicking on the link "Chairman's Q&A at Capitol Hill 3/16/2011" found here <http://portal.nrc.gov/edo/nrr/default.aspx>).

1. Has the government set up radiation monitoring stations to track the release?

The NRC understands that EPA is utilizing its existing nationwide radiation monitoring system, RadNet, to monitor continuously the nation's air and regularly monitors drinking water, milk and precipitation for environmental radiation. EPA has publicly stated its agreement with the NRC's assessment that we do not expect to see radiation at harmful levels reaching the U.S. from damaged Japanese nuclear power plants. Nevertheless, EPA has stated that it plans to work with its federal partners to deploy additional monitoring capabilities to parts of the western U.S. and U.S. territories.

This looks great but it does not mention anything about the radiological environmental monitoring programs that the NRC regulations require at each commercial nuclear power plant in the US. With 65 commercial nuclear power plants across the country, this represents a significant radiological environmental monitoring capability in the continental US. These environmental monitoring sampling stations are in place because of NRC

TTTT/126

regulations, and one of the primary objectives of these environmental monitoring programs is to monitor radiation in the environment around the commercial nuclear power plants. Licensees collect air samples as often as weekly, and some of those results will be available from the licensees shortly. Please contact Undine or myself if you would like additional information.

Thanks,

Richard L. Conatser

Health Physicist

Nuclear Regulatory Commission

301-415-4039

Richard.Conatser@NRC.gov

From: Clayton, Mark
To: Burnell, Scott
Subject: Re: request for response to UCS report on US nuclear plant safety issues
Date: Friday, March 18, 2011 7:55:33 AM

thanks Scott.... the story was held - so this will get into it - thanks for sending and for all NRC is doing. mc

On Thu, Mar 17, 2011 at 7:18 PM, Burnell, Scott <Scott.Burnell@nrc.gov> wrote:

Mark;

I apologize that we've missed your deadline – it's just that crushingly busy here. For what it's worth, here's our response:

The NRC is aware that UCS issued a report today regarding U.S. nuclear power plant safety in 2010. The NRC remains focused on responding promptly and effectively to events in Japan. Once we have completed that important task, we'll review the UCS report in depth. At first blush it doesn't seem to contain any new insights. The NRC remains confident that our Reactor Oversight Program, which includes both on-site and region-based inspectors, is effectively ensuring U.S. nuclear power plants are meeting the NRC's strict requirements and are operating safely.

Please let me know if you need anything else. Thanks.

Scott Burnell

Public Affairs Officer

Nuclear Regulatory Commission

From: Clayton, Mark [<mailto:claytonm@csps.com>]
Sent: Thursday, March 17, 2011 3:17 PM
To: OPA Resource
Subject: request for response to UCS report on US nuclear plant safety issues

Hi Eliot or Scott,

TTTT/127

I'm writing about the Union of Concerned Scientists report on US nuclear plant safety released today. I wondered if you could provide a response or statement on this report. I will be filing this article by 4:30 p.m. - just over an hour from now.

Thanks for your thoughts,

Mark

Mark Clayton

Staff Writer

The Christian Science Monitor

617-450-2672

claytonm@csmonitor.com

--

Mark Clayton

Staff Writer

The Christian Science Monitor

617-450-2672

claytonm@csmonitor.com

From: [Burnell, Scott](#)
To: [Bonaccorso, Amy](#); [McIntyre, David](#); [Harrington, Holly](#)
Cc: [Deavers, Ron](#)
Subject: Re: K1 Pills
Date: Friday, March 18, 2011 9:32:40 AM

Amy;

Please double-check w/Dave and Holly, since my coffee hasn't kicked in, but here goes -- isn't there some QA language to the effect of "listen to your state and local authorities, they'll be the best source of information on actions appropriate to your area" we can use?

Scott

Sent from an NRC Blackberry
Scott Burnell
202-441-0471

From: Bonaccorso, Amy
To: Burnell, Scott; McIntyre, David; Harrington, Holly
Cc: Deavers, Ron
Sent: Fri Mar 18 09:01:57 2011
Subject: K1 Pills

What are we telling people who want to know where to get K1? If I say there is no danger, it's still a potentially weak answer because FEMA always tells people to "be prepared."

T T T T / 128

From: [Sheehan, Neil](#)
To: [Burnell, Scott](#); [Courret, Ivonne](#)
Subject: RE: SOME ANSWERS - FW: questions from The New York Times
Date: Friday, March 18, 2011 9:59:32 AM

I did.

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

From: Burnell, Scott
Sent: Friday, March 18, 2011 9:57 AM
To: Sheehan, Neil; Courret, Ivonne
Subject: Re: SOME ANSWERS - FW: questions from The New York Times

No info on IN past what I saw yesterday -- did you see draft release?

Sent from an NRC Blackberry
Scott Burnell
202-441-0471

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

From: Sheehan, Neil
To: Burnell, Scott; Courret, Ivonne
Sent: Fri Mar 18 09:55:23 2011
Subject: RE: SOME ANSWERS - FW: questions from The New York Times

I'm going to tell him he needs to check with the Japanese regulators on the specifics of those reactors.

Scott: Do you know if that Information Notice is going out today? That contains good background that would answer some of his questions.

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

From: Burnell, Scott
Sent: Friday, March 18, 2011 9:54 AM
To: Courret, Ivonne; Sheehan, Neil
Subject: Re: SOME ANSWERS - FW: questions from The New York Times

Hadn't seen these last night, no action on my part.

Sent from an NRC Blackberry
Scott Burnell
202-441-0471

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

From: Courret, Ivonne
To: Sheehan, Neil
Cc: Burnell, Scott
Sent: Fri Mar 18 09:50:29 2011
Subject: SOME ANSWERS - FW: questions from The New York Times

FYI please let me know if we have responded to NYTimes. Ivonne

TTTT/129

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
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301-415-8200

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

From: OPA Resource
Sent: Friday, March 18, 2011 9:20 AM
To: Couret, Ivonne
Subject: FW: questions from The New York Times

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

From: Kammerer, Annie
Sent: Friday, March 18, 2011 2:41 AM
To: OPA Resource
Cc: Ake, Jon; Munson, Clifford
Subject: RE: questions from The New York Times

not sure who is picking this up...but here are some answers...

Please review and provide feedback to me, Jon or Cliff.

Thanks,
Annie

From: Glanz, James [glanz@nytimes.com]
Sent: Friday, March 18, 2011 12:22 AM
To: OPA Resource
Cc: Kammerer, Annie; Glanz, James
Subject: questions from The New York Times

It was requested that we submit questions in writing on our story regarding the seismic preparedness of the Fukushima Daiichi nuclear power plant. See brief questions below. I hope that you will advise that you have received questions and likely time frame for responses. If you can respond by Monday that would be very helpful, and thanks very much. Also, if you do not have answers to all the questions and can send the information that you have as it is gathered, that is also much appreciated. We understand that you are in the midst of supporting the effort in japan.

Sincerely, Jim Glanz
The New York Times
212 556 7545

QUESTIONS FOR NRC ON FUKUSHIMA DAIICHI NUCLEAR POWER PLANT:

1. What was the disposition of the plant during the time after the earthquake struck and before the tsunami arrived? Was there indication of damage to the plant solely from the earthquake (if so, what systems) and did emergency procedures function during this time.

2. What magnitude earthquake was the plant designed to withstand? For example, what magnitude earthquake was the plant expected to sustain with damage but continued operation? And with an expected shutdown but no release of radioactive material?

3. Did this reactor sustain damage in the July 16, 2007 earthquake, as the Kashiwazaki power plant did? What damage and how serious was it?

4. Was the Fukushima power plant designed to withstand a tsunami of any size? What sort of modeling was done to design the plant to withstand either seismic events or tsunamis? What specific design criteria were applied in both cases?

Thank you.

From: [Mensah, Tanya](#)
To: [Burnell, Scott](#)
Cc: [Scott, Catherine](#); [Rosenberg, Stacey](#)
Subject: RE: Please immediately close older reactors for inspection
Date: Friday, March 18, 2011 12:20:41 PM

Hi Cathy,

Scott Burnell (OPA) had a question/suggestion and I was just following up with you for OGC's perspective. We are receiving letters from foreign nationals requesting immediate shutdown of reactors in the US. Do we need to treat those at 2.206 petitions? I know the 2.206 process is for all members of the public. Is that just for US citizens? Currently we have one from Mr. Saporito (US), a petitioner from Canada (he lives closest to Nine Mile), and the following from Bill Linton (UK).

Thanks,
Tanya

From: Burnell, Scott
Sent: Friday, March 18, 2011 12:07 PM
To: Mensah, Tanya
Subject: RE: Please immediately close older reactors for inspection

Tanya;

Quick thought -- check with OGC on whether foreign nationals have 2.206 priveleges. Could cut down on the clutter. Thx.

scott

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

From: Screnci, Diane
Sent: Friday, March 18, 2011 10:26 AM
To: Mensah, Tanya
Cc: OPA Distribution
Subject: RE: Please immediately close older reactors for inspection

This looks like another 2.206. Do you want me to continue to send these to you?

Diane Screnci
Sr. Public Affairs Officer
USNRC, RI
610/337-5330

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

From: Fleming, Kreslyon On Behalf Of OHRComments Resource
Sent: Friday, March 18, 2011 10:11 AM
To: OPA Distribution
Subject: FW: Please immediately close older reactors for inspection

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

From: info@ecologicalinternet.org [<mailto:info@ecologicalinternet.org>] On Behalf Of Bill Linton
Sent: Wednesday, March 16, 2011 11:09 AM
To: OHRComments Resource
Subject: Please immediately close older reactors for inspection

TTTT/130

Dear U.S. Nuclear Regulatory Commission,

Given the worsening Japanese nuclear disaster, I am writing to demand immediate closure of U.S. nuclear energy facilities that remain operational after having exceeded their engineered operable life. Please immediately close these facilities for inspection in an orderly manner as is occurring in Europe. It is the prudent thing to do given many older reactors in the U.S. are of similar design as those melting down in Japan.

Japan is facing the worst nuclear crisis since the atomic bombing of Hiroshima and Nagasaki. Multiple explosions have hit the Fukushima Daiichi nuclear plant, several reactors have lost their cooling systems, raising fears of meltdown(s). Radiation levels have been detected as far as 100 miles away. Many people have tested positive for radiation exposure, and hundreds of thousands of have been evacuated, with the numbers expected to rise.

In the United States, some reactors which have recently had their licenses extended are nearly 40 years old, and their owners are asking the Nuclear Regulatory Commission for approval to extend their lives further. No additional extensions should be granted, and these older reactors that have been extended must be taken off line immediately and inspected given recent happenings in Japan. Clearly these 1970s vintage era systems were not adequately engineering for infrequent but large natural disasters and increasingly human exacerbated events.

Further, it is presumptuous for the federal government to be planning to provide for \$36 billion in loan guarantees to build still more nuclear plants, when we do not yet have a permanent waste repository, or even a plan. We are dooming civilizations for hundreds of thousands of years to having to protect and maintain enclosure upon our nuclear waste. Nuclear waste stored on site has caught fire in Japan, and the current on site storage across America is completely unacceptable. It is not a matter of if, it is only one of when will there be a nuclear disaster in America.

All existing nuclear energy plants, waste and weapons are accidents waiting to happen. Nuclear complexity, ecological costs, natural disasters and a conflict ridden world show nukes can never be safe. The price of nuclear fission is potentially enormous when even one accident happens, must less several as now with our Japanese brothers and sisters. In a continually more disorderly world, it is clear that no nuclear materials are secured, and that developing countries embracing nuclear energy will lead to weapon proliferation and yet more great loss of life from accidents and war. Be we could choose to ban nuclear materials in their entirety.

It is time for humanity to choose which technologies they allow based upon full preponderance of the evidence - and as an ecologist I would predict all but certain similar impacts no matter the effort from the introduction of

geo-engineering, genetically modified organisms (particularly food), nanotech, etc. Nuclear fission has been shown to be deadly in the field of battle, along Japan's coastal plains, it's unsecured wastes are growing, and through terrorist and militaristic rhetoric regarding their use in an increasingly unstable world.

Please immediately cease extending the licenses of old nuclear power plants, and shut down for inspection those which have been extended. We will be calling upon President Obama to convene an urgent summit to begin fully dismantling global nuclear weaponry. Some technologies such as splitting the atom at their root are anti-human and Earth. Let's get it done, ban the bomb, ban nuclear energy, and commit to climate and energy solutions that are serious and include life-saving energy conservation, efficiency & using only true renewables. This will soon be the only energy at our disposal if we desire a habitable Earth, and we must transform our society accordingly.

With grave concern,

Bill Linton
United Kingdom
bill.linton@blueyonder.co.uk

cc:
President Obama; EPA Administrator, Lisa P. Jackson;
Secretary of Agriculture, Tom Vilsack; Secretary of Energy,
Steven Chu; Secretary of Interior, Ken Salazar; NOAA
Administrator, Jane Lubchenco; President's Science Advisor,
Dr. John Holden; NRC Contacts for Open Government

From: [Harrington, Holly](#)
To: [Taylor, Robert](#); [Brenner, Eliot](#); [Burnell, Scott](#); [Couret, Ivonne](#); [Hayden, Elizabeth](#); [McIntyre, David](#); [Chandrathil, Prema](#); [Dricks, Victor](#); [Hannah, Roger](#); [Ledford, Joey](#); [Mityng, Viktoria](#); [Screnci, Diane](#); [Sheehan, Neil](#); [Uselding, Lara](#)
Subject: Text of Blog Post Just Posted -- Verbiage about MSNBC report
Date: Friday, March 18, 2011 3:22:05 PM

Don't Believe Everything You Read

Many news reports during this chaotic week have questioned the safety of U.S. nuclear power plants in the wake of the terrible events in Japan. These reports raise questions about the design of reactor containments and spent fuel pools, and of course whether our plants would be able to withstand an earthquake and tsunami like the ones that devastated Japan.

Nuclear power is a complicated, technical subject, and we naturally try to simplify it to make it understandable to the general public. Sometimes, however, simplification leads to misunderstanding, and misunderstanding causes fear.

One example was a so-called "investigative report" on MSNBC.com that ranked nuclear power plants according to their "vulnerability" to major earthquakes. The reporter concluded that the Indian Point plant, 24 miles north of New York City, was "the most vulnerable" in the nation. Instant headlines. You may have heard a local news report that your neighborhood nuclear plant ranked "on the NRC's Top Ten List" of the plants most likely to tumble in a temblor.

Let's be clear: The NRC does not rank nuclear power plants according to their vulnerability to earthquakes. This "ranking" was developed by the MSNBC.com reporter using partial information and we believe an even more partial understanding of how we evaluate plants for seismic risk. Each plant is evaluated individually according to the geology of its site, not by a "one-size-fits-all" model – therefore such rankings or comparisons are highly misleading.

We are also frequently asked whether Plant A can withstand a quake of magnitude X. The reporters always want a yes-or-no answer, but again, it's not that simple. Nuclear plants are designed to withstand a certain level of "ground shaking," to use a technical term. But the way the ground shakes in an earthquake is a factor of the magnitude and the distance from the epicenter, among other things. So we can't give a simple answer to such a simple question.

Each plant is built to the circumstances that exist at its location – including earthquakes, floods and tsunamis. For example, at nuclear plants along the Atlantic and Gulf Coasts, the greatest water threat is hurricane storm surge, not a tsunami. Moreover, there is only one fault, near the northwest U.S. coast, that is similar to the fault in Japan, and there are no nuclear plants nearby. The closest coastal plant to that fault is well-protected against tsunami.

Over the last few years, the NRC has reassessed nuclear plants in the central and eastern United States for their vulnerability to earthquakes, using new seismic data developed by geologists. The study's preliminary work has shown that a few plants might have stronger ground motions than originally thought, although still within the plants' safety margins. These plants will do more research once more detailed analytical models are available later this year.

TTTT/131

This is a complex issue that does not always lend itself to simple yes and no answers.
Bottom line: the NRC does not rank plants on seismic risk. Plants in this country continue to operate safely and securely.

Eliot Brenner
Public Affairs Director

From: [Brenner, Eliot](#)
To: SIMON LOMAX, BLOOMBERG/ NEWSROOM:
Cc: [Burnell, Scott](#); [McIntyre, David](#); [Taylor, Robert](#); [Harrington, Holly](#); [Brenner, Eliot](#)
Subject: RE: (BN) 'Miniscule' Amounts of Radiation From Japan Plants
Date: Friday, March 18, 2011 6:50:39 PM

Go ahead and take door #1

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

From: SIMON LOMAX, BLOOMBERG/ NEWSROOM: [<mailto:slomax@bloomberg.net>]
Sent: Friday, March 18, 2011 6:48 PM
To: Brenner, Eliot
Subject: (BN) 'Miniscule' Amounts of Radiation From Japan Plants

Hi Eliot -- please find at the bottom of this message the story that i'd like to update with your info about the height of the radioactive material. i can attribute it one of two ways (#1 is my preference):

1. "Quote," the U.S. Nuclear Regulatory Commission said in an e-mailed statement. (this would be my preferred option)
2. Paraphrase, said a U.S. Nuclear Regulatory Commission official who declined to be identified because the agency hasn't made a public statement on the matter.

If you can let me know which one to go with I'll update ASAP.

Cheers,
Simon.

+-----+
'Miniscule' Amounts of Radiation From Japan Plants Found in U.S.
2011-03-18 22:42:28.443 GMT

By Simon Lomax and John Hughes

March 19 (Bloomberg) -- A "miniscule" amount of radiation that probably came from damaged nuclear reactors in Japan was picked up at a California monitoring station yesterday, the U.S. government said.

The level of radiation registered in Sacramento was about "one-millionth of the dose" a person gets from rocks, bricks, the sun and natural background sources and "poses no concern," the U.S. Environmental Protection Agency and Energy Department said in a joint statement.

A similar level of the radioactive isotope, xenon-133, was detected in Washington state on March 16 and 17, according to the agencies. It was "consistent with a release from the Fukushima reactors in Northern Japan," according to the statement. The EPA and Energy Department have monitoring systems and neither found "radiation levels of concern."

Japan is seeking to avert a meltdown at the Fukushima Dai-ichi plant, which was damaged by a March 11 earthquake and tsunami. Helicopters and fire trucks used water buckets and cannons to help cool the plant, which has been crippled by explosions, fires and radiation leaks.

Tokyo Electric Power Co., the plant's owner, said it's also

T T T T / 132

trying to connect a power line to the site to restart water pumps used to keep fuel rods from overheating.

President Barack Obama said yesterday his nuclear advisers don't expect "harmful levels" of radiation will reach the U.S.

Airlines and ships can operate into Japan's airports and sea ports, excluding those damaged by the tsunami, the International Civil Aviation Organization said, citing information from the World Health Organization and other international agencies.

Passenger Screening

Screening for radiation of international passengers from Japan isn't considered necessary at this time, the organization said in an e-mailed statement yesterday.

The earthquake and tsunami crippled the company's Dai-Ichi plant, triggering fires, explosions and radiation leaks. Doctors and scientists have said the plant is unlikely to pose a health risk for people living more than 36 miles (50 kilometers) from the site.

The containment devices in Japan, even if compromised, offer more protection than reactors at the world's worst nuclear disaster at Chernobyl, Ukraine, in 1986, said Donald Bucklin, former medical director of Palo Verde Nuclear Generating Station in Arizona, the largest U.S. nuclear plant.

Radiation can damage DNA, the building blocks of human life, said Bucklin, now medical review officer for U.S. HealthWorks, the nation's largest private provider of occupational health care. While the body repairs most damage, some radiation-caused mutations can make cells malignant, he said.

Radiation, Tokyo

Radiation spewed from the reactor in a meltdown might rise to as high as 500 meters (1,640 feet), and is unlikely to reach Tokyo, 135 miles away, John Beddington, U.K.'s chief science officer, said on a conference call March 16 with the British Embassy in Tokyo. The Chernobyl explosion sent radioactive dust 30,000 feet high and continued for months.

The public-health risk would be equal to little more than two additional chest x-rays, said John Lee, a professor of nuclear engineering and radiological sciences, at the University of Michigan in Ann Arbor. A Chernobyl type of explosion is impossible, he said.

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BMAP of Disasters: [BMAP 80438 <GO>](#)

U.S. reactor status: [NRCR <GO>](#)

--With assistance from Michelle Cortez in Chicago and John Lauerman in Boston. Editors: Steve Geimann, Larry Liebert

To contact the reporters on this story:

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To contact the editor responsible for this story:
Larry Liebert at +1-202-624-1936 or
lliebert@bloomberg.net

From: [Taylor, Robert](#)
To: [Brenner, Eliot](#); [Daly, Matthew](#)
Cc: [Burnell, Scott](#)
Subject: RE: NRC Informs U.S. Nuclear Power Plants on Japan Earthquake's Effects
Date: Friday, March 18, 2011 6:55:24 PM

The IN can be found at the following link:

<http://www.nrc.gov/reading-rm/doc-collections/gen-comm/info-notices/2011/ML110760432.pdf>

Please let me know if it doesn't work for some reason.

Regards,
Rob

From: Brenner, Eliot
Sent: Friday, March 18, 2011 6:53 PM
To: Daly, Matthew
Cc: Burnell, Scott; Taylor, Robert
Subject: RE: NRC Informs U.S. Nuclear Power Plants on Japan Earthquake's Effects

It's supposed to be up on the website. Our crack team over in the ops center are trying to run it to ground. It's about as boring as government notice can be!

From: Daly, Matthew [<mailto:MDaly@ap.org>]
Sent: Friday, March 18, 2011 6:51 PM
To: Brenner, Eliot
Subject: FW: NRC Informs U.S. Nuclear Power Plants on Japan Earthquake's Effects

Any we can get a copy of the notice?

From: opa administrators [<mailto:opa@nrc.gov>]
Sent: Friday, March 18, 2011 6:29 PM
To: Daly, Matthew
Subject: NRC Informs U.S. Nuclear Power Plants on Japan Earthquake's Effects

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From: [Burnell, Scott](#)
To: [Annys Shin](#)
Subject: RE: 50 mi evac zone question
Date: Friday, March 18, 2011 9:04:00 PM

No problem.

From: Annys Shin [mailto:ShinA@washpost.com]
Sent: Friday, March 18, 2011 9:04 PM
To: Burnell, Scott
Subject: Re: 50 mi evac zone question

Glad I asked! Thks.

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

From: "Burnell, Scott" [Scott.Burnell@nrc.gov]
Sent: 03/18/2011 09:01 PM AST
To: Annys Shin
Subject: RE: 50 mi evac zone question

11 staff total from the NRC

From: Annys Shin [mailto:ShinA@washpost.com]
Sent: Friday, March 18, 2011 9:01 PM
To: Burnell, Scott
Subject: Re: 50 mi evac zone question

Hey scott just double chking nrc has total of 12 folk in japan now. Thks

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

From: "Burnell, Scott" [Scott.Burnell@nrc.gov]
Sent: 03/18/2011 04:54 PM AST
To: Annys Shin
Subject: RE: 50 mi evac zone question

Hi Annys;

I can only say our opinion regarding conditions at the site hasn't significantly changed. We continue to monitor the best available information coming from all available sources.
Thanks.

Scott

From: Annys Shin [mailto:ShinA@washpost.com]
Sent: Friday, March 18, 2011 3:57 PM
To: Burnell, Scott
Subject: RE: 50 mi evac zone question

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scott: sorry to belabor this but with the fuel pool at unit 4, are the nrc readings definitive that there is no water?

i have an expert saying it could be semantics, that both the japanese and nrc could be right because the readings nrc is getting, it could still get if there was some water still there....

Annys Shin
Staff Writer
Washington Post
1150 15th St. NW
Washington, DC 20071
o. (202) 334-5465

From: [Burnell, Scott](#)
To: [Brenner, Eliot](#)
Subject: RE: Suggested Q&A
Date: Saturday, March 19, 2011 7:33:00 AM

I'll work with PMT to see what Q&A are called for.

From: Brenner, Eliot
Sent: Saturday, March 19, 2011 7:33 AM
To: Gibson, Kathy; Burnell, Scott; McIntyre, David; Hayden, Elizabeth
Subject: RE: Suggested Q&A

We will be staffed all weekend. Thanks for sending along the link, etc.

From: Gibson, Kathy
Sent: Saturday, March 19, 2011 7:32 AM
To: Brenner, Eliot
Subject: Fw: Suggested Q&A

Eliot,
I'm not sure what your schedule is for staffing the Ops Center over the weekend, so I am also sending this to you directly.

Kathy

From: PMT09 Hoc
To: Brenner, Eliot; Harrington, Holly
Cc: Gibson, Kathy; PMT04 Hoc; PMT09 Hoc
Sent: Sat Mar 19 06:51:15 2011
Subject: Suggested Q&A

The ET suggested that some information be passed on to NRC/OPA. I am not sure how to frame the information, although a Q&A and incorporation in a press release were suggested. In any case, the information follows:

The EPA website has current radiation monitor readings from locations on the west coast. Members of the public may obtain radiation level readings if they are concerned regarding radiological impact from the Japanese reactor accident in the US.

<http://www.epa.gov/japan2011/rert/radnet-data.html>

Hope this can be used.

Randy Sullivan, pmt

The PMT response team should be able to answer questions.

TTTTT/135

From: [Burnell, Scott](#)
To: [Wiggins, Jim](#); [Screnci, Diane](#)
Subject: RE: Arranging In-State Meetings With Your Senators/Members of Congress
Date: Saturday, March 19, 2011 8:44:00 AM

Sorry for all the recalls, I was getting documents confused.

I don't see ANS saying anything contrary to our statements, it's very much "moving too fast to try and comment on 'latest' information or provide analysis, but we can discuss basics."

From: Wiggins, Jim
Sent: Saturday, March 19, 2011 8:37 AM
To: Screnci, Diane; Burnell, Scott
Subject: FW: Arranging In-State Meetings With Your Senators/Members of Congress

Any of this contrary to what we've been saying?

From: Joe Colvin [<mailto:president@ans.org>]
Sent: Saturday, March 19, 2011 7:35 AM
To: Wiggins, Jim
Subject: Arranging In-State Meetings With Your Senators/Members of Congress

Dear ANS Members,

We are all saddened by the catastrophic earthquake and tsunami in Japan and the resulting damage to the Fukushima Daiichi Nuclear Station. As we move forward, it is critically important that we work together to ensure that our federal policy makers have accurate information about nuclear technology and radiation.

Your Senators and Members of Congress are returning to their States and Districts next week, and I encourage you to schedule a meeting with them while they are back home. They need to know they have constituents with nuclear related technical expertise who can help them make sense of this very complex and dynamic situation in Japan.

I suggest you take these steps:

1. Find the phone numbers of your Senators' state offices by accessing their website here http://www.senate.gov/general/contact_information/senators_cfm.cfm>. You can find your Member of Congress' district office by clicking here <http://www.house.gov/zip/ZIP2Rep.html>>.
2. Call their scheduler and ask for an appointment. Let them know you are a constituent and a member of the American Nuclear Society with knowledge relevant to technical aspects of the situation in Japan. If you are offered a meeting with staff, accept.
3. Once you have an appointment, arm yourself with information. Unfortunately, we

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cannot provide you with up-to-date talking points since the situation itself is so fluid. Instead, your role is to help the member understand some of the many technical issues, learn about their concerns and share your expertise. Below are some reliable sources of information, which are being updated regularly:

- * American Nuclear Society Japan Page ansnuclearcafe.org
- * Nuclear Energy Institute www.nei.org
- * World Nuclear News www.world-nuclear-news.org
- * ANS Radiation Dose Chart www.new.ans.org/pi/resources/dosechart/
- * NHK Television www3.nhk.or.jp/nhkworld/index.html
- * Japan Times www.japantimes.co.jp

4. On the day of the meeting,

- * Be prompt and patient. It is not uncommon for a member of Congress to be late or to have a meeting interrupted due to a crowded schedule.
- * Be grateful. Make sure you open the conversation by thanking the members/staff for his/her time, and send a handwritten thank you note afterwards.
- * Be honest. The situation in Japan is a difficult one. Don't feel the need to provide "spin." Stick to the facts as you know them and don't be afraid to say that you do not know the answer to a question. The goal is to be a technical resource for them to contact in the future and let them know your support for NS&T in general.
- * Be responsive. Make sure you follow up promptly if the member/staff has asked you to provide any additional information or analysis. Contact us at japanfacts@ans.org if you need help.

Again, your goal is to be a technical resource to your Senators/Representative and their staffs, providing perspective and correcting misperceptions without sugarcoating the situation.

Finally, we encourage you to send ANS a message to let us know how your meeting went. Send an e-mail to japanfacts@ans.org with the subject line "MEETING."

Any help you can give would be greatly appreciated.

Joe Colvin
ANS President

Attachment: Information About Conditions in Japan, March 18, 2011

From: [Dolley, Steven](mailto:Steven.Dolley@nrc.gov)
To: [Burnell, Scott](mailto:Scott.Burnell@nrc.gov)
Subject: RE: MEDIA - DOLLEY - FW: Japan -- exposure of a US worker
Date: Saturday, March 19, 2011 12:04:08 PM

Not at all, he was speaking of a "US nuclear worker" helping with emergency response at Fukushima. No other details on the call.

From: Burnell, Scott [mailto:Scott.Burnell@nrc.gov]
Sent: Saturday, March 19, 2011 11:59 AM
To: Dolley, Steven; Harrison, Tom; Ostroff, James
Cc: OPA Resource; Brenner, Eliot
Subject: RE: MEDIA - DOLLEY - FW: Japan -- exposure of a US worker

And re-reading your question, is he implying U.S. citizens have received multi-rem doses?

From: Dolley, Steven [mailto:Steven_Dolley@platts.com]
Sent: Saturday, March 19, 2011 11:26 AM
To: Hayden, Elizabeth; OPA Resource
Cc: Ostroff, James; Harrison, Tom
Subject: RE: Japan -- exposure of a US worker

David Lochbaum of the Union of Concerned Scientists just said at an 11 am EDT telephone news briefing that "a US nuclear worker" helping with the emergency response at Fukushima had been exposed to "the permissible annual dose in less than an hour."

Can you confirm or deny this, and provide as much detail as possible? Please REPLY all so my fellow editor gets this too, he's picking up coverage at noon.

Thanks,
Steve

Steven Dolley
Managing Editor, Inside NRC
Platts Nuclear
202-383-2166 Office
202-383-2187 Fax

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From: [Kammerer, Annie](#)
To: [Burnell, Scott](#); [Hiland, Patrick](#); [Skeen, David](#); [Case, Michael](#); [RST01 Hoc](#); [LIA06 Hoc](#)
Cc: [Uhle, Jennifer](#)
Subject: RE: Seismic Q&As March 19th 8am update
Date: Saturday, March 19, 2011 3:27:33 PM

Scott,

I'm glad they like them. Please be sure to post the 6 page version, instead of the 97 version you just attached!!!

WRT, Steve, I also got some questions sent to Mike Case (see below email)

The answer is as follows:

*As described in regulatory guide 1.208 (and question 8 of the FAQ), we use a ground motion with an annual frequency of occurrence of 1×10^{-4} /year, but this can be thought of as the ground motion that occurs every 10,000 years on average. But we also check the 1×10^{-5} /year and the 1×10^{-6} /year, values to assure that the "slope" of the hazard curve (the curve of loads versus probability) is high enough (the values get very uncertain out there). There is a minimum values to the slope to assure that we are capture the risk of the very rare earthquakes. We do this because the hazard curve is convolved with the fragility curve (for all ranges of probability...including beyond design basis) and we want to makes sure it is a robust estimate of the beyond-design-basis risk.

*First a series of Design Factors are applied to the "response spectrum"; and these are frequency dependent.

(The mathematical expression of the ground motion is not a single value, but is a "response spectrum"; a series of loads versus frequencies. A response spectrum is sort of like a Fourier spectrum of the ground motion, except that it captures the way things behave...not just the ground motion. For example, consider a building with a 1 second natural period and a loading in the form of a sine wave with a frequency of 0.9 seconds. The Fourier spectrum would have all the energy at 0.9 seconds and none at 1 second. But the building would certainly respond to the input; even though it is not exactly it's resonant frequency of 1 second. So the "response" spectrum would have content at 1 second, unlike the Fourier spectrum.)

Then, we look a the ground motion that is 1.67 times the $10E-4$ response spectrum and assure that the HCLPF (high confidence of a low level of failure) exceeds that. In other words, we don't look at the average performance at 1.67 times the ground motions, we also account for natural variability in the strength of individual structures, systems, and components in the "failures sequences" and assure that we have 95% confidence of the plant's performance at the 1.67*ground motion values.

The above answers are technical. I'm struggling to make them less technical, but it is hard because the answers are very complex. The very complex nature of this work is why I get paid the big bucks, even though I am really just a low level government functionary ☺. I've met Steve when he was at LBNL and we were just starting to do work with them in the seismic research program. I

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know he's a very smart man and am hoping that he knows similar concepts from his own field.

Annie

From: Lyons, Peter <Peter.Lyons@Nuclear.Energy.gov>
To: Case, Michael
Sent: Fri Mar 18 19:14:53 2011
Subject: RE: Summary of NRC Seismic Regulations

Thanks Michael

Two more specific requests from our Secretary have gone in to the Chairman and the HOO:

What earthquake frequency does NRC use to set their anticipated g-loading level, 1 in 10,000 years or ??

Once such a level of g loading is identified, what is the safety factor applied to that level??

Thanks
pete

From: Burnell, Scott
Sent: Saturday, March 19, 2011 9:44 AM
To: Kammerer, Annie; Hiland, Patrick; Skeen, David; Case, Michael; RST01 Hoc; LIA06 Hoc
Cc: Uhle, Jennifer
Subject: FW: Seismic Q&As March 19th 8am update

All;

OPA thinks these are great. We're working with the LT to provide them to DOE Sec. Chu and to get the PDF posted to the NRC Web site. Thanks.

Scott

From: [Nicola Taylor](#)
To: [Burnell, Scott](#)
Subject: RE: ABC News Breakfast interview request
Date: Sunday, March 20, 2011 2:01:42 AM

Hi Scott,

That's no problem; I understand you guys would have been very busy right now. We are still keen to talk to someone though – so if you have someone available at all either Sunday afternoon or Monday afternoon – we would love to speak to them.

Many thanks,
Nicola

From: Burnell, Scott [mailto:Scott.Burnell@nrc.gov]
Sent: Friday, 18 March 2011 10:13 AM
To: Nicola Taylor
Subject: RE: ABC News Breakfast interview request

Hello Nicola;

Obviously we've missed your deadline and I apologize we couldn't respond sooner, I'm sure you can understand the volume of calls and e-mails. In any case, we're really focused on responding to the Japanese request and don't have the ability to break technical people away for interviews. Please keep us in mind later on once the situation stabilizes in Japan. Thanks very much.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

From: ABC2 Breakfast [mailto:breakfast@your.abc.net.au]
Sent: Wednesday, March 16, 2011 9:58 PM
To: OPA Resource
Subject: ABC News Breakfast interview request

Dear Sir/Madame,

I understand the US Nuclear Regulatory Commission is assisting the Japanese with getting the situation at the Fukushima nuclear power plant under control.

I am writing to see if someone from the US Nuclear Regulatory Commission is available for an interview with the hosts of our television show.

Ideally – we would be keen to speak to them for a five minute interview between 1500 to 1800hrs

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on Thursday the 17th of March.

We have a television studio in Washington from which we could conduct the interview.

I am writing to you as a producer from an Australian news/current affairs television show called ABC News Breakfast. Our program airs nationally each week day morning in Australia on the ABC, and across Asia on the Australia Network,

If you could let me know if someone is available for an interview it would be greatly appreciated.

Kind regards,

Nicola Taylor

Planning Producer
ABC TV News Breakfast
+613 9626 1570
taylor.nicola@abc.net.au

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From: [Lee, Samson](#)
To: [Burnell, Scott](#); [Sheehan, Neil](#)
Subject: Fw: FYI -- New York Times article
Date: Sunday, March 20, 2011 9:55:14 AM

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

From: Harrison, Donnie
To: Cheok, Michael; Lee, Samson; Rodriguez, Veronica; Tate, Travis; Klein, Alex; Laur, Steven;
NRR_DRA_APLA Distribution; Heida, Bruce
Sent: Sat Mar 19 10:29:02 2011
Subject: FW: FYI -- New York Times article

FYI

From: Drouin, Mary
Sent: Friday, March 18, 2011 5:27 PM
To: Demoss, Gary; Coyne, Kevin; Correia, Richard; Coe, Doug
Subject: FYI -- New York Times article

Either on Monday or Tuesday, there will be an article in the New York Times on the Japan event, supposedly to be entitled "Can this happen here?" The reporter interviewed Biff Bradley (NEI) and Doug True (President of Erin Eng, major industry consultant and probably biggest contractor doing PRA work in the private sector); a large part of the interview were questions regarding PRA. I have no idea who else was interviewed. Doug felt that the reporter did not have any "agenda."

Mary Drouin
peanuts makes 30,000
Senior Program Manager/Advisor
are eaten per person per year which
U.S. Nuclear Regulatory Commission
of the Grand Canyon!
MS CS 4A07
Washington, D.C. 20555
(301) 251-7574 (phone)
(301) 251-7424 (fax)
mary.drouin@nrc.gov

March FunFact – National Peanut Month, did you know that 1 acre of

peanut butter sandwiches and 3 lbs of peanuts

is 700 million lbs -- enough to coat the floor

TTTT/140

From: Harrington, Holly
To: Abraham, Susan; Bonaccorso, Amy; Campbell, Tison; Crouch, Nicole; Culp, Lisa; Deegan, George; Eilmers, Glenn; English, Kimberly; Francis, Karin; Goldberg, Francine; Groh, Deborah; Howard, Patrick; Janney, Margie; Jasinski, Robert; Landau, Mindy; Mroz (Sahm), Sara; Rakovan, Lance; Reiter, Stuart; Rihm, Roger; Sall, Basia; Schwartzman, Jennifer; Sentz, Brian; Sexton, Kimberly; Shropshire, Alan; Stahl, Eric; Steger (Tucci), Christine; Usilton, William; VandenBerghe, John; Weil, Jenny; Wellock, Thomas; Andrews, Tom; Barkley, Richard; Cain, Chuck; Hay, Michael; Heck, Jared; Tiff, Doug; Woodruff, Gena
Cc: Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David; Chandrathil, Prema; Dricks, Victor; Hannah, Roger; Ledford, Joey; Mityng, Viktoria; Screnci, Diane; Sheehan, Neil; Uselding, Lara
Subject: Blog Update
Date: Sunday, March 20, 2011 1:54:07 PM

We're continuing to focus on Japan on the blog, with updates by Public Affairs Director Eliot Brenner. It's likely this will continue through this week. As soon as possible, we're return to our regular blog posts. Please don't let this temporary situation keep you from writing your posts. We will need them soon!

Some recent stats:

Total Views Since January 31: 55,600!

Highest day was Monday, March 14th, with 5700 views, following by Tuesday, March 15, with 5500 views.

Holly

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From: [Mitlyng, Viktoria](#)
To: [Burnell, Scott](#); [Harrington, Holly](#); [Sheehan, Neil](#)
Cc: [McIntyre, David](#)
Subject: Re: QUAKE_TP_3_20.docx
Date: Sunday, March 20, 2011 6:35:11 PM

Thanks, Scott. Yelling now: Stop checking email! Put your feet up. You'll be dancing soon enough...
(Sent from my Blackberry)

From: Burnell, Scott
To: Mitlyng, Viktoria; Harrington, Holly; Sheehan, Neil
Cc: McIntyre, David
Sent: Sun Mar 20 15:04:12 2011
Subject: RE: QUAKE_TP_3_20.docx

No yelling at me for checking e-mail on my "day off," Holly, I felt a disturbance in the Force and I was right, wasn't I?? :-)

I've already told at least one reporter that two primary BWR Mark I issues were resolved decades ago:

Suppression pool torus -- there were concerns about the torii (plural of torus?) being able to withstand the forces of a full-blown steam release from the reactor vessel. All the BWR Mark I torii were reinforced to resolve the concern.

Hydrogen venting -- post-TMI, all plants had to include systems for dealing with hydrogen buildup, to avoid exactly what apparently has happened in Japan. All BWR Mark I (and probably other BWR containments but I'm not sure) had to install "hardened vents" to shunt releases in such a way as to preclude hydrogen buildup and potential detonation.

I talked this over with Neil in the Ops Ctr at some point last week and he agrees with my recollection.

IIRC, the folks in NRR Division of Safety Systems should have more details, so I'll check with them first thing tomorrow on formalising the above language.

From: Mitlyng, Viktoria
Sent: Sunday, March 20, 2011 2:37 PM
To: Harrington, Holly
Cc: Burnell, Scott; McIntyre, David
Subject: RE: QUAKE_TP_3_20.docx

Thanks! It would be very useful, especially as we are going into a Braidwood meeting Thursday. I am sure questions about Dresden and the safety of this type of containment will come as the plant are less than 30 miles apart.

From: Harrington, Holly
Sent: Sunday, March 20, 2011 2:24 PM
To: Mitlyng, Viktoria
Cc: Burnell, Scott; McIntyre, David
Subject: RE: QUAKE_TP_3_20.docx

To my knowledge we are not, but maybe we can if things are quieter Monday afternoon. Scott – what do you think?

From: Mitlyng, Viktoria
Sent: Sunday, March 20, 2011 2:18 PM

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To: Harrington, Holly
Subject: RE: QUAKE_TP_3_20.docx

Thanks, Holly. I know you all are REALLY busy but are we working on GE Mark 1 Containment talking points - as in how the NRC has addressed issues that have come up with this design historically speaking. The statements out there make it sound like the NRC has done nothing with issues raised for the past 30 years.

From: Harrington, Holly
Sent: Sunday, March 20, 2011 1:40 PM
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: FW: QUAKE_TP_3_20.docx

For your use . . . Some updates and re-arranging . . .

From: McIntyre, David
Sent: Sunday, March 20, 2011 1:34 PM
To: Harrington, Holly
Subject: QUAKE_TP_3_20.docx

Brian agrees with me that dividing this into topics helps make it more coherent.

From: [Mensah, Tanya](#)
To: [Markley, Michael](#)
Cc: [Guzman, Richard](#); [Tam, Peter](#); [Lyon, Fred](#); [Polickoski, James](#); [Salgado, Nancy](#); [Banic, Merrilee](#); [Rosenberg, Stacey](#); [Scott, Catherine](#); [Blount, Tom](#); [Quay, Theodore](#); [Burnell, Scott](#)
Subject: 2.206 Process Question/Followup: Related to Japanese EQ
Date: Monday, March 21, 2011 8:22:23 AM

Good morning all,

OPA apparently is receiving letters from individuals that reside outside of the US (UK, Canada, etc.). They are only forwarding the letters to me that request immediate actions to shut down reactors as 2.206 petitions - which I then request ticketing for via the EDO.

This past Friday, the question was raised by Scott Burnell, "does the NRC need to treat letters from individuals that reside in other countries under the 2.206 process?"

To my knowledge, a 2.206 can be submitted by any member of the public. It does not specify that the petitioners have to reside in the US (or be US citizens) in order for us to treat their concerns under the 2.206 process. I emailed our OGC contact for the 2.206 process (Cathy Scott) on Friday to ask her this question and am awaiting a response.

In the meantime, Rich was planning to contact his petitioner (who resides in Canada) early this week. I asked Rich this morning to please hold off with contacting the petitioner to discuss the 2.206 process. I want to avoid an awkward situation in the event that OGC verifies that we should not be treating these letters under 2.206 (for individuals that reside outside of the US).

Cathy is copied on this email and I am hoping she will be able to respond to all shortly.

Thanks for your time,

Tanya

From: Markley, Michael
Sent: Friday, March 18, 2011 4:53 PM
To: Mensah, Tanya
Cc: Guzman, Richard; Tam, Peter; Lyon, Fred; Polickoski, James; Salgado, Nancy
Subject: G20110174 ticket re: NMP

Tanya,

Rich Guzzman has the lead for this petition.

Mike

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From: [Burnell, Scott](#)
To: [Ellmers, Glenn](#)
Subject: RE: Materials for March 21st Commission Briefing on Japan Event (Staff Slides)
Date: Monday, March 21, 2011 8:33:00 AM

Does this version include his "script" in the notes?

From: Ellmers, Glenn
Sent: Monday, March 21, 2011 8:32 AM
To: Burnell, Scott; McIntyre, David
Subject: FW: Materials for March 21st Commission Briefing on Japan Event (Staff Slides)

FYI. Not sure what the "public release" policy is on these.
Scott, this is the only prepared material Bill is using.

From: Landau, Mindy
Sent: Monday, March 21, 2011 8:29 AM
To: Rihm, Roger; Ellmers, Glenn
Subject: FW: Materials for March 21st Commission Briefing on Japan Event (Staff Slides)

From: Andersen, James
Sent: Sunday, March 20, 2011 6:04 PM
To: Laufer, Richard; Baval, Rochelle; Svinicki, Kristine; Montes, David; Adler, James; Bates, Andrew; Batkin, Joshua; Bubar, Patrice; Bupp, Margaret; Chairman Temp; Clark, Lisa; Coggins, Angela; Davis, Roger; Dhir, Neha; Hart, Ken; Loyd, Susan; Monninger, John; Nieh, Ho; Pearson, Laura; Reddick, Darani; Rothschild, Trip; Joosten, Sandy; Sharkey, Jeffrey; Shea, Pamela; Sosa, Belkys; Burns, Stephen; Vietti-Cook, Annette; Warren, Roberta; Zorn, Jason; Baggett, Steven; Bradford, Anna; Castleman, Patrick; Kock, Andrea; Tadesse, Rebecca; Thoma, John; Franovich, Mike; Hipschman, Thomas; Batkin, Joshua; Marshall, Michael; Orders, William; Snodderly, Michael; Warnick, Greg; Lisann, Elizabeth
Cc: Dudley, Richard; Ruland, William; Tregoning, Robert; Wittick, Brian; Blake, Kathleen; Bozin, Sunny; Ciani, Sandra; Crawford, Carrie; Gibbs, Catina; Harves, Carolyn; Hasan, Nasreen; Jimenez, Patricia; KLS Temp; Landau, Mindy; Lepre, Janet; Lewis, Antoinette; Herr, Linda; Muessle, Mary; Pace, Patti; Pulley, Deborah; Savoy, Carmel; Speiser, Herald; Taylor, Renee; Temp, GEA; Temp, WCO; Temp, WDM; Wright, Darlene; Wittick, Susan; Sargent, Kimberly; Hayden, Elizabeth; Brenner, Eliot; Powell, Amy; Schmidt, Rebecca; Borchardt, Bill; Weber, Michael; Ash, Darren; Virgilio, Martin; Muessle, Mary; Landau, Mindy; Leeds, Eric; Howe, Allen; Gratton, Christopher; Boska, John; Grobe, Jack
Subject: Materials for March 21st Commission Briefing on Japan Event (Staff Slides)

Attached are the staff slides for the Commission Meeting on March 21, 2011, "Briefing on NRC Response to Recent Nuclear Events in Japan." I am sending this information out via two e-mail list, I apologize if you are getting it twice.

Jim Andersen
Deputy AO, TBPM, OEDO
415-1725.

From: Laufer, Richard
Sent: Friday, March 18, 2011 4:46 PM
To: Baval, Rochelle; Svinicki, Kristine; Montes, David; Adler, James; Bates, Andrew; Batkin, Joshua; Bubar, Patrice; Bupp, Margaret; Chairman Temp; Clark, Lisa; Coggins, Angela; Davis, Roger; Dhir, Neha; Hart, Ken; Loyd, Susan; Monninger, John; Nieh, Ho; Pearson, Laura; Reddick, Darani; Rothschild,

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Trip; Joosten, Sandy; Sharkey, Jeffrey; Shea, Pamela; Sosa, Belkys; Burns, Stephen; Vietti-Cook, Annette; Warren, Roberta; Zorn, Jason; Baggett, Steven; Bradford, Anna; Castleman, Patrick; Kock, Andrea; Tadesse, Rebecca; Thoma, John; Franovich, Mike; Hipschman, Thomas; Batkin, Joshua; Marshall, Michael; Orders, William; Snodderly, Michael; Warnick, Greg; Lisann, Elizabeth
Cc: Dudley, Richard; Ruland, William; Tregoning, Robert; Wittick, Brian; Andersen, James; Blake, Kathleen; Bozin, Sunny; Cianci, Sandra; Crawford, Carrie; Gibbs, Catina; Harves, Carolyn; Hasan, Nasreen; Jimenez, Patricia; KLS Temp; Landau, Mindy; Lepre, Janet; Lewis, Antoinette; Herr, Linda; Muessle, Mary; Pace, Patti; Pulley, Deborah; Savoy, Carmel; Speiser, Herald; Taylor, Renee; Temp, GEA; Temp, WCO; Temp, WDM; Wright, Darlene; Wittick, Susan; Sargent, Kimberly; Hayden, Elizabeth; Brenner, Eliot; Powell, Amy; Schmidt, Rebecca
Subject: Materials for March 21st Commission Briefing on Japan Event

Attached is the final scheduling note for the March 21st Commission briefing on the Japan Event. Staff slides should be emailed later today by Jim Andersen (OEDO).

Note that Commissioner Magwood goes first with questions.

Below are a few meeting logistics for your information:

- Bill Borchardt will be the only NRC staff member at the table.
- The seats in the well are reserved for DEDOs / Office Directors
- The stadium seating to the Commissioners left will be reserved for designated technical staff (who may be called upon during the meeting) and Commission Office EAs/TAs
- The stadium seating to the Commissioners right will be reserved for Press Corps/OPA
- Some of the stadium seating in front of the Commissioners will be reserved for VIPs (Congressional Office staffers).
- The remaining stadium seats in front of the Commissioners will be open to the public.

Once the available public seats are filled, members of the public will be directed around the back of the building where they will enter the TWFN Auditorium to view the Commission meeting.

Thanks,
Rich

From: [Ellmers, Glenn](#)
To: [Burnell, Scott](#); [McIntyre, David](#)
Subject: FW: ACTION: all hands
Date: Monday, March 21, 2011 8:34:45 AM
Attachments: [Staff Slides for March 21 Meeting \(Japanese Event\).pptx](#)

Here's the version with the Notes (not for release).

From: Gratton, Christopher
Sent: Friday, March 18, 2011 12:18 PM
To: Ellmers, Glenn
Subject: RE: ACTION: all hands

Glenn, Here are the most recent slides and talking points. We are still getting info, but they should be close. I don't know about Allen or John, but I haven't had time to review the talking points you developed.

CG

From: Ellmers, Glenn
Sent: Friday, March 18, 2011 12:08 PM
To: Boska, John; Howe, Allen
Cc: Gratton, Christopher
Subject: RE: ACTION: all hands

I'm meeting with Bill in 20 minutes. Any input? Feedback on my talking points?

From: Boska, John
Sent: Friday, March 18, 2011 9:13 AM
To: Howe, Allen; Ellmers, Glenn
Cc: Gratton, Christopher
Subject: RE: ACTION: all hands
Importance: High

Glenn, Chris Gratton has the slides and is updating them. We will email you a copy before noon.

John Boska
Indian Point Project Manager, NRR/DORL
U.S. Nuclear Regulatory Commission
301-415-2901
email: john.boska@nrc.gov

From: Howe, Allen
Sent: Friday, March 18, 2011 9:10 AM
To: Leeds, Eric
Cc: Ellmers, Glenn; Boska, John; Gratton, Christopher
Subject: RE: ACTION: all hands

Will do

John/Chris – please update Glenn

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From: Leeds, Eric
Sent: Friday, March 18, 2011 8:16 AM
To: Howe, Allen
Cc: Ellmers, Glenn; Boska, John; Gratton, Christopher
Subject: ACTION: all hands

Allen – could you or one of your team, help Glenn on this. Thanks!

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
301-415-1270

From: Borchardt, Bill
Sent: Friday, March 18, 2011 6:53 AM
To: Ellmers, Glenn; Leeds, Eric
Subject: all hands

Glenn – please get the outline (and talking points in whatever shape they're in) for Monday's comm mtg so that I can use them for the all hands meeting. Also prepare a 1 pager of additional items that you think I should cover such as Darren's note (that I just sent to you), thanking the nrc staff, etc....

I hope to back from the hill around noon



Briefing on NRC Response to Recent Nuclear Events in Japan

Bill Borchardt
Executive Director for Operations
March 21, 2011

Agenda

- **Event Overview**
- **Immediate NRC Response**
- **Continuing NRC Response**
- **International perspectives**
- **Assessment of Domestic Reactor Safety**
- **Planned NRC Activities**
- **Impact on Current NRC Activities**

Event Overview

- **Discussion of initiating event**
- **Current status of reactors**
- **Current status of spent fuel pools**
- **NRC Incident Response Center evaluating potential dose impacts within 50 miles of site**
- **Collaborating with DOE to support evaluation of potential impacts on U.S.**

Immediate NRC Response

- **Activated Operations Center**
- **Dispatched 11 NRC experts to Japan**
- **Established support for U.S. Embassy**
- **Opened dialog with Japanese government**
- **Established outreach to stakeholders**

Continuing NRC Response

- **Operations Center manned 24/7**
- **Support NRC personnel in Japan, rotate as necessary**
- **Provide assistance as requested**
- **Mobilize resources as part of U.S. response**

International Perspectives

- **Historical Relationships**
- **Global Nuclear Safety Network**

Assessment of Domestic Reactor Safety

- **Design basis includes natural disasters expected for their locale**
- **Must be able to cope with a loss of all AC power for a designated time period**
- **Guidelines and planning for Beyond-Design-Basis events**

Assessment of Domestic Reactor Safety (Cont.)

- **Improvements to design and operation since initial licensing**
- **The emergency preparedness planning basis for nuclear power plants is valid.**
- **INPO and industry initiatives**
- **NRC confidence in U.S. plants safety**

Planned NRC Activities – Near Term

- **Regulatory Actions evaluation**
 - **Enhanced Inspection Activities**
 - **Generic Communications**
 - **Other regulatory actions**

Planned NRC Activities – Longer Term

- **Develop lessons learned and recommendations**
- **Consider other regulatory actions**

Impact on Current NRC Activities

- **Increased communications with stakeholders**
- **Current licensing action review impacts**
- **Most NRC activities will continue as scheduled**

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](#)
Subject: FW: Japan EQ Press Guidance - 03.21.11
Date: Monday, March 21, 2011 10:00:28 AM
Attachments: [110321_0930 EDT Japan EQ Talking Points.doc](#)

FYi – if it's useful

From: RMTPACTSU_ELNRC [mailto:RMTPACTSU_ELNRC@ofda.gov]
Sent: Monday, March 21, 2011 9:59 AM
To: LIA11 Hoc; LIA01 Hoc; LIA02 Hoc; LIA07 Hoc; LIA08 Hoc; LIA12 Hoc; LIA04 Hoc; Harrington, Holly; Burnell, Scott; McIntyre, David; ET07 Hoc
Subject: FYI: Japan EQ Press Guidance - 03.21.11

Subject: Japan EQ Press Guidance - 03.21.11

Dear all,

Please find attached the updated USAID/OFDA Japan press talking points for March 21, 2011.

Best,
Helen

Helen Ho, Lily Frey, and Patricia Shea
Information Coordinators
Pacific Tsunami and Japan Earthquake Response Management Team
RMTPACTSU_INC@ofda.gov
202-712-0039

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Attachment 110321 0930 EDT Japan EQ Talking Points.doc (33280 Bytes) cannot be converted to PDF format.

From: [Couret, Ivonne](#)
To: [Burnell, Scott](#)
Subject: RE: FYI - Radiation Chart
Date: Monday, March 21, 2011 10:09:27 AM
Attachments: [factoid2-lrg.pdf](#)

Is this what you are talking about?

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
opa.resource@nrc.gov
301-415-8200

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/>

From: Burnell, Scott
Sent: Monday, March 21, 2011 9:58 AM
To: Couret, Ivonne
Subject: RE: FYI - Radiation Chart

Dose comparisons -- the bar chart going from annual dose to NRC limits to ALARA, etc.

From: Couret, Ivonne
Sent: Monday, March 21, 2011 9:57 AM
To: Burnell, Scott
Subject: FW: FYI - Radiation Chart

What chart? Please advise

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
opa.resource@nrc.gov
301-415-8200

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/>

From: LIA01 Hoc
Sent: Monday, March 21, 2011 9:05 AM
To: Couret, Ivonne
Subject: FW: FYI - Radiation Chart

Ivonne,

Scott Burrell tells me you may be able to provide a link to a simplified chart we use, that I could

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forward to the folks at USAID.

Thanks,

Ted Smith
Federal Liaison
NRC Operations Center

From: RMTFACTSU_ELNRC [mailto:RMTFACTSU_ELNRC@ofda.gov]

Sent: Monday, March 21, 2011 8:32 AM

To: LIA01 Hoc; LIA11 Hoc; LIA07 Hoc; LIA02 Hoc; LIA08 Hoc; LIA12 Hoc; LIA04 Hoc; ET07 Hoc; PMT01 Hoc; Hoc, PMT12; PMT09 Hoc; Harrington, Holly; McIntyre, David; Burnell, Scott

Subject: FYI - Radiation Chart

FYI - This is what is being passed around down here at USAID. It's a radiation chart that explains things in very simple terms!

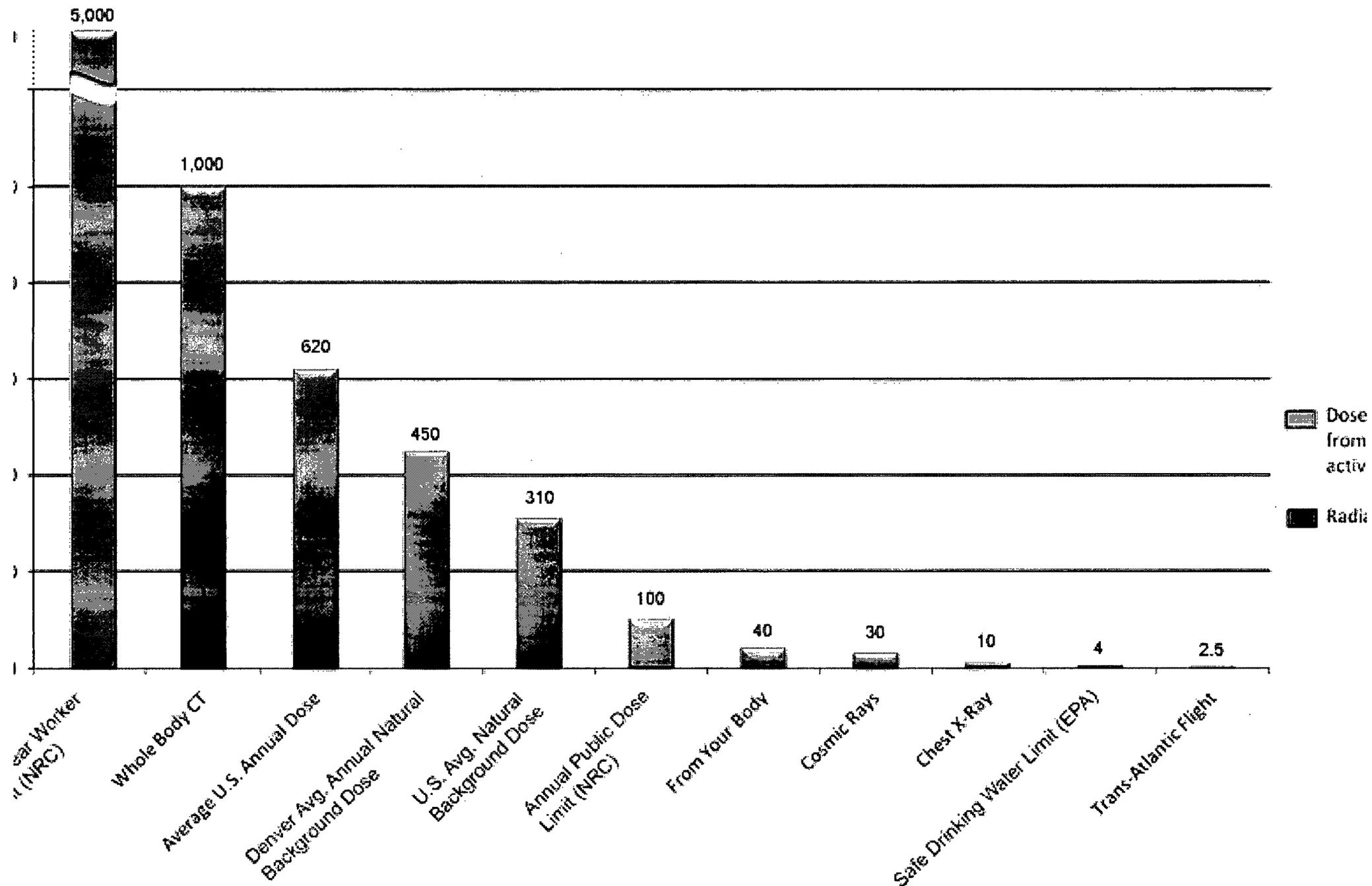
Is it accurate?

<http://xkcd.com/radiation/>

Thanks!

Michael I. Dudek

Radiation Doses and Regulatory Limits (in Millirems)



From: [OST03_HOC](#)
To: [DOI](#); [DTRA](#); [chardin](#); [rfraass@crcpd.org](#); [james.d.lloyd@nasa.gov](#); [PN Distribution](#); [FDA](#); [State Dept](#); [White House Sit Room](#); [Bernie Beaudin](#); [Canadian Nuclear Safety Commission \(CNSC\)](#); [eoc2@cnscccsn.gc.ca](#); [DOEHQEOC@OEM.DOE.GOV](#); [fldr-nrc@comdt.uscg.mil](#); [EOC.EPAHQ@EPAMAIL.EPA.GOV](#); [Lawrence Koleff](#); [SIOC](#); [FEMA-operations-center@dhs.gov](#); [Health Canada Operations Center](#); [IAEA Emergency Response Unit](#); [USDA](#); [Screnci, Diane](#); [Sheehan, Neil](#); [Dricks, Victor](#); [Clifford, James](#); [Gamberoni, Marsha](#); [Heater, Keith](#); [Holian, Brian](#); [Kay Gallagher](#); [Kinneman, John](#); [Lew, David](#); [Nick, Joseph](#); [ODaniell, Cynthia](#); [Powell, Raymond](#); [R1 IRC](#); [Roberts, Darrell](#); [Thompson, Margaret](#); [Davenport, Patricia](#); [McCallie, Karen](#); [Miles, Patricia](#); [Quinones-Navarro, Joylynn](#); [R2 IRC](#); [Rudisail, Steven](#); [R3 IRC](#); [Smith, Desiree](#); [Alferink, Beth](#); [Andrews, Tom](#); [Howell, Linda](#); [R4 IRC](#)
Subject: Real Event: NRC Press Release #11 - Japan Event Earthquake/Tsunami
Date: Monday, March 21, 2011 11:06:00 AM
Attachments: [Press Release 11.pdf](#)

*****Event Information is Attached*****

The NRC is responding to an event.

Please contact the NRC Executive Support Team if necessary at 301-816-5100 or reply to this e-mail.

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NRC NEWS

U.S. NUCLEAR REGULATORY COMMISSION

Office of Public Affairs Telephone: 301/415-8200

Washington, D.C. 20555-0001

E-mail: opa.resource@nrc.gov Site: www.nrc.gov

Blog: <http://public-blog.nrc-gateway.gov>

No. 11-051

March 18, 2011

NRC INFORMS U.S. NUCLEAR POWER PLANTS ON JAPAN EARTHQUAKE'S EFFECTS

The Nuclear Regulatory Commission has issued an Information Notice to all currently operating U.S. nuclear power plants, describing the effects of the March 11 earthquake and tsunami on Japanese nuclear power plants.

The notice provides a brief overview of how the earthquake and tsunami are understood to have disabled several key cooling systems at the Fukushima Daiichi nuclear power station, and also hampered efforts to return those systems to service. The notice is based on the NRC's current understanding of the damage to the reactors and associated spent fuel pools as of Friday, March 18.

The notice reflects the current belief that the combined effects of the March 11 earthquake and tsunami exceeded the Fukushima Daiichi plant's design limits. The notice also recounts the NRC's efforts, post-9/11, to enhance U.S. plants' abilities to cope with severe events, such as the loss of large areas of a site, including safety systems and power supplies.

The NRC expects U.S. nuclear power plants will review the entire notice to determine how it applies to their facilities and consider actions, as appropriate.

###

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 also offers a SUBSCRIBE link. E-mail notifications are sent to subscribers when news releases are posted to NRC's website.

From: [Mitlyng, Viktoria](#)
To: [Brenner, Eliot](#)
Cc: [Hayden, Elizabeth](#); [Harrington, Holly](#)
Subject: FW: Invitation to a Forum on March 25th Chicago, IL
Date: Monday, March 21, 2011 8:56:35 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[Invitation Letter Jaczko.pdf](#)

Eliot, are you aware of this?

From: Pederson, Cynthia
Sent: Monday, March 21, 2011 7:55 AM
To: Mitlyng, Viktoria; Chandrathil, Prema; Heck, Jared; Barker, Allan; Logaras, Harral
Subject: FW: Invitation to a Forum on March 25th Chicago, IL

Don't know yet who will testify. It could be me or someone from HQ.

From: Schmidt, Rebecca
Sent: Sunday, March 20, 2011 10:14 AM
To: Pederson, Cynthia
Cc: Riley (OCA), Timothy; Powell, Amy; Droggitis, Spiros
Subject: FW: Invitation to a Forum on March 25th Chicago, IL

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

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]
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 25th 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.

TTTT/149

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
202.224.2152

[Visit Senator Durbin's Website](#) | Follow Senator Durbin:



United States Senate

WASHINGTON, DC 20510

March 18, 2011

The Honorable Gregory Jaczko
Chairman, U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Chairman Jaczko:

We would appreciate your participation in a public forum on the safety of nuclear energy and nuclear reactors at 1:00 pm on Friday, March 25th at the Everett M. Dirksen U.S. Courthouse in Chicago, Illinois.

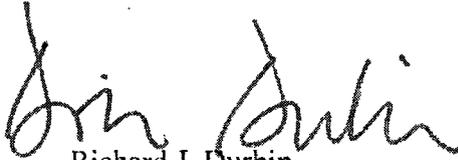
The tragic events in Japan following the 9.0 earthquake and subsequent tsunami has renewed attention on the role of nuclear energy in Illinois and the safety precautions and measures in place at Illinois' nine nuclear power plants and stations.

Through this forum, we hope to hear from stakeholders and experts about the safety features at Illinois' nuclear power plants and preparedness for damage incurred by natural disasters such as tornado, earthquakes, and floods. The reactor units at the Quad Cities and Dresden plants are the same design and approximate age of the units in the Fukushima Daiichi plant. Additionally, the Zion nuclear power station has spent nuclear fuel, the biggest concern at Fukushima, along the shores of Lake Michigan. We would like to highlight any additional protective modifications that may have been taken at the plants after the Three Mile Island accident and the attacks on September 11th, 2001.

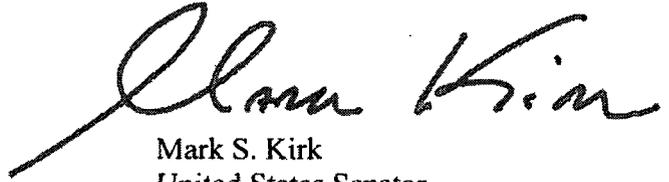
The courthouse is located at 219 S. Dearborn Street and the event will be in room 1418 at 1:00 PM. As a {nuclear energy expert}, we would greatly appreciate hearing your opinions and views on the matter and invite you to participate as a presenter. If you are able to participate, please prepare to make a brief oral statement, no more than five minutes, and remain for questions following all panelist presentations. We understand that as the Chairman of the Nuclear Regulatory Commission, your schedule is very busy and would greatly appreciate the attendance of a professional nuclear scientist for the NRC in lieu of your presence.

I look forward to your participation on March 25th. To confirm your role, or if you have any questions regarding the forum, please contact Jasmine Hunt at (202) 224-2152 or via email at Jasmine_Hunt@durbin.senate.gov.

Sincerely,



Richard J. Durbin
United States Senator



Mark S. Kirk
United States Senator

Holahan, Gary

From: Lawrence.BURKHART@oecd.org, NEA
Sent: Monday, March 21, 2011 7:00 AM
To: Holahan, Gary; Williams, Donna; Dudes, Laura
Subject: FW: EC Update #10 on the event in Japan
Attachments: image001.gif; JAPAN earthquake - update #10.pdf

FYI

From: Diane.JACKSON@oecd.org [Diane.JACKSON@oecd.org]
Sent: Monday, March 21, 2011 10:44 AM
To: REHACEK Radomir, NEA/SURN; JACKSON Diane, NEA/SURN; LAMARRE Greg, NEA/SURN; TEPHANY-M'PANIA Christèle, NEA/SURN; KIM Byung-Soon, NEA/SURN; AMRI Abdallah, NEA/SURN; GRESS Philippe, NEA/SURN; BREEST Axel, NEA/SURN; BURKHART Lawrence, NEA/SURN; IANNOLO Nicolina, NEA/SURN; MCGARVEY Thomas, NEA/SURN; REIG Javier, NEA/SURN; GAUVAIN Jean, NEA/SURN; HUERTA Alejandro, NEA/SURN; MAUNY Elisabeth, NEA/SURN; NAKOSKI John, NEA/SURN
Subject: FW: EC Update #10 on the event in Japan

[<http://home.nea.fr/neaweb/new-signature/images/oecd-nea-logo-30-30.gif>]

Diane Jackson, Nuclear Safety Specialist Nuclear Safety Division, OECD Nuclear Energy Agency (NEA)
Tel.: +33 (0)1 45 24 10 55, Diane.Jackson@oecd.org

From: Marc.NOEL@ec.europa.eu [mailto:Marc.NOEL@ec.europa.eu]
Sent: Sunday, March 20, 2011 17:22
To: Rob.Campbell@hse.gsi.gov.uk; m.kearney@iaea.org; Lauriane.GIROUD-GIACOMEL@asn.fr; remy.bertrand@irsn.fr; Simon.Coenen@fanc.fgov.be; cantemir.ciurea@cncan.ro; mlgs@csn.es; Kenneth.Broman@ssm.se; Fred.Vanlddekinge@minvrom.nl; guenter.prohaska@ensi.ch; d.brandisaukas@vatesi.lt; Seija.Suksi@stuk.fi; julien.husse@asn.fr; adeline.clos@asn.fr; Hubert.Boxman@minvrom.nl; Pavel.bobaly@ujd.gov.sk; didier.wattrelos@irsn.fr; matjaz.podjavorsek@gov.si; Juhasz@haea.gov.hu; david.krembel@asn.fr; kai.weidenbrueck@bmu.bund.de; evr@csn.es; e.kristapoviciute@vatesi.lt; STRITAR Andrej [Slovenia]; Zdenek.Tipek@sujb.cz; JACKSON Diane, NEA/SURN; les.philpott@hse.gsi.gov.uk; Michael.Magua@grs.de; pieter.degelder@belv.be; T.Ganchev@bnra.bg; Peter.Schimann@areva.com
Cc: Jukka.Laaksonen@stuk.fi
Subject: Update #10 on the event in Japan

Dear colleagues,

in annex our daily update - situation today at 16:00.

The situation is slowly improving.

Best regards.

Marc.

TTTT/150!



Summary of the events reported in Japanese NPPs as a result of the earthquake of Friday 11th March – status on Sunday 20th at 16:00 CET

Summary of the current reported status:

The main problems are still located at Fukushima Daiichi NPP, however the situation seems to improve progressively. There is no raised safety concern for plants Fukushima Daini and Onagawa.

According to chief cabinet secretary (JAIF), Units 1 and 2 were successfully connected to off-site power supply. External power of units 3 to 6 is to be connected.

Fukushima Daiichi NPP

Status of Fukushima Daiichi units as of Sunday 20th March 22:00 local time (JAIF):

Unit	1	2	3	4	5	6
Core and fuel integrity	Damaged	Damaged	Damaged	No fuel in the reactor	Not Damaged	Not Damaged
Reactor Pressure Vessel Integrity	Unknown	Unknown	Unknown			
Containment Integrity	Not Damaged	Damage Suspected	Might be not damaged	Not Damaged	Not Damaged	Not Damaged
Reactor building integrity	Severely Damaged	Slightly Damaged	Severely Damaged	Severely Damaged	Open a vent hole on the rooftop for avoiding hydrogen explosion	Open a vent hole on the rooftop for avoiding hydrogen explosion
Water injection to core	Continuing (Seawater)	Continuing (Seawater)	Continuing (Seawater)	Not necessary	Not necessary	Not necessary
Water injection to Containment Vessel	Continuing (Seawater)	to be decided (Seawater)	Continuing (Seawater)	Not necessary	Not necessary	Not necessary
Fuel integrity in the spent fuel pool	Water injection to be considered	Seawater injections continue	level low - Seawater spray continue - certain effect confirmed	level low - Seawater spray continue	Pool cooling capability was recovered	Pool cooling capability was recovered
Electric power supply	Connected to off-site grid	Connected to off-site grid	Not connected	Not connected	Diesel Generator connected	Diesel Generator connected

(IAEA) Japanese authorities have assessed that the core damage at the Fukushima Daiichi 1, 2 and 3 reactor units caused by loss of all cooling function has been rated as 5 on the INES scale.

(TEPCO) Regarding the spent fuel in the common spent fuel pool, TEPCO confirmed that the water level of the pool is secured. A detailed inspection is under preparation.



Unit 1 (shut down due to earthquake)

According to chief cabinet secretary (JAIF), Units 1 and 2 were successfully connected to off-site power supply. Work to recover AC power is in progress. According to IAEA, we however do not know if the water pumps have been damaged and if they will work when power is restored.

Unit 2 (shut down due to earthquake)

According to chief cabinet secretary (JAIF), Units 1 and 2 were successfully connected to off-site power supply. Work to recover AC power is in progress.

(JAIF) Seawater injection into the spent fuel pool started today.

Unit 3 (shut down due to earthquake)

(JAIF) Operation for filling the spent fuel pool with water at Unit 3 was conducted yesterday. It seems that water reached the pool. However, quantity of added water is unknown. Same operation is conducted today.

Japan's Nuclear and Industrial Safety Agency (NISA) has reported that different means have been used the 18th March to spray water to the Unit 3 Spent Fuel Pool (fire engines from the Self-Defence Force, fire engine provided by the US Army...).

(WNN) On March 19th, an announcement of stability at unit 3's spent fuel pool came from chief cabinet secretary Yukiyo Edano. This follows the deployment of Hyper Rescue, a truck featuring a 22 meter arm that pumps some 3000 litres of water per minute, in combination with Super Pump Truck. Together the machines sprayed seawater through the holes left in the sides of the reactor building. Edano made clear that unit 3 remains a concern and that spraying may continue.

According to the Chief Cabinet Secretary (JAIF), the filling of spent fuel pool 3 was conducted during 13 hours until 03:40 am local time.

(TEPCO), TEPCO prepares an operation to release radioactive air from the containment vessel of Unit 3, in order to relief the containment pressure.

Note: the core of unit 3 contains MOx fuel.

Unit 4 (outage due to regular inspection)

(IAEA) This reactor was shut down 30 November 2010 for routine maintenance, and all the fuel assemblies were transferred from the reactor to the spent fuel pool, before the 11 March earthquake. The heat load in this pool is therefore larger than the others. On 14 March, the building's upper floors were severely damaged, possibly causing a reduction of cooling capability in the spent fuel pool.

Japanese authorities have assessed that the loss of cooling and water supplying functions in the spent fuel pool of the unit 4 reactor should be rated as 3 on the INES scale.



According to chief cabinet secretary (JAIF), operations for filling the spent fuel pool with water were conducted twice today by Japan Self Defence. A total of 160 tons of water was sprayed.

Unit 5 (outage due to regular inspection)

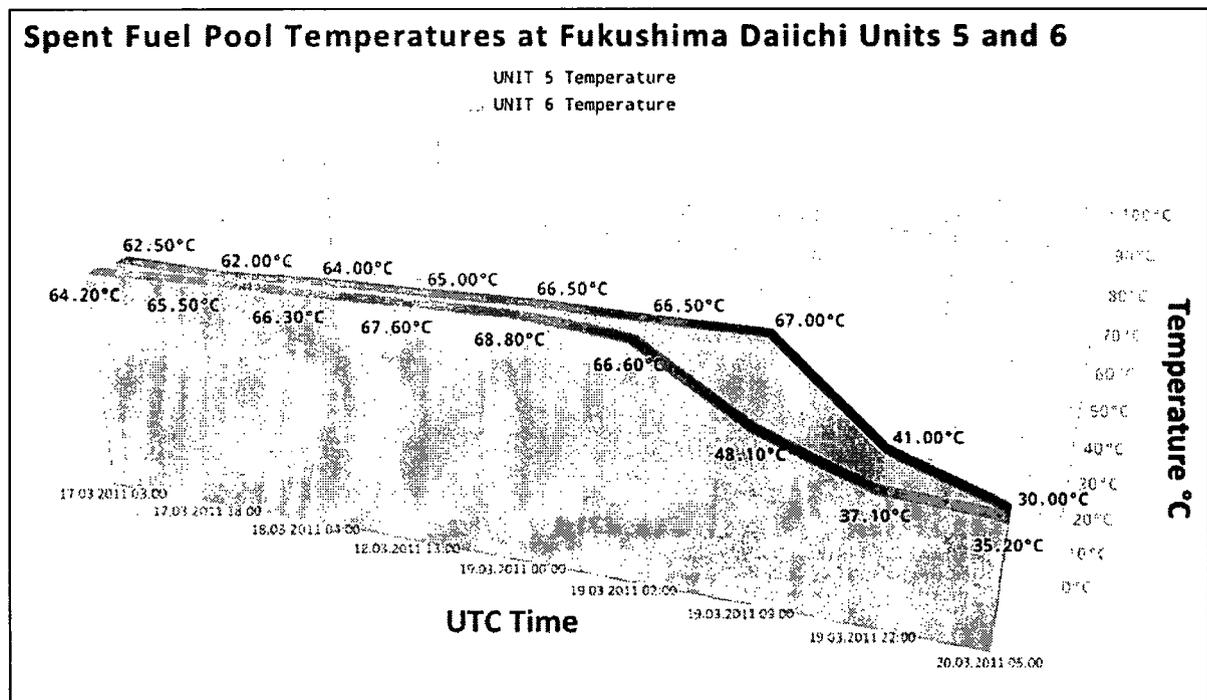
(WNN) Units 5 and 6, elsewhere on site, two diesel generators at unit 6 are now providing power to units 5 and 6 to circulate water in the fuel ponds. Engineers have also brought back the residual heat removal system of unit 5 allowing heat from its fuel pond to be removed to the sea, which is the ultimate source of cooling for any thermal power plant on the coast.

(IAEA) Workers have opened holes in the roofs of both buildings to prevent the possible accumulation of hydrogen, which is suspected of causing explosions at other units.

(IRSN) The **temperature of the spent fuel pool is decreasing significantly.**

Unit 6 (outage due to regular inspection)

(NISA) **Residual Heat Removal (RHR) pump B of Unit 6 started full operation at March 19th, 22:14 local time, in order to cool the spent fuel pool of Unit 6.**



Spent fuel pool temperatures – units 5 and 6 (source: IAEA).



(IAEA) In addition to pools in each of the plant's reactor buildings, there is another facility - the Common Use Spent Fuel Pool - where spent fuel is stored after cooling at least 18 months in the reactor buildings. This fuel is much cooler than the assemblies stored in the reactor buildings. Japanese authorities have confirmed that fuel assemblies there are fully covered by water.

Radiological consequences

(IAEA) Contamination in Food Products around Fukushima

The Japanese Ministry of Health, Labour and Welfare has confirmed the presence of radioactive iodine contamination in food products measured in the Fukushima Prefecture, the area around the Fukushima Daiichi nuclear power plant.

(WNN) Radiation levels exceeding the Japanese government-set level have been detected in samples of milk and spinach collected in the region of the Fukushima nuclear power plant. However, the levels measured are said to pose no immediate threat to health.

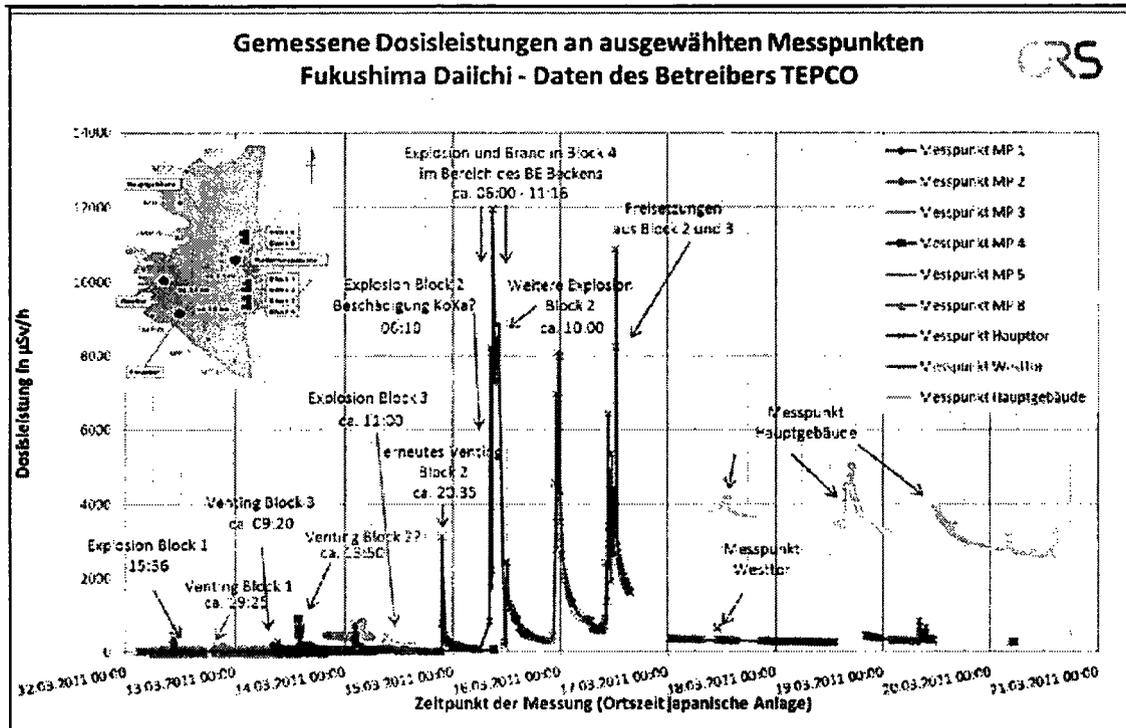
The milk samples had been collected within Fukushima Prefecture at a location more than 30 kilometers from the damaged Fukushima Daiichi plant. This morning, six samples of spinach collected in Ibaraki Prefecture, neighboring to the south of Fukushima Prefecture, were found to have higher levels of radiation. The prefectural boundary is some 65 km from the nuclear power plant.

Edano said that the levels of radiation detected exceed the limits stipulated as provisional regulation values under the national Food Sanitation Law. These limits have been set in accordance with International Committee on Radiation Protection's recommendations.

He stressed that the radiation measured from the samples poses no immediate threat to health. In the case of the milk samples, even if consumed for one year, the radiation dose would be equivalent to that a person would receive in a single CT scan. The levels found in the spinach were much lower, equivalent to one-fifth of a single CT scan.

The Ministry of Health, Labour and Welfare, as well as the prefectural governments, will continue to monitor and analyse food samples and determine the exact location where contaminated samples are found. Edano said that, assuming the higher radiation levels found in food are associated with emissions from the Fukushima plant, the Japanese government will consider taking necessary actions. These could include a ban on the shipment of foodstuffs or setting limits to the intake of such foods.

The graph hereunder shows the dose rates at 08:00 CET March 20th (source: GRS).

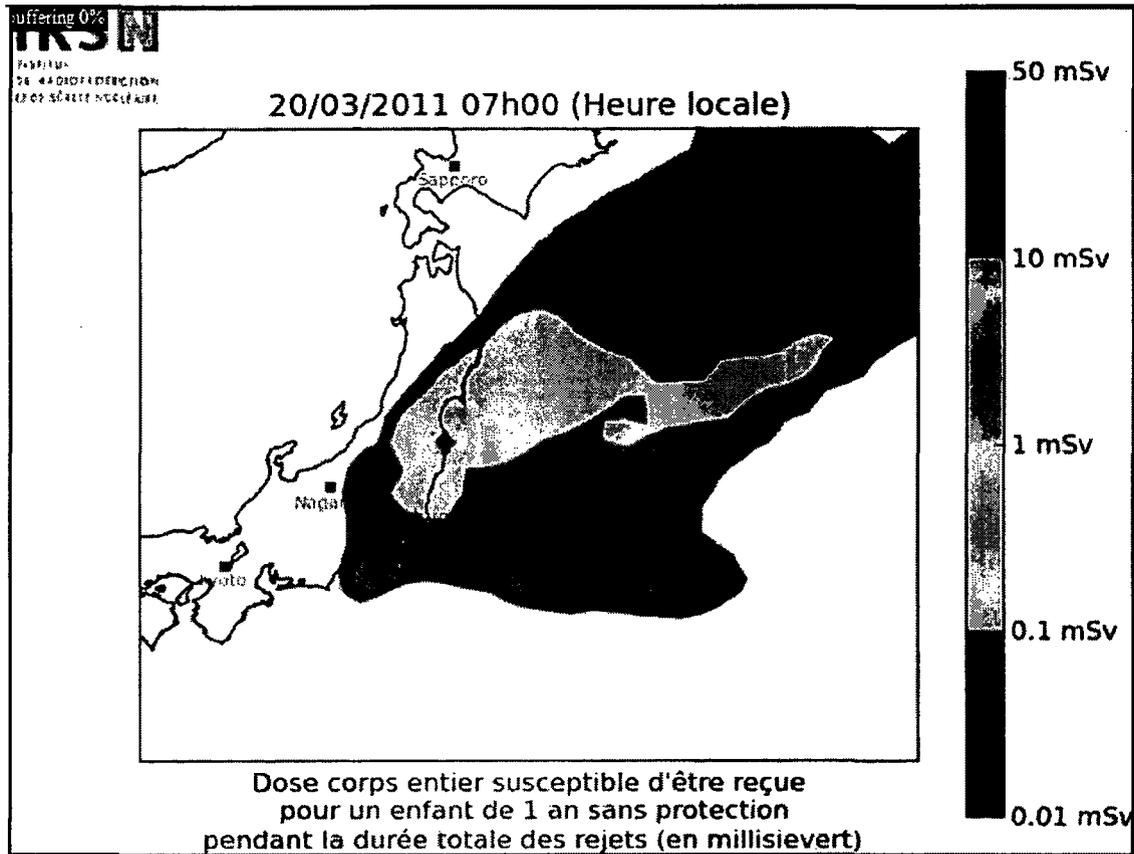


IRSN has simulated the atmospheric dispersion of the estimated release between 12 and 20 March, using a numerical model and meteorological data.

The potential whole body dose assessed by IRSN, is given hereunder for a 1 year child assuming no protection during the releases. In France, sheltering is recommended above 10 mSv and evacuation above 50 mSv. Below 10 mSv, the risk is judged sufficiently low and protection actions for the population is not necessary, according to IRSN. The average yearly dose due to natural radioactivity and medical expositions in France is around 3,7 mSv.

Another simulation has been performed by IRSN for Cs 137; results can be seen using the link hereunder. According to IRSN, Cs 137 values measured around the Chernobyl site just after the accident of 26 April 1986 exceeded 100 000 Bq/m³. These values were around 100 to 1000 Bq/m³ in Ukraine and Belorussia. In France, these values were between 1 and 10 Bq/m³ (on May 1st 1986). Today, a very low Cs137 activity would remain in the air, around 0,000001 Bq/m³ according to IRSN.

http://www.irsn.fr/FR/popup/Pages/animation_dispersion_rejets_17mars.aspx



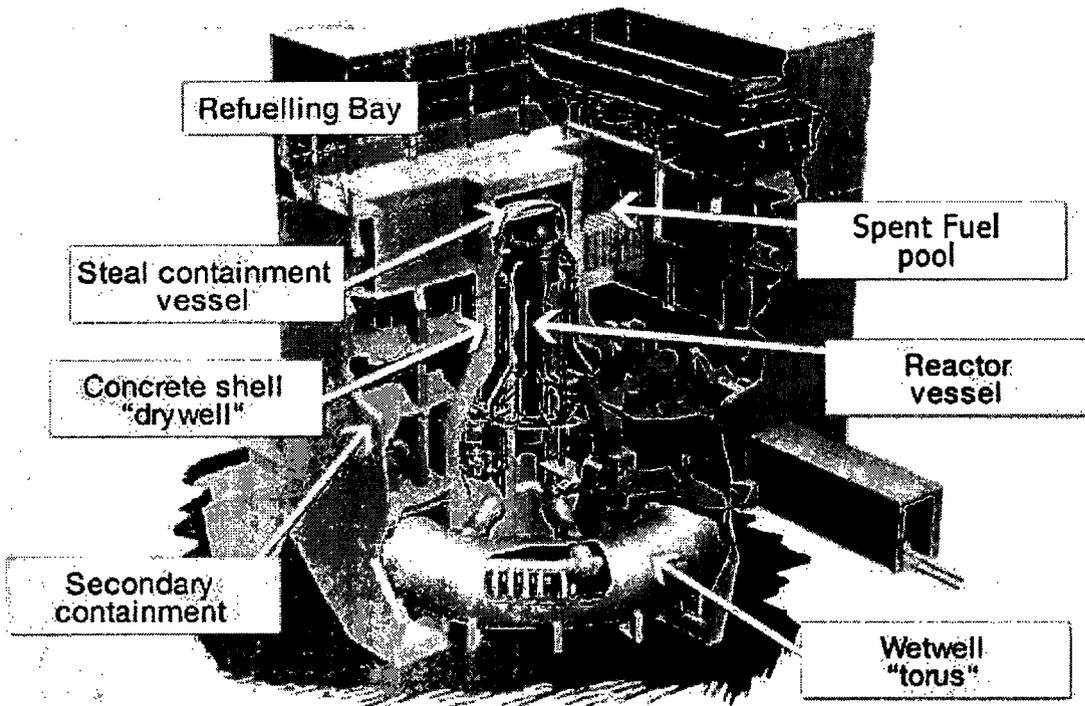
(<http://www.weather-forecast.com>) Winds at Fukushima are forecast to remain offshore for most of the next 10 days, blowing dust away from land and over the Pacific. At this stage, the only unfavourable winds occur during a brief period on Sunday, and only at very low elevations. At altitudes of 1000m and above, winds are forecast strong and remain favorable (from the west).

Fukushima Daini NPP

No additional information reported.

Onagawa NPP

No additional information reported.



Structure of the reactor building (source: IAEA)

From: [Burnell, Scott](#)
To: [Tartal, George](#)
Cc: [Cubbage, Amy](#); [Burrows, Sheryl](#); [Sanders, Serita](#)
Subject: RE: ESBWR DC Proposed Rule Publication This Week
Date: Monday, March 21, 2011 3:04:00 PM

For what it's worth, perhaps we could at least float a trial balloon on extending the comment period before people ask? Thanks.

From: Tartal, George
Sent: Monday, March 21, 2011 2:58 PM
To: Burnell, Scott
Cc: Cubbage, Amy; Burrows, Sheryl; Sanders, Serita
Subject: RE: ESBWR DC Proposed Rule Publication This Week

At this time it's 75 days, and any request for extension will be considered on a case-by-case basis. Business as usual.

From: Burnell, Scott
Sent: Monday, March 21, 2011 2:56 PM
To: Tartal, George
Cc: Cubbage, Amy; Burrows, Sheryl; Sanders, Serita
Subject: RE: ESBWR DC Proposed Rule Publication This Week

All;

Yes, the timing will be a very interesting topic in the comments – any thought to extending the comment period? I'm aware of the "business as usual" direction from top levels of the agency.

Scott

From: Tartal, George
Sent: Monday, March 21, 2011 2:49 PM
To: Burnell, Scott
Cc: Cubbage, Amy; Burrows, Sheryl; Sanders, Serita
Subject: ESBWR DC Proposed Rule Publication This Week

Scott,

Just a quick note to inform you that the ESBWR DC proposed rule is with the Office of Federal Register for publication. I have seen OFR's proposed changes to the FRN, so I know they have it and are working on it. At this point in time, it appears that it will be published on Wednesday, March 23, 2011 – though that may slip a day or so depending on OFR's ability to get it into the publication queue. We will be notified by OFR one day before publication, and you'll be seeing positive confirmation from NRO when we get the official word. So just a heads up that it should be out this week. I believe you have the press release already drafted. **Please take another look** at the wording on it and make sure it reads like a proposed rule that has been published versus a proposed rule that the Commission just voted on and will be published soon (like we did for the ABWR and AP1000 amendments).

TTTT/151

Also be aware that we may be getting some interesting feedback on this proposed rule being issued in relation to the timing of the Japan events. I may be stating the obvious here, but nonetheless...

George M. Tartal
Senior Project Manager
US Nuclear Regulatory Commission
Office of New Reactors
Division of New Reactor Licensing
Rulemaking and Guidance Development Branch
NRO/DNRL/NRGA
301-415-0016

From: LIA02 Hoc
Sent: Tuesday, March 22, 2011 4:49 AM
To: Smith, Brooke
Cc: LIA03 Hoc; PMT01 Hoc; Hoc, PMT12; Foggie, Kirk; Casto, Chuck
Subject: Differences Between the NRC Press Release Assumptions and the French Reactor and Containment Status
Attachments: french data comparison.doc

Brooke –

Please find the NRC Protective Measures Team's response concerning the differences between the NRC Press Release Assumptions and the French Reactor and Containment Status. This information was requested from Ambassador Roos.

If you need any additional information, please let me know.

Thanks,
Eric

TTTT/152

Differences between NRC Press Release Assumptions and French Reactor and Containment Status

The French data shows three damaged reactors (Nos. 1, 2 and 3) each with varying degree of damage, 70% damage, 33% damage and approximately 50 to 66% damage for reactors 1 through 3, respectively. Rate of release from the containment for each of the three damaged reactors is not clear from the table. This probably explains the difference between the US and French recommendations both of which are based on exceeding the PAGs. It does not appear that the French information shows damage to any of the six spent fuel pools.

NRC analysis for the press release assumed two different scenarios, both assuming worst case, hypothetical assessments of the reactors and spent fuel pools as we know it at that time. First assessment assumed 100% core damage for unit 2, core melt as an unfiltered release from a totally failed containment.

The second assessment represented multiple unit failure:

- unit 2 with 33% reactor core damage as an unfiltered release from a totally failed containment;
- unit 3 spent fuel pool (not reactor core) damaged 50% with 180 bundles of spent fuel discharged 105 days ago; and
- unit 4 spent fuel pool with 100% damage containing 550 bundles discharged 30 days ago).

From: LIA05 Hoc
Sent: Tuesday, March 22, 2011 3:40 PM
To: Collins, Richard
Cc: Dan Feighert; Andrew Seward; Harry Sherwood; John Simpson; Michelle Ralston; Steve Horwitz; Tim Greten; Vanessa E. Quinn
Subject: FW: NASA Emergency Management Contact
Importance: High

Mr. Collins,

Can you provide the correct NASA Contact information?

Bonnie Sheffield Dayshift 0700-1500
Ken Wierman Nightshift 1500-2300
FEMA REP Liaison
NRC Operations Center
(301) 816-5187

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From: LIA05 Hoc
Sent: Tuesday, March 22, 2011 2:44 PM
To: 'Marc.Madden@dhs.gov'
Cc: Dan Feighert; 'Andrew Seward'; 'Harry Sherwood'; John Simpson; 'Michelle Ralston'; 'Steve Horwitz'; 'Tim Greten'; 'Vanessa E. Quinn'
Subject: NASA Emergency Management Contact

Mr. Madden,

The Institute of Nuclear Power Operations (INPO) is requesting correct information for NASA Emergency Management. The email address (Jolene.meidnger@nasa.gov) is not a correct email address. Thank you for your attention to this matter.

Bonnie Sheffield Dayshift 0700-1500
Ken Wierman Nightshift 1500-2300
FEMA REP Liaison
NRC Operations Center
(301) 816-5187

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Holahan, Gary

From: Leeds, Eric
Sent: Wednesday, March 23, 2011 2:24 PM
To: Brenner, Eliot; Hayden, Elizabeth
Cc: Borchardt, Bill; Virgilio, Martin; Weber, Michael; Johnson, Michael; Holahan, Gary; Wiggins, Jim; Evans, Michele; Miller, Charles; Sheron, Brian; Uhle, Jennifer; Doane, Margaret; Mamish, Nader; Grobe, Jack; Boger, Bruce; Ruland, William; Dean, Bill; McCree, Victor; Pederson, Cynthia; Howell, Art; Batkin, Joshua
Subject: Heads up: Japan evacuations
Attachments: Japan evacuation.doc

FYI - I asked our contact at the NEA for info on other countries evacuating around Fukushima. Some other members of the international community followed the US recommendation. Some did other things See below and attached.

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
301-415-1270

From: Diane.JACKSON@oecd.org [mailto:Diane.JACKSON@oecd.org]
Sent: Wednesday, March 23, 2011 1:22 PM
To: Leeds, Eric
Subject: Your question about Japan evacuations

Eric –

I did some web searching. Canada, South Korea, UK and Australia stated an evacuation distance of 80 km/ 50 miles.

Many countries, such as France, urged their citizens in the north-east Japan and Tokyo to evacuate. In most reports, most countries do not state the reason is nuclear and they do not give a defined distance.

Attached are excerpts from reports with web sources.

Hope that helps,
Diane

~~TTTTT~~/1546

From: [Burnell, Scott](#)
To: [Mensah, Tanya](#)
Subject: RE: Japanese Earthquake: Responding to correspondence from citizens of other countries
Date: Tuesday, March 22, 2011 9:04:00 AM

I suppose it would be improper to let out a little "woohoo!" after reading this... :-)

From: Mensah, Tanya
Sent: Tuesday, March 22, 2011 9:03 AM
To: Markley, Michael
Cc: Guzman, Richard; Tam, Peter; Lyon, Fred; Polickoski, James; Salgado, Nancy; Burnell, Scott; Rosenberg, Stacey; Blount, Tom; Walker(NRR), Sandra; Craver, Patti
Subject: Japanese Earthquake: Responding to correspondence from citizens of other countries

Good morning,

I just received feedback from my management (Tom Blount), regarding how NRR should treat requests from citizens of other countries requesting that the NRC shutdown U.S. reactors. Should it be responded to under the 2.206 process or as general correspondence?

I won't forward all the emails, but NRR ET members are in agreement that these letters received from concerned individuals residing in other countries should be responded to as general correspondence and not under the 2.206 process. We are proceeding with this direction.

Thus, when I receive any letters which fall into this category (from citizens of other countries), I will forward them to the EDO for ticketing and will request that they should be:

- A. Assigned to NRR.
- B. Treated as general correspondence (not a 2.206). Consistent with Eric Leeds direction, the letter be directed to Robert Nelson, NRR/DORL for his communications team to address.

Rich: Per the direction described, you should plan to develop a response for NMP as general correspondence since Mr. Rudman resides in Canada. Please call me if you have questions.

Thank you all for your time,

Tanya
301-415-3610

From: Markley, Michael
Sent: Friday, March 18, 2011 4:53 PM
To: Mensah, Tanya
Cc: Guzman, Richard; Tam, Peter; Lyon, Fred; Polickoski, James; Salgado, Nancy
Subject: G20110174 ticket re: NMP

Tanya,

TTTT/ISS

Rich Guzman has the lead for this petition.

Mike

From: [Harrington, Holly](#)
To: [Burnell, Scott](#); [McIntyre, David](#)
Subject: FW: EPZ Question
Date: Tuesday, March 22, 2011 9:17:35 AM
Attachments: [Emergency Planning Zones.pdf](#)

From: LIA12 Hoc
Sent: Tuesday, March 22, 2011 8:54 AM
To: Harrington, Holly
Subject: FW: EPZ Question

Holly,

I believe this is the information you were looking for. Let us know if it is not the right document. Reviewing the press release from March 16, NRC Provides Protective Action Recommendations... there are two sets of calculations: for a hypothetical single reactor site and for a hypothetical four reactor site. That may supplement your argument.

From: LIA07 Hoc
Sent: Tuesday, March 22, 2011 8:50 AM
To: LIA12 Hoc
Subject: FW: EPZ Question

From: LIA07 Hoc
Sent: Tuesday, March 22, 2011 8:49 AM
To: LIA08 Hoc
Subject: FW: EPZ Question

From: LIA07 Hoc
Sent: Friday, March 18, 2011 10:26 PM
To: Decker, David
Cc: Mroz (Sahm), Sara
Subject: EPZ Question

The attached document was developed by FEMA and NSIR regarding EPZs ...

I hope that this might provide more insight for your Congressional staffer inquiry. I find it hard to believe that a county within a 50 mile EPZ would not know about it. They are required to participate in FEMA evaluated exercises. She

Please let me know if you need anything else. If she has more questions or would like to talk to somebody, let me know and I can arrange something.

I'm on shift in the Ops Center tomorrow 3-11pm and Monday-Saturday of next week 3-11pm, so my communications are coming at weird times ...

-Sara

T T T T / 156

Sara Mroz
Communications and Outreach
Office of Nuclear Security and Incident Response
US Nuclear Regulatory Commission
Sara.Mroz@nrc.gov

From: [Hayden, Elizabeth](#)
To: [Sheehan, Neil](#)
Cc: [Screnci, Diane](#); [Harrington, Holly](#); [Burnell, Scott](#); [McIntyre, David](#)
Subject: EPZ Statement
Date: Tuesday, March 22, 2011 9:19:35 AM

Neil,

I understand you are drafting a blog on EPZ & NY and thought this might help from Eric Leeds as our message following this morning's meeting with NY.

There are two EPZs; a 10 mile EPZ for plume exposure and a 50 mile EPZ for food exposure. The 10 mile EPZ is the area established as a basis for planning because the projected doses from most accident sequences would not exceed the EPA protective action dose guidelines (1-5 rem) at 10 miles. However, the 10 mile EPZ was always considered a basis for emergency planning that could be expanded if the situation warranted. The situation in Japan, with three reactors and two fuel pools experiencing exceptional difficulties simultaneously, along with a dearth of radiological monitoring information surrounding the plant, led to the decision to expand the evacuation beyond the 10 mile radius.

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

TTTT / 157

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: Transcript for yesterday's meeting
Date: Tuesday, March 22, 2011 9:34:00 AM
Attachments: CommissionMeetingTranscript.pdf

And available here: <http://www.nrc.gov/reading-rm/doc-collections/commission/recent/2011/>

TTTT/158

UNITED STATES OF AMERICA
U.S. NUCLEAR REGULATORY COMMISSION

BRIEFING ON NRC RESPONSE TO RECENT NUCLEAR
EVENTS IN JAPAN

MARCH 21, 2011

9:00 A.M.

TRANSCRIPT OF PROCEEDINGS

Public Meeting

Before the U.S. Nuclear Regulatory Commission:

Gregory B. Jaczko, Chairman

Kristine L. Svinicki, Commissioner

George Apostolakis, Commissioner

William D. Magwood, IV, Commissioner

William C. Ostendorff, Commissioner

NRC Staff:

Bill Borchardt
Executive Director for Operations

1 Since Friday, March 11, when the earthquake and tsunami struck,
2 the NRC's headquarter operation center has been operating on a 24-hour basis
3 to monitor and analyze events at nuclear power plants in Japan. At the request
4 of the Japanese government and through the United States Agency for
5 International Development, the NRC sent a team of its technical experts to
6 provide an on the ground support, and we have been in continual contact with
7 them since they deployed.

8 And within the United States, the NRC has been working closely
9 with other federal agencies as part of the U.S. Government's response to the
10 situation. Here in the United States we have an obligation to the American
11 people to undertake a systematic and methodical review of the safety of our own
12 domestic nuclear facilities in light of the natural disaster and resulting nuclear
13 situation in Japan. Beginning to examine all available information is an essential
14 part of our effort to analyze the event and understand its impacts on Japan and
15 implications for the United States. Our focus will always be on keeping plants
16 and radioactive materials in this country safe and secure.

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

24 On behalf of the Commission I want to thank all of our staff for
25 maintaining their focus on our essential safety and security mission throughout

1 these difficult days. I want to acknowledge their tireless efforts and their critical
2 contributions to the U.S. response to assist Japan. In spite of the evolving
3 situation, the long hours, and the intensity of efforts over the past week, the staff
4 has approached their responsibilities with dedication, determination, and
5 professionalism, and we are all incredibly proud of their efforts. The American
6 people can also be proud of the commitment and dedication within the federal
7 workforce, which is exemplified by our staff every day. And again, I want to
8 reiterate certainly on behalf of the Commission and all of us here in this room our
9 sympathy with the crisis and the difficult situation for our friends and colleagues
10 in Japan, and we look forward to continuing our efforts to provide them with
11 assistance as they continue to deal with a very challenging situation, not only
12 with the nuclear facilities but with many of the other impacts from this natural
13 disaster in Japan. I would like to offer Commissioner Svinicki an opportunity to
14 make some comments.

15 COMMISSIONER SVINICKI: Thank you Mr. Chairman. I want to
16 add my voice to that of others regarding the great sympathy we feel over the loss
17 and devastation due to the earthquake and tsunami in Japan. The dramatic
18 images of the events at Fukushima, images that have riveted so many of us over
19 the course of the past week, have an added dimension for us as a community of
20 nuclear safety professionals because for us these images are not an abstraction.
21 Many of us have traveled to Japan; we have toured the facilities of our Japanese
22 colleagues. We have worked alongside them in support of the shared goal of
23 advancing nuclear safety. The sense of anguish we feel as we desire so
24 desperately to do something, anything we can, to help our friends and colleagues
25 in Japan has been so clearly evident on the faces of the men and women

1 working here at NRC. We are heartsick over this tragedy. Some may
2 characterize that our faith in this technology is shaken, but nuclear safety has not
3 been and cannot be a matter of faith; it is and must continue to be a matter of
4 fact. So today we continue the systematic evaluation of facts of what we know
5 about what happened and what we don't know but will piece together in the
6 coming months. Our objective is to confirm that our approach to the regulation of
7 nuclear power in this country is comprehensive and correct while applying any
8 lessons learned we can from these events. In taking the systematic and
9 deliberate approach to this review that you have called for, Mister Chairman, I'm
10 certain the Commission will achieve this objective. Thank you.

11 CHAIRMAN JACZKO: Thank you. Commissioner Apostolakis.

12 COMMISSIONER APOSTOLAKIS: I join the Chairman and
13 Commissioner Svinicki in expressing my condolences to the people of Japan and
14 I also second the Chairman's comments on commending the staff for its
15 response to this accident. Thank you, Mr. Chairman.

16 CHAIRMAN JACZKO: Commissioner Magwood.

17 COMMISSIONER MAGWOOD: Thank you, Chairman. This is in
18 many ways a very personal tragedy for me. I have many friends and colleagues
19 in Japan. I have been in touch with several of them over the last week and a
20 half. I've heard from friends in Tokyo worried about radiation and others in the
21 North who are dealing with food shortages and gasoline shortages. Everyone in
22 Japan is enduring continuing aftershocks, anxiety about the Fukushima and
23 Daiichi plant, and difficulties in communicating with friends and neighbors, and a
24 lot of uncertainty about what will happen next. I have one friend Emito who lost
25 all her utilities for several days after the earthquake and is still waiting for water to

1 be restored. But in the aftermath of the earthquake, she is making new friends
2 as people bond together to help each other and comfort each other and make the
3 best of a difficult situation. Fortunately she found a kind neighbor who has a well,
4 and so she has been able to get water and take it to her apartment on a daily
5 basis.

6 I'm sure there's thousands of examples of people who are reaching
7 out to each other, bonding as a community, and showing the kind of resilience
8 that is going to be necessary to move forward. The scale of the tragedy is
9 staggering and the toll on life and property has been terrible, but Japan will
10 recover. But Japan will not stand alone and has not stood alone over the last
11 week and a half. We in the U.S. are close friends to the Japanese people and
12 I'm very, very proud of how our country has responded to this crisis and
13 particularly proud of how the Nuclear Regulatory Commission Staff has
14 responded as well. The staff has demonstrated both the expertise and the
15 selflessness over the last 10 days and I applaud their outstanding efforts.

16 Today the Commission will receive an update on the nuclear
17 situation in Japan, our response and our efforts to understand what has
18 happened. There will be important lessons learned from the events at the
19 Fukushima/Daiichi plant. It's essential that we identify them correctly and
20 respond to them effectively. This meeting, I expect, will be the first of many
21 Commission meetings as we engage to understand the issues and address
22 those issues to ensure the safety of U.S. nuclear power plants. And I look
23 forward to working with my partners on the Commission to do so. Thank you.

24 CHAIRMAN JACZKO: Thank you, Commissioner Magwood.
25 Commissioner Ostendorff.

1 COMMISSIONER OSTENDORFF: Thank you, Mr. Chairman. This
2 is a vitally important meeting for the Commission and the country. I want to join
3 my colleagues in extending my personal sympathies to the people of Japan. The
4 consequences and loss of life in the earthquake and tsunami are simply
5 devastating. Our thoughts and prayers are with all. I'd like to commend the
6 Chairman, the Executive Director for Operations and the NRC staff for their
7 efforts to date in supporting the NRC's monitoring assistance associated with
8 these events. I appreciate the hard work ongoing 24/7 at the Op Center for the
9 last 11 days. Along with my other colleagues here at this table, I've been very
10 impressed with the technical competence and professionalism demonstrated by
11 the NRC staff. I'm also grateful for the highly competent team of NRC detailees
12 dispatched to Japan. While dismayed by this tragedy as a Commissioner, I am
13 also extraordinarily proud of the commitment and professionalism of our team.
14 The events that have unfolded at the Daiichi plant over the last 11 days are stark.
15 On one hand, I believe that our existing licensing and oversight activities assure
16 us that our commercial nuclear power plants in this country are safe. On the
17 other hand, I know that we must, and that we most certainly will, conduct a
18 thoughtful and rational examination of the NRC's regulatory framework with the
19 information and lessons learned resulting from the incidence in Japan. As we
20 head down this path together, I know this Commission will stay mindful of the
21 challenges that face us. As stated by Chairman Jaczko several times in the last
22 week and again today as echoed by the Commissioners, I fully support his call
23 for a systematic and methodical review. We must also do this in a way that
24 clearly communicates to the American people what this review means and what it
25 implies for the safety of our existing nuclear power plants. Thank you.

1 CHAIRMAN JACZKO: Well thank you everyone. With that, we will
2 turn it to Bill Borchardt, the Executive Director for Operations for the presentation.

3 MR. BORCHARDT: Thank you, and good morning. I would like to
4 join in your expressions of condolences to the people of Japan. I and many of
5 my colleagues on the NRC staff have had many years of very close and personal
6 interaction with our regulatory counterparts and we would like to extend our
7 condolences to them.

8 We are mindful of our primary responsibility to ensure the public
9 health and safety of the American people. We have been very closely monitoring
10 the activities in Japan and reviewing all available information to allow us to
11 conclude that the U.S. plants continue to operate safely. There has been no
12 reduction in the licensing or oversight function of the NRC as it relates to any of
13 the U.S. licensees. Contributors to the conclusion that the current fleet of
14 reactors and materials licensees continue to protect the public health and safety
15 are based on a number of principles, including the Defense in Depth.

16 The fact that every reactor in this country is designed for natural
17 events based upon the specific site that that reactor is located, that there are
18 multiple fission product barriers, and that there are a wide range of diverse and
19 redundant safety features in order to provide that public health and safety
20 assurance. We have a long regulatory history of conservative decision-making.
21 We've been intelligently using risk insights to help inform our regulatory process,
22 and we have never stopped to make improvements to the plant design as we
23 learn from operating experience over the more than 35 years of civilian nuclear
24 power in this country. Some have been derived from lessons learned from
25 previous significant events, such as Three Mile Island. We have severe accident

1 management guidelines, revisions to the emergency operating procedures,
2 procedures and processes for dealing with large fires and explosions, regardless
3 of the cause. We have a station blackout rule. We have a hydrogen rule for
4 reactors and many others which I'll go into in a little more detail later.

5 But all of these relate in one way or another to the tragic events in
6 Japan. In addition to all that we've done in the NRC and over the last week and
7 a half and over the many years as I alluded to on rulemaking type activities, the
8 industry is also performing many verification activities at this time to verify that all
9 of these processes and procedures and rules that have been implemented are
10 still valid. From a very high level, the NRC response centered from the
11 Operations Center here in Rockville as well as the NRC team that's in Japan
12 focuses on three major areas. The first is to support the Japanese government
13 and our regulatory counterpart, NISA. Second is to gather information and
14 assess that information for implications on the U.S. facilities. And the third is to
15 support the U.S. ambassador in Japan with a level of nuclear expertise that the
16 NRC is perfectly positioned to do. We are in fact mobilized to support the US
17 government in responding to this event.

18 Notwithstanding the very high level of support, we continue to
19 maintain our focus on our domestic responsibilities. And finally as my last point
20 of introduction, we do not expect the releases of radioactive material that have
21 occurred in Japan to have any effect on the health and safety of the U.S.
22 population.

23 The next slide shows the agenda for this meeting. Given the time
24 constraints, it'll be a relatively high overview of activities but the room has a
25 healthy number of NRC staff that are available to explore any questions and

1 answers that you may have later. I'll now move to, let's say, a brief overview of
2 the events.

3 On Friday, March 11th an earthquake hit Japan, resulting in the
4 shutdown of more than 10 reactors. To our understanding, the reactors'
5 response to the earthquake went according to design. There is no known
6 problems to our knowledge with the response to that event. The ensuing
7 tsunami, however, caused the loss of emergency AC power to six units at the
8 Fukushima Daiichi site; and it's those six units that have received the majority of
9 our attention since that time. Units One, Two, and Three, at that six unit site,
10 were in operation at the time. Units Four, Five, and Six were in previously
11 scheduled outages.

12 Immediately after the tsunami, there appeared that there was no
13 injection capability into the reactor vessels on Units One, Two, and Three. On
14 Saturday, March 12th, a hydrogen explosion occurred in Unit One; and then the
15 following Monday, March 14th, a hydrogen explosion in Unit Three. On the 15th
16 of March, on Tuesday, there were explosions in Unit Two and in Unit Four from
17 hydrogen originating from, we believe, overheated fuel in the spent fuel pool.

18 At this time, it's our assessment that it's likely that Units One, Two,
19 and Three have experienced some degree of core damage. Today, all three
20 units appear to be in a stable condition, with seawater injection being used to
21 keep the reactors cool. Containment integrity for all three units is also believed
22 to have been -- is currently maintained. Grey smoke has emitted from Unit
23 Three, which is the cause of the site evacuation that's been reported this
24 morning. The source of that smoke is unknown, although there is indication that
25 there's been no increase in temperature or in radioactivity.

1 On a sign of some promising news, TEPCO has been able to bring
2 offsite power onto the site from a nearby transmission line. It is now essentially
3 at the border of Units One and Two. There's early indications that there may be
4 cabling problems -- electrical cabling problems within the units. So I understand
5 that they're now in the process of laying some temporary cables to some of the
6 pumps and valves inside of Units One and Two. Over the next day or two they'll
7 be doing the same thing for Units Three and Four. There's two diesel generators
8 that are currently running and supplying power to Units Five and Six.

9 Moving to the NRC response: Shortly after 4:00 in the morning on
10 Friday, March 11th, the NRC Operations Center made the first call, informing
11 NRC management of the earthquake and the potential impact on U.S. plants.
12 We went into the monitoring mode at the Operations Center and the first concern
13 for the NRC was possible impacts of the tsunami of U.S. plants on the West
14 Coast.

15 On that same day, Friday, March 11th, we dispatched two experts
16 to Japan to help at the embassy and begin interactions with our Japanese
17 regulatory counterparts. By Monday, we had dispatched a total of 11 staff to
18 Japan. As I said, the areas of focus for this team of 11 is to support the
19 Japanese government and respond to requests from our regulatory counterpart,
20 NISA, to support the U.S. ambassador and his understanding of the nuclear
21 impacts of this event, and then third to help the information flow from Japan to
22 the U.S. NRC so that we could assess the implications on the U.S. fleet in as
23 timely a manner as possible.

24 We've had an extensive range of stakeholders that we've had
25 constant interaction with, ranging from the White House, Congressional staff, our

1 state regulatory counterparts, a wide range of other federal agencies, and of
2 course the international regulatory bodies around the world.

3 Our ongoing NRC response is that the NRC Operations Center
4 remains in a 24/7 posture. This has involved the efforts of over 250 NRC staff on
5 a rotating basis. In addition to the people that are staffing the Operations Center,
6 there is hardly a person amongst the 4,000 people in this agency that aren't in
7 one way or another contributing to the response, whether it's through information
8 technology needs for the people in Japan, or the Region IV staff in Texas, which
9 is backing up for the operations officers in our Operations Center to help maintain
10 an information flow on the currently operating reactors in this country. The entire
11 agency is coordinating and pulling together in response to this event so that we
12 can provide the assistance in Japan and not miss any of our normal activities
13 regarding domestic responsibilities.

14 In addition, we remain aware of U.S. industry efforts to provide
15 assistance with their counterparts in TEPCO in Japan.

16 The U.S. Government has an extensive network of radiation
17 monitors across the country. EPA's system has not identified any radiation levels
18 of concern in this country. In fact, natural background from things like the rock --
19 from rocks, sun, buildings, is 100,000 times more than any level that has been
20 detected to date. We feel confident in our conclusion that there is no reason for
21 concern in the United States regarding radioactive releases from Japan.

22 I'd like to focus for a few more minutes on the factors that go into
23 assuring us of domestic reactor safety. We have, since the beginning of the
24 regulatory program in the United States, used a philosophy of Defense-in-Depth,
25 which recognizes that the nuclear industry requires the highest standards of

1 design, construction, oversight, and operation, but even with that we will not rely
2 on any one level of protection for the entire purposes of protecting public health
3 and safety. So the designs for every single reactor in this country take into
4 account the specific site that that reactor is located and does a detailed
5 evaluation for any natural event such as earthquakes, tornadoes, hurricanes,
6 floods, tsunami, and many others.

7 In addition, there are multiple physical barriers to fission product
8 release at every reactor design. And then in addition to that, there are both
9 diverse and redundant safety systems that are required to be maintained
10 operable and frequently tested by NRC regulations that ensure that the plant is in
11 a high condition of readiness to respond to any scenario.

12 As I mentioned earlier, we've taken advantage of the lessons
13 learned from previous operating experience, one of the most significant in this
14 country, of course, being the Three Mile Island accident in the late 1970s. As a
15 result of those lessons learned, we've significantly revised the emergency
16 planning, the emergency operating procedures. Many human factors issues as it
17 relates to how control room operators operate the plant. We added new
18 requirements for hydrogen control to help prevent explosions inside of
19 containment and we also created requirements for enhanced indication of pumps
20 and valves.

21 We have a post-accident sampling system that requires -- or that
22 allows -- for the monitoring of radioactive material release and possible fuel
23 degradation. And of course one of the most significant changes is after Three
24 Mile Island we created the Resident Inspector Program, which has at least two

1 full time NRC inspectors on site that have unfettered access to all licensees'
2 activities 24 hours a day, seven days a week.

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

11 As a result of the events of September 11, 2001, we did a similar
12 evaluation, and identified important pieces of equipment that, if, regardless of the
13 cause of a significant fire or explosion at a plant, we would have pre-staged
14 equipment, procedures, and policies to help deal with that situation. All of these
15 things are directly applicable to the kinds of very significant events that are taking
16 place in Japan. Over the last 15 or 20 years, there's been a number of new
17 rulemakings that directly relate to Japan. There's a station blackout rule that has
18 required every plant in the country to analyze what the plant response would be if
19 it were to lose all alternating current so that it could respond using batteries for a
20 while, and then have procedures and arrangements in place in order to restore
21 alternating current to the site, and provide cooling to the core.

22 As I mentioned earlier, there's a hydrogen rule, which requires
23 modifications to reduce the impacts of hydrogen generated for beyond-design
24 basis events and core damage. There's equipment qualification rules that
25 require equipment, indication equipment, as well as pumps and valves, to remain

1 operable under the kinds of environmental temperature, radiation conditions that
2 you would see under a design basis accident. And then, going directly to the
3 type of containment design that the plants in Japan of highest interest have,
4 we've had a Mark I Containment Improvement Program since the very late
5 1980s, which had installed hardened vent systems for the containment cooling
6 and fission product scrubbing for all BWR Mark I's, as well as enhanced reliability
7 of the automatic depressurization system.

8 I also mentioned earlier that we have emergency preparedness and
9 planning requirements that provide ongoing training, and testing, and evaluations
10 of emergency preparedness programs, in coordination with our federal partner,
11 FEMA. And that entails extensive interaction with state and local governments,
12 as those programs are evaluated and tested on a yearly basis.

13 Over the near term, the NRC activities are -- we will -- concurrent
14 with the event evaluation that we're doing through the Operations Center and the
15 team that's in Japan, we will be enhancing inspection activities through
16 temporary instructions to our inspection staff, including the resident inspectors
17 and the region-based inspectors in our four Regional offices, to look at the
18 readiness to deal with both the design basis accidents and the beyond-design
19 basis accidents.

20 We've already issued an information notice to the licensees to
21 make them aware of the events, and what kinds of activities we believe they
22 should be engaged in, to verify their readiness. And then we, every single day,
23 assess whether or not there is some additional regulatory action that needs to be
24 taken immediately, in order to address the information that we have, to date. The
25 temporary inspection I've referred to is verifying that the capabilities to mitigate

1 conditions that result from severe accidents, including the loss of significant
2 operational and safety systems, are in effect and operational. They're verifying
3 the capability to mitigate a total loss of electric power to the nuclear plant.
4 They're verifying the capability to mitigate problems associated with flooding, and
5 the impact of floods on systems both inside and outside of the plant. And they're
6 identifying the equipment that's needed for the potential loss of equipment due to
7 seismic events appropriate for the site, because each site has its own unique
8 seismic profiles.

9 The information that we gather from this temporary inspection will
10 be used to evaluate the industry's readiness for similar events, and aid in our
11 understanding of whether additional regulatory actions need to be taken in the
12 immediate term. For a near term effort, we are beginning, very soon, a 90 day
13 effort, that will evaluate all of the currently available information from the
14 Japanese event, and look at it to evaluate our 104 operating reactors' ability to
15 protect against natural disasters, to evaluate the response to station blackouts,
16 severe accidents and spent fuel accident progression, look at radiological
17 consequence analysis, and also look at severe accident management issues
18 regarding equipment.

19 I expect that, coming out of this, we'll have the development of
20 some recommendations for generic communications, either to make sure that the
21 industry has a broad understanding of the events and the issues, as best we
22 understand them. But also, as I mentioned earlier, that we would evaluate
23 whether or not some regulatory action, perhaps in the framework of an order,
24 would be required, in order to require the licensees to take some actions that
25 they have not already done. I expect that this 90 day effort will include a Quick

1 Look 30 day report to the Commission, and of course we stand ready to brief the
2 Commission as you desire.

3 In order to accomplish this Quick Look report, I think we will have
4 limited stakeholder involvement in this activity, and that it will be done
5 independent of industry efforts that might be ongoing. The idea is to just get a
6 quick snapshot of the regulatory response and the condition of the U.S. fleet
7 based on whatever information we have available. You know, I recognize that
8 we have limited information now. More and more information will become
9 available to us as we go along. But we wanted to do at least this Quick Look
10 report, beginning very soon. And of course, consistent with the Commission's
11 practices, the results of this report will be made public.

12 On the longer term, we'll be developing lessons learned that are
13 somewhat dependent on when we begin to get a better understanding of the
14 events and the results of the earthquake and tsunami in Japan. So, to some
15 degree, it's difficult to precisely state when the start date for this longer-term
16 review will begin. The review may include the involvement of other federal
17 agencies, but it will certainly include interaction with those other federal agencies,
18 because there's, obviously, the issue of emergency preparedness is a prime
19 example of where we would interact with FEMA to have an effective review. And
20 we would identify the lessons learned that need to be incorporated into any
21 ongoing, long term agency action.

22 We'll evaluate all the technical and policy issues to identify
23 additional research, or generic communications, changes to our reactor oversight
24 program, potential new rulemakings, adjustments to the regulatory framework
25 that should be conducted by the NRC. As I said, we'll evaluate inter-agency

1 issues, and also look for applicability to non-operating reactor facilities. I expect
2 this longer-term report to have substantial stakeholder involvement, and the
3 outcomes are likely to be along the lines of generic letters, bulletins, and potential
4 rulemakings. So, in conclusion, I want to make it clear that we continue to make
5 our domestic responsibilities of licensing and oversight of the U.S. licensees our
6 top priority. There is an immediate short term and long term evaluations that are
7 beginning, and that they will be influenced by our understanding of the events in
8 Japan. With that, that concludes my presentation. I'm ready to answer any
9 questions.

10 CHAIRMAN JACZKO: Well, thank you, Bill, for that very thorough
11 presentation. We have a proposal in front of the Commission now to consider
12 the options for the short term and the long term reviews, so we'll take a look at
13 that and provide response in fairly short order. I would, again, just want to
14 reiterate my thanks to the work that you and your team have done over the last
15 several days, to deal with this situation, and the -- emphasize the importance of a
16 systematic and methodical review, so that we do make sure that we approach
17 these issues, and really get the facts, and make sure that we don't move in a
18 direction that is based on early information, which often tends to be confusing,
19 and sometimes conflicting. So I appreciate the work that you've done to this
20 point. And I don't have any specific questions, at this time, but I would turn to
21 Commissioner Svinicki to begin with some questions and comments.

22 COMMISSIONER SVINICKI: Thank you, Mr. Chairman, and thank
23 you, Bill. I second the Chairman's comments about the tremendous efforts that
24 you and all of the NRC staff members have made in supporting the agency's
25 reaction to this event. There is a lot that we don't yet know, and so that becomes

1 a context, really, for the types of questions that we're able to ask about this event
2 today. Very generally, I would ask you, in the staff's expert assessment, this
3 morning, do you believe that the events occurring at Fukushima have stabilized,
4 or is it reasonable to expect that events there will continue to be dynamic in the
5 days and weeks to come?

6 MR. BORCHARDT: In my view, the fact that off-site power is close
7 to being available for use of plant equipment is, perhaps, the first optimistic sign
8 that we've had, that things could be turning around. We believe that the spent
9 fuel pools on Units Three and Four, which had been two components that were
10 of significant safety concern, that the situation there is stabilizing, that the
11 containment in three, all three Units One, Two, and Three appear to be
12 functional, and that there's water being injected into the reactor vessels in Units
13 One, Two, and Three.

14 So I would say optimistically, things appear to be on the verge of
15 stabilizing. This has been a very challenging event for us to understand the
16 exact situation, because, as was alluded to, the information is sometimes
17 conflicting, it's certainly not at the level that any engineer would like to have in
18 order to do a thorough analysis, so we've spent a lot of the time trying to piece
19 together our best understanding. But that would be my personal assessment of
20 the situation on site now.

21 COMMISSIONER SVINICKI: Is it fair to say from that, then, that,
22 based on what we understand now of the needs that most urgently need to be
23 addressed there at the site, that those are being addressed, and that they have
24 the status that you just described to me? Those are, of course, the items of
25 highest interest. But it sounds also like, in the days and weeks to come, we will

1 certainly discover other conditions and things at the site, of perhaps a lower level
2 of priority that we just don't know about right now.

3 MR. BORCHARDT: Yes. The radiation releases and the dose
4 rates that we've seen on site, I think, were primarily influenced by the condition of
5 the Units Three and Four spent fuel pools. And the water inventory questions of
6 whether or not there was some fuel that was uncovered in the spent fuel pool
7 was of significant concern. TEPCO, the licensee, and the Government of Japan
8 have been making a concerted effort to address those issues. So that we're
9 aware of.

10 I don't believe we have anywhere near a clear understanding of
11 what the plant conditions are like within the reactor buildings. So, what kinds of
12 electrical cabling has been damaged, what kinds of pumps and valves remain
13 operable, is a significant unknown right now.

14 COMMISSIONER SVINICKI: Okay, thank you. You gave a very
15 high level chronology of the events that occurred, as we know them. And it really
16 ends up being a narrative of three events that are related to each other. First, of
17 course, being the earthquake, the seismic event. Second, the tsunami, or, as we
18 might have it in the United States, a flood surge, or some other flooding event,
19 followed by the loss of power.

20 In terms of what we know now, and given that there are these three
21 events in succession, do you think that our regulatory focus right now, for the
22 review we're doing, is where it needs to be?

23 MR. BORCHARDT: Yes, I'm quite confident. We've looked at all of
24 the information that we're getting from Japan. We've looked at the design basis
25 for the U.S. reactors. We continue with the inspection program, and we have a

1 high degree of confidence that the 104 currently operating reactors, there's an
2 adequate basis to assure adequate protection.

3 COMMISSIONER SVINICKI: Thank you. There's been some
4 discussion of what we call Generic Safety Issue 199. And Generic Safety Issues,
5 that's a program that we have at NRC for the continual evaluation of various
6 safety-relevant issues. Could you talk a little bit about the ongoing nature, this is,
7 Generic Safety Issue 199, was ongoing prior to the event in Japan. Could you
8 talk about what was occurring there, and how the events in Japan may alter how
9 we approach that generic safety issue, going forward?

10 MR. BORCHARDT: Occasionally, I think it's every five years or so,
11 the USGS does a review of information which impacts the U.S. Government's
12 understanding of seismic frequencies and issues associated with seismic.
13 Recently they put out a report that talked about the seismic information for the
14 East, the Central and Eastern United States. That information has been given to
15 the industry. There's now both industry and NRC evaluation of that information
16 to see if this new information, and in some places it's an increase in the
17 frequency, expected frequency of a seismic event, would cause us to have to
18 change the seismic design basis for the plants.

19 We did a, as we do every time we get any kind of new information,
20 seismic or otherwise, we do a quick look to make sure that we don't believe
21 there's any immediate information or any immediate need to take any regulatory
22 action. If there was, we would certainly do that through the immediate imposition
23 of new operating guidelines, or new systems, or potentially, even, requirement to
24 shut the reactor down, until the issue was addressed.

1 In this case, we did that review. We found no reason to take any
2 immediate regulatory action. And so this is an ongoing review. I don't believe
3 that what we've learned from Japan would cause a different type of analysis. It
4 certainly puts a broader, brighter spotlight on the work we're doing, and that
5 follow-up. But I'm confident that the approach we've been on is the right
6 approach.

7 COMMISSIONER SVINICKI: You described our role in the inter-
8 agency response, and NRC-specific actions. Are we cognizant of, and working
9 to understand and make sure that our efforts do not conflict with, any industry-to-
10 industry systems that is going on? I'm not aware of Tokyo Electric Power
11 reaching out to the U.S. nuclear industry, or nuclear utilities, since this is a
12 technology that we have in the United States. Do we maintain a cognizance of
13 that so that we can make sure that all efforts are coordinated?

14 MR. BORCHARDT: We are aware that the industry-to-industry
15 interaction has been ongoing at one level. Of course, there's many vendors and
16 companies in the United States that have had ongoing business relationships
17 with TEPCO, and the other generating companies in Japan. So at the working
18 level, it has been going on ever since the event, and prior to the event.

19 At a higher, coordinated industry-level, I would say we are still in
20 the formulative stages of that interaction. We have had some discussions with
21 the industry, U.S. industry, it's still evolving. So we're cognizant of what's going
22 on, and trying to help, in a U.S. government role, facilitate the contacts, if you
23 will, between the U.S. and the Japanese companies, in any way that we can.
24 Because we think it would certainly be a potential benefit to TEPCO.

1 COMMISSIONER SVINICKI: Thank you. And my last question to
2 you is that, you mentioned our ability to issue very rapidly various types of
3 generic communications to the industry, and in your prepared remarks you talked
4 about the fact that we had already issued, I believe last week, an information
5 notice. Could you describe generally, in that notice, what are we alerting the
6 U.S. reactors to?

7 MR. BORCHARDT: Well, the main purpose, from my perspective,
8 and I might ask NRR to supplement my answer if I'm not quite complete, was to
9 have a regulatory follow-up on the activities that we understand the industry has
10 taken on their own to verify that the plant procedures and equipment for severe
11 accidents, for the types of things I discussed that came out of the 9/11 event: that
12 all of those pieces of equipment, temporary hoses, fittings, procedures, that all
13 those things are, in fact, still in place, that the operators are cognizant of them,
14 that they've been trained for whatever reason, to make sure that they haven't
15 fallen into disuse because they haven't been used.

16 So it was really a regulatory verification that the industry's initiatives
17 on this front have, in fact, been taken, and that we will be following up on the
18 results of those assessments, and doing our own sampling check, as we always
19 do.

20 COMMISSIONER SVINICKI: Okay, and so those were the items,
21 based on what we know now, that we identified as being of the highest interest,
22 at least in the immediate term, okay?

23 MR. BORCHARDT: Yes.

24 COMMISSIONER SVINICKI: Thank you. Thank you, Mr.
25 Chairman.

1 CHAIRMAN JACZKO: Did you have any other questions?

2 Commissioner Apostolakis.

3 COMMISSIONER APOSTOLAKIS: Thank you, Mr. Chairman. Bill,
4 you mentioned that the -- well, first of all, we know that there is a number of Mark
5 I BWRs in the United States, which is the same design as those in Fukushima.
6 But you also said that in the recent past we hardened the venting valves of the
7 containment. Have the Japanese done this?

8 MR. BORCHARDT: That, we're not clear on. I'm not sure; I can't
9 really answer that question.

10 COMMISSIONER APOSTOLAKIS: I guess the question is, if they
11 had done it, would that have affected the accident? And in what way?

12 MR. BORCHARDT: Well, it would not have affected the loss of off-
13 site power, which is, right, the initiator. The hydrogen explosion aspect, though,
14 possibly, is where the hardened vent would happen. There's two vent paths off
15 of the U.S. Mark I containments. The preferred vent path takes suction, if you
16 will, or has a release path from the airspace above a pool of water that's in the
17 basement, it's in the torus of the Mark I containment, and that would allow for the
18 steam that went into the torus to be scrubbed of fission products, so you would
19 have a release; it would relieve the pressure, which is the main objective of the
20 vent, is, you want to maintain the containment integrity. And it's preferable to
21 vent it on purpose to get the pressure so that you don't have a catastrophic
22 failure of the containment.

23 And so that release path is exterior to the plant. So it's at least my
24 belief that you wouldn't have the hydrogen accumulation in the upper levels of
25 the reactor building, which we believe is the cause of the explosions. Now, the

1 spent fuel pools on these designs are also on that same level, on the upper level
2 of the reactor building. So it's, the hardened vent wouldn't do anything to help
3 hydrogen that came from the spent fuel pool

4 COMMISSIONER APOSTOLAKIS: I see, okay. Now you also
5 mentioned that we have extra equipment for beyond-design basis accidents that
6 were installed, so-called B.5.b that were installed after the September 11
7 attacks. Did the Japanese have any of those?

8 MR. BORCHARDT: Again, I'm not sure. I -- really, we're trying to
9 get information, but I am not personally aware of the situation in Japan.

10 COMMISSIONER APOSTOLAKIS: Okay. Thank you. Some
11 people are asking why did the Germans shut down their plants, or some plants,
12 after the accident, and we did not? Are we less prudent than the Germans?

13 MR. BORCHARDT: No, I am not aware of the basis for the
14 German decision to do that. I'm 100 percent confident in the review that we've
15 done, and we continue to do every single day, that we have a sufficient basis to
16 believe, to conclude that the U.S. plants continue to operate safely. So I -- we've
17 asked ourselves the question every single day: Should we take a regulatory
18 action based upon the latest information? And, because of the kinds of things
19 that I outlined in my presentation, we have not reached the conclusion.

20 COMMISSIONER APOSTOLAKIS: Thank you. Now, of course,
21 the seismic risk is at the forefront of the news. And we hear that -- well, first of
22 all, our press releases emphasize that the seismic design is based on the
23 horizontal ground acceleration at the plant. But, of course, most people think in
24 terms of the Richter scale. And also we hear that the earthquake of magnitude 9
25 at Fukushima had not been anticipated.

1 Now, we say that in the United States, we design the plants by
2 looking at the historical record, and then by, we add margins. Now I understand,
3 or believe, that the strongest earthquakes in the United States have occurred
4 east of the Rocky Mountains in the 1800s, and the magnitude was between 7
5 and 7.7 on the Richter scale, something like that. So immediately you get the
6 question, then, yeah, okay, you design against those, but look at Japan: What if
7 you had an earthquake of magnitude 9? How does one answer that question? I
8 mean, you can always ask, what if an earthquake of 9 and a half occurred. I
9 mean, is there a rational way of addressing that?

10 MR. BORCHARDT: Well, my explanation is one that I know you
11 understand this, but we look at faults around the U.S., we have that information.
12 We look at the historical record, look at what the maximum earthquake has been,
13 and then, as with everything we do, we add margins. But we also look at the
14 specific location in relation to the fault, and consider the kinds of soil and rock
15 formations that are between the fault location and the site, and do an analysis to
16 see what is the ground motion that would actually be seen at this site. And we
17 design for an earthquake of a certain size, or a, you know, I'm falling into the trap
18 of saying "an earthquake of a certain size", of a ground motion of a certain
19 magnitude.

20 But then, having said that, all of these other things: severe accident
21 management guidelines, the B.5.b procedures, we have programs in place,
22 equipment in place, that says, even if we were wrong, and the plants suffered
23 this kind of serious event, we have, in fact, the activities, the equipment, ready,
24 and practiced to respond to protect public health and safety. So I don't know if I

1 should throw a seismic lifeline here, if you wanted to get into any more detail on
2 seismic issues.

3 CHAIRMAN JACZKO: And just say your name.

4 ANNIE KAMMERER: Thank you. My name is Dr. Annie
5 Kammerer, I'm in the Office of Research. I think I'd like to make a couple of
6 points. The first point is related to the ground motion in Japan. Recently, starting
7 in 2006, the Japanese regulatory agency performed a study in which they looked
8 at increased hazard, perception of hazard at the plants. And recently themselves
9 did a reevaluation of the impact that potential increased hazard at the facilities,
10 and actually were in the middle of this when this event occurred. As a result, a
11 number of modifications were made to the plants.

12 At this point, it's not clear exactly what modifications the Fukushima
13 plant had already had implemented. However, the ground motions for which the
14 plant was reevaluated, is about .62G; the original design basis was about .37G.
15 Based on the preliminary information that we have, .62G is in the range of the
16 ground motions that were actually experienced by the plant, although they came
17 from a different earthquake than was anticipated. The ground motions that, for
18 which the plant was assessed, was a 7.1, very close to the plant. That's what
19 produced the ground motions of 6.2.

20 So, one thing that we believe is that the ground motions at the
21 plant, even though it was a different event, were not out of the range that they
22 had already considered. It's less clear with regard to the tsunami. Currently, the
23 Japanese Society of Civil Engineers is finalizing guidance, probabilistic tsunami
24 hazard assessment guidance for Japan. And it was anticipated that the
25 Japanese regulator would do a similar study for a tsunami hazard assessment at

1 the plants once that was completed. Unfortunately, because the guidance has
2 not yet completed, it's not believed that they initiated that work.

3 So just to clarify, that even though this particular event was larger
4 on the subduction zone than was anticipated, it probably didn't greatly exceed the
5 ground motions. The one exception to that may be in the long period range.
6 Because if you have a larger amount farther away, you get more long period
7 content than would be anticipated from a 7.1 close in. The second question, or
8 the second point is in regard to a seismic hazard in the United States. As was
9 mentioned, we are undertaking a program, Generic Issue 199, which is looking at
10 the potential impact to assess risk, given a perceived increase in the ground
11 motion hazard in the Central and Eastern U.S., which was initiated by the new
12 USGS seismic hazard mapping work that was done. And it's important to note
13 that when the modern analysis techniques that are used are probabilistic
14 techniques, those are the basis of the maps, and they account for basically all
15 sources and the potential for all the different magnitudes that are capable of
16 those sources, up to and including maximum magnitude events which, in many
17 cases, exceed that which we have seen in the historic record. It was mentioned
18 that the largest, the most widely-felt earthquakes in the U.S. were the 1811-1812
19 New Madrid events, which we currently believe were about a magnitude 7. And
20 yet, we do look at, particularly in portions of the crust of a potential for exceeding
21 that. Of course, we also account for the likelihood that that event occurs. And
22 that also accounts for background seismicity, which is common in the east, which
23 is seismicity which cannot be attributed to a specific fault.

24 In fact, it's important to note that seismicity in the Central and
25 Eastern U.S. tends to be in what we call seismic zones, which are not directly

1 attributable to a fault. And we account for all of the hazard in the seismic zones.
2 One of the questions which has come up repeatedly is, how many plants are
3 near faults? Or, how many plants are in moderate or high seismicity regions?
4 And that's a very challenging question to answer, because these seismic zones
5 are not well-defined boundaries. The faults that were the causative faults in the
6 1811 and 1812 earthquakes have never been identified, in part because they're
7 under a very deep -- the very deep sediments in the Mississippi region. And so
8 we have to account for the uncertainty in the location, we have to account for the
9 uncertainty involved in the maximum magnitudes. And all of that is incorporated
10 in the hazard analyses that we undertake.

11 The Generic Issue Program is using the most state-of-the-art types
12 of analyses, which do look at earthquakes, and include earthquakes beyond the
13 design basis. So, in that way, we directly account for those potential sources and
14 those potential earthquakes, which are not under our current licensing basis.
15 And we're currently assessing the risk from the possible beyond-design basis
16 events.

17 CHAIRMAN JACZKO: Well, thank you for that, Annie.
18 Commissioner Apostolakis, did you have additional comments or questions?

19 COMMISSIONER APOSTOLAKIS: Yeah, I'd like to make one
20 comment and then ask my last question. Annie mentioned several times,
21 probabilities, even after we do the probabilistic analysis, we still have Defense in
22 Depth in mind, which is the current way of looking at things. So it's not just, what
23 is the most likely event that we anticipate, we always ask that question that Mr.
24 Borchardt mentioned: what if we are wrong? And we take additional measures.

1 So I think that's very important, for people to understand it. Because, you know,
2 probabilities, sometimes, are easy to attack.

3 One last question, thank you Annie. As you mentioned, the
4 damage in Fukushima was not really caused by the earthquake; it was the
5 tsunami that came afterwards. So the question now is: when we license our
6 plants here, are we considering this one-two punch? Are we considering an
7 earthquake followed by a tsunami, as appropriate? Or a major fire, or a flood,
8 because tanks holding water fail? Because this secondary event seems to be,
9 now, very important, and we have to account for it. So how are we approaching
10 this issue in the United States?

11 MR. BORCHARDT: Well, the design basis includes many different
12 analyses. I would just say one thing about the earthquake in Japan. We don't
13 know what the impacts of the earthquake are inside of the reactor buildings,
14 specifically, that's where most of the equipment of interest to us would be
15 located. It may have survived perfectly well, and stayed perfectly functional, or
16 there may be damage that we just don't know about. So we need to see what
17 the inspection results are, once they have access to the plant.

18 But our reviews for the U.S. include, it's always very site-specific.
19 So, you know, for earthquakes, if they are in a very soft soil environment, there's
20 not a very challenging review that's required, or analysis that's required on
21 earthquakes. But it might be that you need a storm surge for a hurricane, or a
22 storm surge for a tsunami. But there are multiple -- you don't take every possible
23 current event and pile them all together into one event. So it's done more on an
24 event by event basis, so I don't know if --

25 COMMISSIONER APOSTOLAKIS: [inaudible] or something else?

1 CHAIRMAN JACZKO: Well, I think that, and Eric, maybe you could
2 just answer the question. I think it's, more generally, how do we -- do we
3 consider separate design basis events -- do we consider design basis events
4 separately, or do we consider all design basis events simultaneously on a plant?

5 MR. LEEDS: Eric Leeds, Director of the Office of Nuclear Reactor
6 Regulation. As Bill mentioned, we take into account whatever natural
7 phenomena could occur at a particular site, whether it's a hurricane, a tsunami,
8 an earthquake, a tornado, what have you. And we have them analyzed site-
9 specifically. Now, I'm not exactly sure if I understand the question directly. Are
10 you asking, a seismic event followed by a tsunami? Well, I know that we
11 analyzed for a tsunami, we analyzed for the maximum storm surge, as Mr.
12 Borchardt mentioned, and also what kind of a run-out would happen. Typically,
13 tsunamis are triggered by an earthquake. So, one or the other, we would
14 analyze for that. And we've done that for our plants on the coast.

15 COMMISSIONER APOSTOLAKIS: Thank you, Mr. Chairman.

16 CHAIRMAN JACZKO: And I would just echo, I think, Bill's
17 comments. We are at a very early stage now, too, and detailed information, it's
18 probably going to be some time until we have it. And so exactly the impacts of
19 the tsunami and/or the earthquake and what their effects on the plant were will
20 probably still take some time to understand. Commissioner Magwood?

21 COMMISSIONER MAGWOOD: Thank you. Good morning, Bill.

22 MR. BORCHARDT: Good morning.

23 COMMISSIONER MAGWOOD: Did you get some sleep this
24 weekend.

25 MR. BORCHARDT: Not much.

1 COMMISSIONER MAGWOOD: Not much? I'm sorry. You'll get
2 there at some point. There's been a lot of discussion in the media about -- that
3 compares what's happening in Japan to Three Mile Island. And I, as I look at
4 this, and again, we're so early in this, I tend not to think as much about Three
5 Mile Island as I do 9/11. And one reason I think about that is because it seems
6 to me that there are, certainly, a lot of lessons learned, a lot of technical details
7 we'll have to sort out over time. But I wondered, also, whether, as in the case of
8 9/11, is there a major conceptual "Ah-ha!" that's sitting out there in front of us?
9 And I want to make sure we don't miss that forest while we're looking at all these
10 trees.

11 And in the case of 9/11, it wasn't just simply, you know, that we
12 need to do a better job protecting, you know, airplane cockpits, and lots of other
13 security upgrades. It was a conceptual "Ah-ha!" that the threat is a lot different
14 than we thought it was. Do you, as you look at this at this early stage, do you
15 see a bigger message out there that we should be thinking about?

16 MR. BORCHARDT: I don't see a significant weakness now, but
17 that's why we need to do this Quick Look review. And my personal view is that
18 what we need to do is take some very experienced people that are both within
19 the staff, and maybe take some even recently retired people that have expertise
20 in the broad areas of design review and licensing, and let them just focus on the
21 question of, is there something here that causes us to question these, the way
22 we've applied Defense in Depth, and being risk-informed, and the various
23 barriers of radiation release protection, and those kinds of things, and evaluate
24 whether or not there's something different that needs to be done.

1 It hasn't actually occurred to me, if anything, it's given me a bit of a
2 confidence, if you will, that all of those redundancies, and all of our processes,
3 are paying off. I mean, it was maybe in the view of some stakeholders overly
4 conservative, the way we've approached it, but I think we're seeing the value and
5 the benefit of that approach that we've used for the last 35 years.

6 COMMISSIONER MAGWOOD: I appreciate that, and I agree with
7 it. Let me give you some, just sort of, thoughts about where I think there might
8 be some larger issues to think about. And that is, in looking at, as we've
9 described them, again, we don't know all the details yet. But we do have the
10 sense that the plant seemed to survive the earthquake. And we do have the
11 sense that the tsunami's disabling of the backup power systems led to the
12 situation that followed. But even beyond that, there's the fact that there was so
13 much difficulty in bringing resources to the plant to recover from that situation.

14 When you look at our plants, we certainly have done things in B.5.b
15 and other things to upgrade our ability to recover from site blackout; and we're
16 going to be looking at those issues. But if you lose a lot of infrastructure, if you
17 lose the ability to get to a site, if you lose hundreds of miles of transmission line,
18 if you lose the ability to have rail transport, to move equipment around, that's
19 something I don't know that there's been a lot of thought about.

20 And I wonder if you could reflect on that for a moment, because
21 when I look at this event, I see a significant struggle over -- especially over the
22 early part of this, to get the right resources to the plant to be able to recover from
23 this accident. And even today, we still are struggling to hook up the AC power to
24 Units One and Two, as you've described. When you think about this, and again
25 we'll look at this in great detail as we go forward, do we even have the regulatory

1 scope to cover all the ground that needs to be covered, to assure that the
2 infrastructure's in place to be able to recover from an accident like this?

3 MR. BORCHARDT: I think there's a couple levels that maybe I'd
4 like to touch on in response to that question. The first is, and I have no idea what
5 the situation is in Japan regarding their regulations and what they have in place,
6 so I'm not implying whether they had it or didn't have these kind of things. But in
7 the United States, I mentioned the station blackout rule, which is a rule that
8 requires an analysis of what would happen at a plant and its coping strategy for
9 dealing with a complete loss of all AC power. So that assumes that the diesels
10 don't -- that you'd lose the transmission lines and the diesels don't start, and then
11 they have to do an evaluation and it's a coping study, how they would be able to
12 restore the plant. That has resulted in various approaches at different sites.
13 Some have a gas turbine that is on the site that could be very quickly hooked up
14 into the grid -- not into the grid, into the plant. There's others that have non-
15 safety-related diesel generators. There are plants that have diesel fire-pumps so
16 that there is a backup to a backup to a backup way to inject water into the core
17 and into the spent fuel pool. So there's a regulatory construct that's required and
18 mandated that type of activity.

19 From a U.S. Government perspective, coming out of 9/11, we had
20 the Department of Homeland Security, which is positioned to orchestrate the
21 entire federal response to an event of magnitude that, you know, you might be
22 suggesting, that would happen so that the full resources of the U.S. Government
23 would be able to use different resources to get temporary equipment to a site in
24 order to provide electrical power, temporary diesel generators, that kind of thing.

25 And then the backstop for all of that, and I'm now leaving the kind of

1 federal regulatory requirement perspective, is that the U.S. industry, I think, is
2 unique in the world, but also within industry in this country in that while on the
3 one hand they're competitors, on the other hand they share operating
4 experience, they have programs that they all contribute to, and they have an
5 inventory of spare parts and equipment that can be very quickly brought to bear
6 in responding to this kind of an event. So this is outside the regulatory purview, I
7 want to make clear, but that is yet another backstop that would help a site that
8 had a similar kind of problem respond to it in a quick and effective manner.

9 COMMISSIONER MAGWOOD: I appreciate that, and let me also
10 echo your somewhat positive words about the industry. I think in this particular
11 instance, actually, I think the industry in the U.S. and internationally has
12 responded very, very well to this. I particularly congratulate INPO's efforts,
13 through WANO, to work with international partners and also to take positive
14 action here in the United States. I think they've done a good job, and I think NEI
15 and others have worked together and I think individual companies have done a
16 lot, so I congratulate the industry for reacting that way.

17 Let me move on to a little bit different subject. We've talked a little
18 bit about hydrogen already this morning, and the measures we have to deal with
19 hydrogen. Is it your understanding that all the hydrogen that led to the
20 explosions came from the spent fuel?

21 MR. BORCHARDT: I wouldn't want to hazard a guess. It was
22 certainly a likely source; whether it was all of it or not, I couldn't guess.

23 COMMISSIONER MAGWOOD: You've talked about this a little bit,
24 but I want to give you a chance to sort of give a little bit more of a holistic

1 response to this. What measures are in place to prevent hydrogen from
2 collecting and exploding in U.S. plants? Mark I's or others.

3 MR. BORCHARDT: Well, the hardened vent, of course -- the U.S.
4 design approach is to protect the containment. It's to ensure the integrity of the
5 containment, and if you can do that, even if you have fuel damage, then you can
6 prevent the uncontrolled release of radioactive materials into the environment.
7 And so this is -- Three Mile Island, for example, had core damage, a significant
8 amount of core damage, yet the radiological releases were very limited from
9 Three Mile Island, so there was negligible health effect from that accident. So
10 hardened vents will allow the primary containment to stay intact and that's
11 probably the single most important thing.

12 The other thing to maintain the containment is, for this particular
13 design of containment, we've required, I think since the late 80s again, inerting of
14 the containment. So it's filled with nitrogen, so if you don't have oxygen in the
15 containment, even if you did have hydrogen in there, you're not going to have an
16 explosion or a fire. So I think those are the two, probably the biggest ones, and I
17 don't know if there's anything that we need to add.

18 COMMISSIONER MAGWOOD: Appreciate that. One more
19 question, Mr. Chairman. Also to just give you a chance to clarify. I know there's
20 a lot of chatter in the press over the weekend about the impact of 50-mile
21 evacuation zones around U.S. nuclear plants. Could you sort of give the NRC's
22 position on what the emergency planning requirements are, and why we're
23 confident in what we have today? Can you please elaborate?

24 MR. BORCHARDT: We have, as part of the emergency
25 preparedness construct in this country, a 10-mile emergency planning zone that

1 completely encircles every reactor plant in the country. That, in coordination with
2 FEMA, who has an offsite emergency-preparedness role throughout the country,
3 is routinely practiced. We have models that would do an analysis of what the
4 release paths are; we take into account the meteorological conditions; and the
5 NRC, I should be clear, the NRC does not make the recommendations regarding
6 evacuation or any other protective action guidelines; that's the responsibility of
7 the state government, so it would be the governor that would ultimately be
8 making that decision. But we're in a position to provide independent assessment
9 and advice to the governor in those kinds of circumstances.

10 The situation that led to the 50-mile guidance in Japan was based
11 upon what we understood and still believe had existed, that there was degraded
12 conditions in two spent fuel pools at the site, and in all likelihood some core
13 damage in three of the reactor units. Based on the situation as we understood it
14 at that time, we thought it was prudent to provide the recommendation to the
15 ambassador to evacuate out to 50 miles in Japan. It was not based on the
16 existing radiological conditions, but what at that time was a possibility. And so
17 we thought it was the prudent, conservative suggestion. If those conditions
18 existed in the United States, we would have made the exact same
19 recommendation. But the idea that there might be some misunderstanding, that
20 because we have a 10-mile EPZ, that would be the extent for what we would
21 consider and what our emergency planning recommendations would be limited
22 to, is not true at all. We would have done the exact same kind of analysis and
23 gone through the same thought process to consider extending evacuation or
24 whatever protective measures we thought were appropriate.

1 COMMISSIONER MAGWOOD: Thank you. Thank you, Mr.
2 Chairman.

3 CHAIRMAN JACZKO: Commissioner Ostendorff.

4 COMMISSIONER OSTENDORFF: Thank you, Mr. Chairman. Bill,
5 again I thank you for your leadership in this effort, and for the hard work and
6 professionalism of your teams. It was helpful in your opening statement, where
7 you talked about the history of the NRC post-Three Mile Island, post-9/11, as to
8 what steps or additional measures were considered or in fact implemented; and
9 so I think that history is very relevant to the near-term and longer-term efforts.
10 Certainly there's Hurricanes: Andrew, Katrina that this country has faced. Also
11 provide data points for various steps taken, whether they be specific to the
12 nuclear field or external to the nuclear field. Does any of the experience from
13 your career at NRC, do you have any significant lessons learned from the
14 process, not the substantive technical details, but the process that was employed
15 following these other significant events that would help inform the task force
16 execution of its mission?

17 MR. BORCHARDT: Well I think it's very important that the task
18 force keep the broad perspective of the regulatory framework that exists within
19 the NRC, and the legal framework that exists within the United States. Because
20 there is a temptation to, I think, try to pile in every good idea that exists into
21 something that becomes unmanageable, and in the ultimate could actually end
22 up being counterproductive to safety.

23 There was a degree of that, in my opinion -- this is only speaking
24 my personal opinion -- after Three Mile Island, because when I started with the
25 agency in 1983, we were still in the midst of following up the actions from the

1 Three Mile Island action plan. It was a NUREG-0737, and anybody who started
2 in the NRC has that number burned into their brain because we spent enormous
3 amounts of resources following up on those activities. Some of those fixes that I
4 alluded to were absolutely instrumental in improving the safety in this country.
5 Some were, I believe, if we had carried them all out, might have actually been
6 counterproductive in a way, just not contributed to safety. They might have been
7 a good idea in somebody's mind. So there needs to be -- after you go through
8 the brainstorming and identification of all possible things to change, I think there
9 needs to be a good evaluation, thorough evaluation, of what's the right thing to
10 do, and in what kind of sequence and in what kind of timing.

11 COMMISSIONER OSTENDORFF: Okay. Well I'll just make two
12 comments on that. One thing, just for information, you may be aware of this, but
13 about a year ago the National Academies undertook a significant study for about
14 9 or 10 federal agencies, to look at disaster resilience in this country, specifically
15 from the context of inter-agency coordination, roles and responsibilities. But
16 nothing there was, or to my knowledge is currently nuclear-specific. The extent
17 of interagency coordination for various types of events in this country is a prime
18 subject of that study. There may be some value in looking at that.

19 And refer to Commissioner Magwood's questioning on the
20 transportation logistics support, which I completely agree have been issues here
21 so far, in this particular response. One might take note of the Department of
22 Defense's efforts, since the loss of the U.S.S. Thresher back in 1963. There's
23 been a very operationally ready deep-submergence rescue vehicle, DSRV, on
24 standby close to airplanes on the East and West Coast of the United States to
25 provide a response. So other agencies, the point is, have gone through similar

1 analogues in looking at how they might deal with particular responses, and that's
2 something just to note.

3 Also, kind of maybe staying a little bit on the big-picture historical
4 nature of some of the prior NRC responses to these big events, it also strikes me
5 that perhaps the audience or the recipients of these reports will be representing a
6 broader cross-section than typical Commission meetings. Certainly we have
7 nuclear industry, we have many of the same stakeholders from issue to issue,
8 but in my personal opinion is that this is one where how we communicate to John
9 Q. Public, the person that doesn't have a stake in the industry or is not part of
10 one of the normal stakeholder groups, but also deserves and needs to receive a
11 reply that they can understand, is really essential. Is there anything from your
12 prior experience here at the NRC, either 9/11 or Davis-Besse or the 2003
13 blackout, that you think would be in your initial thoughts on how we communicate
14 so that people in the American public understand what the results are of these
15 near-term and longer-term efforts?

16 MR. BORCHARDT: Well, and again this is just my view, my
17 assessment, I think that especially in the long-term review that we do, we need to
18 build in a meaningful engagement with all the stakeholders. They have an
19 enormous capability to understand the most technical issues. Sometimes we
20 think that capability doesn't exist, but it's in fact not true. And we have had
21 enormously valuable input from a wide range of stakeholders. This is a little bit
22 off of event response, but when we established the reactor oversight program --
23 we did it 10 or 12 years ago -- we used just that kind of an approach. We
24 brought in all kinds of different stakeholders from all different perspectives, and it
25 was a very impressive end result that had everyone's buy-in. People who came

1 from pro-nuclear, anti-nuclear, and they all agreed that this was a good approach
2 to perform regulatory oversight. I think the same kind of mindset is important to
3 enter into this long-term activity, and start at the beginning. Where we get into
4 trouble as a regulator is when we have our mind made up, or even if we don't
5 have our mind made up, there's a perception we already have our mind made
6 up, and then we begin the engagement. So I think we need to do it right from the
7 very beginning, have it be a very open and transparent process.

8 COMMISSIONER OSTENDORFF: Thank you. I know as the
9 Chairman indicated in his comments earlier, there's much we don't know.
10 There'll be significant periods of time before we have full granularity, a lot of the
11 details of what happened at Fukushima, but there's one area, if you'll just bear
12 with me, that I do want to ask you about. I've been here not quite one year; I've
13 spent very little time looking at spent fuel pools. When I go visit a plant, I'll go
14 see the pool, and on some of these visits -- I've probably seen four, I think, in the
15 last year. But I certainly don't have much background at all in the spent fuel
16 pools. And recognizing that's been the focus of a lot of the concerns over the
17 last 10 days, and that perhaps compared to our discussions, we have an
18 emergency core cooling systems and GSI-191 and other issues that we don't
19 spend a lot of time, as a Commission, really talking about that.

20 Is there any initial area of U.S. reactor plant spent-fuel configuration
21 or operation that comes to your mind as warranting particular exploration in this
22 task force?

23 MR. BORCHARDT: Well clearly, it's a very simple problem. All
24 you have to do is keep water in the pool. The pool is an open vessel, and the
25 only objective is to keep water in it. Even if, in a bad situation, it were to heat up

1 and you had boiling in there, as long as you kept the fuel covered with water,
2 you're going to prevent the high radiological release. So I think what the task
3 force needs to do is to go down the specifics of what happened in Japan, and
4 then evaluate that to make sure that in fact, these things that we put into place
5 after 9/11, for example, really would work under that scenario.

6 We have thought about things like making sure that the equipment
7 you're going to use wouldn't be damaged in the event that caused the first
8 problem, so you can't have everything staged exactly where it's ready to be
9 used. There has to be some staging areas. But for example, on the tsunami or a
10 flooding issue you wouldn't want the equipment now stored outside, right?
11 Because it would be swept away. So you know, it's yet another "what if" to really
12 help us explore and probe what the various scenarios are being, and make sure
13 we have the highest probability of success. I think that's really the box we need
14 people to be thinking in.

15 COMMISSIONER OSTENDORFF: That's very helpful. Thank you.
16 Thank you, Mr. Chairman.

17 CHAIRMAN JACZKO: I'd ask at this point if there are any other
18 questions that any of my colleagues have.

19 MR. BORCHARDT: Well at this point, can I just --

20 CHAIRMAN JACZKO: Sure, Bill.

21 MR. BORCHARDT: Can I just -- I'm not going to ask you a
22 question.

23 [laughter]

24 CHAIRMAN JACZKO: I'm not sure I'd have answered it for you if
25 you did.

1 [laughter]

2 MR. BORCHARDT: I do want to just take a moment and thank all
3 the NRC staff that have responded to this event, all the people that are in the
4 Ops Center -- we're doing our best to have a rotation of people in and out of
5 there, but they're working very hard, very long hours. They're still doing their real
6 job too, like I said, that's got to be our first priority. But I want to just make
7 special note of the team of people that volunteered to go to Japan on no notice,
8 that have been there working incredibly long, hard hours, working in a way that
9 there is no operating procedure to operate. They have had to develop it on the
10 go. So Chuck Casto happens to be the team leader, but there are many people
11 that have worked very hard. We have sent another person over to help Chuck in
12 that team-leader role, and there is the next wave of NRC employees that have
13 volunteered, and they'll be leaving beginning, I think it's tomorrow. And then the
14 last element of that group on Thursday. So I just want to make special note of
15 their commitment and professionalism. Thank you.

16 CHAIRMAN JACZKO: Well thanks for that, Bill. I appreciate that,
17 and your work as well, I think, as I've noted. At this point I would just offer that
18 we do have a proposal that's been circulated that I think captures at a high level
19 some of these ideas for a path forward, and I would certainly encourage that we
20 move on that as promptly as possible. But I thought I'd offer at this time an
21 opportunity, if anybody wants to make comments on that or any of the other
22 issues that we have in front of us. Commissioner Ostendorff?

23 COMMISSIONER OSTENDORFF: I just thank you for convening
24 this meeting today. I think it's been very helpful, and I know that we're all ready
25 to move forward to take the actions we need to take.

1 CHAIRMAN JACZKO: Okay. Well again I want to thank everybody
2 for their efforts so far, and again, I just want to reiterate as we close that as many
3 people on this side of the table have indicated, we have had, many of us, very
4 close and personal relationships with colleagues in Japan, and our hearts go out
5 to them as they continue to deal with this very difficult event, and we will continue
6 to work to provide our colleagues and counterparts in Japan with assistance as
7 they need it, to deal with the situation. And I think as Commissioner Magwood
8 indicated, this is likely the first of many discussions we will have on this topic, and
9 I look forward to continuing the discussion and continuing our focus on our
10 important health and safety mission. With that, we are adjourned. Thank you.

11 [Whereupon the proceedings were concluded]

From: Couret, Ivonne
To: Burnell, Scott
Subject: RE: Guidance on reporter queries involving Sandia Natl. Labs
Date: Tuesday, March 22, 2011 2:03:13 PM

I haven't gotten one call today from reporter asking about this information. Ivonne

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
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From: Burnell, Scott
Sent: Tuesday, March 22, 2011 1:52 PM
To: Brenner, Eliot; Hayden, Elizabeth; Harrington, Holly; McIntyre, David; Couret, Ivonne; Janbergs, Holly; Screnci, Diane; Sheehan, Neil; Hannah, Röger; Ledford, Joey; Chandrathil, Prema; Mitlyng, Viktoria; Dricks, Victor; Uselding, Lara
Subject: Guidance on reporter queries involving Sandia Natl. Labs

Folks;

NNSA gave us a call and said reporters interested in Sandia-generated NRC reports are being referred to SNL by OPA folks. The reporters are likely fibbing, but just to be clear:

Any calls about Sandia stay here at HQ and will go through RES -- The folks at Sandia who do NRC work are currently engaged in supporting the NRC response to Japan and will not be available to discuss reports.

The specific report that generated the questions – NUREG/CR-6906 – talks about containment pressure tests done on scale models of several containment types, but not the BWR Mark I. The results suggest the containments are stronger than expected and can withstand much higher accident pressures than they're designed for.

The report HAS NO BEARING on the criticism that Mark I containments would fail if the reactor vessel is breached, so don't go there. Thanks.

Scott

TTTT/159

From: [Dolley, Steven](#)
To: [Burnell, Scott](#)
Cc: [OPA Resource](#)
Subject: RE: 50-mile evacuation recommendation
Date: Tuesday, March 22, 2011 2:56:26 PM

I'm hearing some criticism of the chairman's decision from last week from industry types. Did Chairman Jaczko consult with the other members of the commission before making this recommendation? Did he consult with the Japanese government and/or NISA, the Japanese nuclear regulator?

Thanks,
Steve

Steven Dolley
Managing Editor, Inside NRC
Platts Nuclear
202-383-2166 Office
202-383-2187 Fax

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TTTT/160

From: [Burnell, Scott](#)
To: [Matthews, David](#); [Akstulewicz, Frank](#); [Holahan, Gary](#)
Subject: FW: MEDIA - FW: Power Engineering magazine request
Date: Tuesday, March 22, 2011 5:22:00 PM

Gentlemen;

Any takers? Any interest at all?

Anybody? Bueller?

Thanks.

Scott

From: Brian Wheeler [mailto:BrianW@Pennwell.com]
Sent: Tuesday, March 22, 2011 5:17 PM
To: Couret, Ivonne
Subject: Power Engineering magazine request

Hi Ivonne,

I am putting together an article that is focusing on the safety features of Gen III and Gen III+ reactors. Such as, what safety improvements have been made when comparing Gen II reactors to the newer Gen III and Gen III+ reactors?

Would NRC be willing to comment on safety features that you all look for when vendors are trying to get a new reactor licensed? What safety features are needed today for new plants? And will the disaster in Japan play a role in safety, as far as the NRC is concerned for new reactors in the U.S.?

Thanks and I look forward to hearing from you,

Brian

Brian Wheeler
Associate Editor
Power Engineering magazine
Nuclear Power International magazine
Renewable Energy World North America magazine
1421 S. Sheridan
Tulsa, OK 74112-6600
(918) 832-9214 (direct)
(918) 831-9834 (fax)
BrianW@pennwell.com
www.powergenworldwide.com

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TTTT/161

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From: [Markley, Michael](#)
To: [Burnell, Scott](#)
Cc: [Oesterle, Eric](#)
Subject: FW: Action: Query from Nuclear Engineering International magazine
Date: Wednesday, March 23, 2011 8:22:16 AM

Scott,

FYI on question 1.

Mike

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

From: Mathew, Roy
Sent: Wednesday, March 23, 2011 8:07 AM
To: Markley, Michael
Subject: RE: Action: Query from Nuclear Engineering International magazine

NUREG-CR 6890 is the latest. We have not issued any documents regarding SBO since publishing NUREG-CR 6890.

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

From: Markley, Michael
Sent: Wednesday, March 23, 2011 7:24 AM
To: Mathew, Roy
Cc: Oesterle, Eric
Subject: FW: Action: Query from Nuclear Engineering International magazine

Roy,

Could you provide any information that we could use to provide an answer to OPA on the 1st question?

Mike

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

From: Nelson, Robert
Sent: Tuesday, March 22, 2011 4:27 PM
To: Markley, Michael
Subject: Action: Query from Nuclear Engineering International magazine

NELSON

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

From: Burnell, Scott
Sent: Tuesday, March 22, 2011 11:22 AM
To: Nelson, Robert
Subject: FW: Query from Nuclear Engineering International magazine

This one's less urgent -- end of the week. Is NUREG-CR 6890 the latest word in station blackout info? I'm working the seawater question through the historian. Thanks.

-----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

TTTT/162

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

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From: [Burnell, Scott](#)
To: [Sheehan, Neil](#); [Brenner, Eliot](#)
Subject: RE: Questions from New York Times on Japan
Date: Wednesday, March 23, 2011 8:39:00 AM

Neil;

I have no problem politely repeating to Glanz that he's barking up the wrong tree, since we don't have first-hand information on any of that. The staff has seen simulations of what MIGHT have been felt at the site, but I would point Glanz back at the original source in that case anyway.

Scott

From: Sheehan, Neil
Sent: Wednesday, March 23, 2011 8:35 AM
To: Brenner, Eliot
Cc: Burnell, Scott
Subject: Questions from New York Times on Japan

Eliot,

I'm not sure what to do with this. I dealt with Jim Glanz of the Times last week while in the Ops Center. I told him at that time that the kinds of questions he was posing to us were more appropriately dealt with by TEPCO or the Japanese regulator. Not surprisingly, he e-mailed me back yesterday to say he's getting nowhere on those fronts, given the demands in Japan. He is therefore circling back with us.

I know our technical experts are swamped, too, but can we help him out with at least some of the questions below.

Neil

Jim Glanz
The New York Times
212 556 7545

QUESTIONS ON FUKUSHIMA DAIICHI PLANT:

-- What is NRC's best timeline of the first hour after the earthquake hit. E.g., are there any further details beyond the presumed fact that the emergency generators automatically kicked in and then shut down some time after the tsunami struck, and what is NRC's best understanding of why the generators tripped out (electrical shorts, say, or cooling issues).

-- We have been told that TEPCO is reporting to professional organizations that the maximum ground shaking at Unit 3 was approximately 0.5g and as such exceeded design criteria for safe shutdown (SSE) by 20 to 25 percent. Is this correct as far as you know and can you add any further information you have on this topic.

-- To follow up on the previous question, what level of ground shaking, in units of g, was the Fukushima Daiichi plant designed to withstand and still go into safe shutdown mode (SSE) at the time of the March 11 earthquake? Here is what I have been told, and I would very much appreciate confirmation or correction: that the plant was originally designed to withstand 0.18g and was upgraded to somewhere between 0.24g and 0.46g, according to differing sources. Of course, the figures could be different for the different units. Could you provide your best understanding of the precise figures. We would like to have a precise figure for at least Unit 3 at the time of the quake.

-- How much above design criteria (in the sense above) was the March 11 tsunami, and in general, was the fault that produced the earthquake and tsunami taken into account in the risk assessment for the plant?

Thanks again.

The technical folks we've talked to say they presume that the ground-shaking figures refer to the values at the plant foundation – not in the free field or within the plant structure – but there is not absolute certainty on this point, probably because TEPCO did not specify this in the communications we've been told about. Whatever you can do to set us straight is much appreciated.

TTTT/163

From: Nelson, Robert
To: Giitter, Joseph; Howe, Allen
Cc: Burnell, Scott
Subject: FW: Summary of Sample Results at Nine Mile Point and Ginna
Date: Wednesday, March 23, 2011 8:45:00 AM

From: Pickett, Douglas
Sent: Wednesday, March 23, 2011 8:16 AM
To: Salgado, Nancy
Cc: Guzman, Richard
Subject: FW: Summary of Sample Results at Nine Mile Point and Ginna

Small amounts of Iodine-131 have been detected at the Nine Mile Point and Ginna sites this week. While site personnel believe it is fallout from the events in Japan, the licensee has not informed the public or the state of New York as they continue their investigation of the source. Please note in the email below that the term outfall was erroneously used. The email should have stated that the contamination was observed in storm-drains. According to Glenn Dentel, Iodine-131 has only been observed at Diablo Canyon and the two New York sites below.

From: Dentel, Glenn
Sent: Tuesday, March 22, 2011 2:14 PM
To: Henderson, Pamela; Roberts, Darrell; Clifford, James; Wilson, Peter; Weerakkody, Sunil; Rogge, John
Cc: Patel, Amar; Dempsey, Douglas; Kolaczyk, Kenneth; Hunegs, Gordon; Casey, Lauren; Screnci, Diane; Sheehan, Neil; McNamara, Nancy; Tiff, Doug; Pickett, Douglas; Bellamy, Ronald; Perry, Neil; Ibarrola, Sherlyn; Cronk, Kevin
Subject: Summary of Sample Results at Nine Mile Point and Ginna

The following environmental sample results were observed at Nine Mile Point and Ginna in upstate New York.

<u>Date</u>	<u>Site</u>	<u>Location</u>	<u>Activity</u>
March 21	Nine Mile Point	Unit 1 outfall	19.1 pCi/l
March 21	Nine Mile Point	Unit 2 outfall	8.6 pCi/l
March 21	Nine Mile Point (offsite sample)	Oswego Co. Airport	approximately 10 pCi/l
Confirmatory samples			
March 22	Nine Mile Point	Unit 1 outfall	18 pCi/l
March 22	Nine Mile Point	Unit 2 outfall	10.3 pCi/l
March 22	Nine Mile Point sample)	Oswego Co. Airport	9.7 pCi/l (offsite
March 22	Ginna	Orchard area rainwater	26.8 pCi/l (owner control area)

The licensees are evaluating these results and potential source. No activities onsite likely to have caused the readings. Additional sampling is ongoing.

Glenn Dentel

TTTT/164

From: [Hayden, Elizabeth](#)
To: [Joosten, Sandy](#)
Cc: [McIntyre, David](#); [Brenner, Eliot](#); [Harrington, Holly](#); [Couret, Ivonne](#); [Janbergs, Holly](#); [Burnell, Scott](#)
Subject: RE: COMGBJ-11-0002
Date: Wednesday, March 23, 2011 9:06:40 AM

Thanks. I see it at <http://www.nrc.gov/reading-rm/doc-collections/commission/comm-secy/2011/2011-0002comgbj.pdf>

Beth

From: Joosten, Sandy
Sent: Wednesday, March 23, 2011 8:04 AM
To: Vietti-Cook, Annette; Brenner, Eliot; Hayden, Elizabeth
Subject: COMGBJ-11-0002

The Chairman's COM on NRC Actions Following the Events in Japan has been posted to the NRC's public web site.

Sandy

TTTT/164

From: [Harrington, Holly](#)
To: [Burnell, Scott](#)
Subject: RE: New item in WebEOC Task Tracker
Date: Wednesday, March 23, 2011 9:41:51 AM

Talk to Eliot. Apparently he asked the Op Center for some information related to this and didn't tell any of us.

From: Burnell, Scott
Sent: Wednesday, March 23, 2011 9:35 AM
To: Brenner, Eliot; Hayden, Elizabeth; Harrington, Holly
Subject: New item in WebEOC Task Tracker
Importance: High

**Record
#: 2241**

**EST
Actions
Officer**

Desc: Coordinate with Bechtel concerning Public inquires of Bechtel efforts to support Japanese Reactors in concert with Embassy.

*Dori
Votolato*

Thoughts? Instructions? I'd think our response would be "obtain Bechtel PR contacts to efficiently forward media requests" or something.

TTTT/165

From: [Burnell, Scott](mailto:Burnell.Scott)
To: goulet@berkeley.edu
Bcc: [Harrington, Holly](mailto:Harrington.Holly); [Kammerer, Annie](mailto:Kammerer.Annie)
Subject: RE: ERROR in your answers to faqs related to Japan document
Date: Wednesday, March 23, 2011 7:44:00 AM

Dr. Goulet;

Thanks for pointing that out, our staff had already notified us and we posted the correct version as soon as we could get to it. The correct version's been on our website for about a day now. Thanks again for your sharp eye on detail.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

From: Christine Goulet [<mailto:goulet@berkeley.edu>]
Sent: Monday, March 21, 2011 7:15 PM
To: OPA Resource
Subject: Fwd: ERROR in your answers to faqs related to Japan document

Good afternoon,

Trying this e-mail address now, see my original post below.

I think it would help the NRC credibility if the error I report here was corrected promptly.

Sincerely,

Christine Goulet, PhD
Assistant Researcher
NGA East TI team co-chair
Pacific Earthquake Engineering Research Center (PEER),
University of California, Berkeley

Tel (510) 374-4620
goulet@berkeley.edu

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

Subject: ERROR in your answers to faqs related to Japan document
Date: Sat, 19 Mar 2011 14:54:29 -0700
From: Christine Goulet <goulet@berkeley.edu>
Reply-To: goulet@berkeley.edu
To: opa administrators <opa@nrc.gov>

Good afternoon,

I just opened your pdf at <http://www.nrc.gov/japan/faqs-related-to-japan.pdf> and found a

major error in the answer to question 1.

At the bottom of the answer, "ten times" should be replaced by "approximately 32 times":
"Magnitude is measured on a log scale and so a magnitude 9 earthquake is ten times larger than a magnitude 8 earthquake."

I hope this can be corrected soon!

Sincerely,

Christine Goulet, PhD

Assistant Researcher

NGA East TI team co-chair

Pacific Earthquake Engineering Research Center (PEER),

University of California, Berkeley

Tel (510) 374-4620

goulet@berkeley.edu

On 3/19/11,12:31 PM 12:31 PM, opa administrators wrote:

From: [Burnell, Scott](#)
To: [Harrington, Holly](#); [Bonaccorso, Amy](#)
Cc: [Deavers, Ron](#)
Subject: RE: ERROR in your answers to faqs related to Japan document
Date: Wednesday, March 23, 2011 10:43:00 AM

Yup, a polite "Thanks, we got it."

From: [Harrington, Holly](#)
Sent: Wednesday, March 23, 2011 10:43 AM
To: [Bonaccorso, Amy](#); [Burnell, Scott](#)
Cc: [Deavers, Ron](#)
Subject: RE: ERROR in your answers to faqs related to Japan document

I believe Scott already responded to him

From: [Bonaccorso, Amy](#)
Sent: Wednesday, March 23, 2011 10:38 AM
To: [Harrington, Holly](#)
Cc: [Deavers, Ron](#)
Subject: FW: ERROR in your answers to faqs related to Japan document

Holly:

This person has credentials...so I am worried about blowing them off. Do we ever forward things like this to our seismic staff?

Thanks,

Amy

From: [OPA Resource](#)
Sent: Wednesday, March 23, 2011 10:30 AM
To: [Bonaccorso, Amy](#); [deavers,](#)
Subject: FW: ERROR in your answers to faqs related to Japan document

From: [Christine Goulet \[mailto:goulet@berkeley.edu\]](mailto:goulet@berkeley.edu)
Sent: Saturday, March 19, 2011 5:54 PM
To: [OPA Resource](#)
Subject: ERROR in your answers to faqs related to Japan document

Good afternoon,

I just opened your pdf at <http://www.nrc.gov/japan/faqs-related-to-japan.pdf> and found a **major error** in the answer to question 1. At the bottom of the answer, "ten times" should be replaced by "approximately 32 times": "Magnitude is measured on a log scale and so a magnitude 9 earthquake is ten times larger than a magnitude 8 earthquake."

I hope this can be corrected soon!

Sincerely,

Christine Goulet, PhD

Assistant Researcher

NGA East TI team co-chair

Pacific Earthquake Engineering Research Center (PEER),

University of California, Berkeley

Tel (510) 374-4620

goulet@berkeley.edu

On 3/19/11,12:31 PM 12:31 PM, opa administrators wrote:

From: [Harrington, Holly](#)
To: [Courret, Ivonne](#); [Brenner, Eliot](#); [Hayden, Elizabeth](#)
Cc: [McIntyre, David](#); [Burnell, Scott](#); [Hannah, Roger](#)
Subject: RE: FYI - Kyodo News (3/23) 9:32 AM - Radioactive iodine exceeding limit for infants found in Tokyo water
Date: Wednesday, March 23, 2011 10:26:53 AM

Yes, I'm tracking down with federal folks are working on US gov response

From: Courret, Ivonne
Sent: Wednesday, March 23, 2011 10:26 AM
To: Brenner, Eliot; Harrington, Holly; Hayden, Elizabeth
Cc: McIntyre, David; Burnell, Scott; Hannah, Roger
Subject: FYI - Kyodo News (3/23) 9:32 AM - Radioactive iodine exceeding limit for infants found in Tokyo water

Radioactive iodine exceeding limit for infants found in Tokyo water

TOKYO, March 23, Kyodo

The Tokyo metropolitan government warned Wednesday that infants should not drink tap water in Tokyo's 23 wards and five of its suburban cities as radioactive iodine exceeding the limit for them was detected in water at a purification plant.

The amount of the substance was 210 becquerels per 1 kilogram of water at the plant in the Kanamachi district of Katsushika Ward, which serves the cities of Musashino, Mitaka, Machida, Tama and Inagi as well as central Tokyo, above the limit of 100 becquerels for infants but below 300 becquerels for older people, the metropolitan government said.

The detection came amid the country's worst nuclear crisis that has led to radiation leaks at Tokyo Electric Power Co.'s Fukushima Daiichi nuclear power plant, located about 220 kilometers northeast of Tokyo, triggered by the devastating earthquake and tsunami earlier this month.

The central government said separately it had detected radioactive iodine in 12 prefectures in a survey of tap water Tuesday covering all but four of Japan's 47 prefectures, all at levels below the regulated limit, up from eight prefectures as of Monday.

Iwate, Akita, Yamagata and Shizuoka prefectures were added to the list Tuesday. Among the four prefectures not covered by the ministry's survey, Fukushima Prefecture announced that it had detected radioactive iodine in its own survey.

Cesium, another radioactive substance, was also found in four of the 12 prefectures where radioactive iodine was detected, including Tokyo and Gunma. Cesium measuring 5.3 becquerels was detected in Tochigi and 4.8 becquerels in Ibaraki against the limit of 200 becquerels, the Ministry of Education, Culture, Sports, Science and Technology said.

While the Tokyo government also found 190 becquerels of radioactive iodine Wednesday at the Kanamachi plant, as well as 32 becquerels on Tuesday at a plant in Hamura in western Tokyo, none was detected at a plant in Asaka, Saitama Prefecture. The science ministry found 19 becquerels in tap water in Tokyo on Tuesday as well as 15 becquerels in Tochigi and 12 becquerels in Ibaraki.

The ministry also said it had detected 1.17 million becquerels of radioactive iodine and 163,000 becquerels of cesium per kg of soil in samples collected in Iitate, Fukushima Prefecture, 40 km from the nuclear plant, in a survey it conducted Sunday.

==Kyodo

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
opa.resource@nrc.gov
301-415-8200

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

From: [Burnell, Scott](#)
To: [Dolley, Steven](#)
Cc: [OPA Resource](#)
Bcc: [Kahler, Robert](#); [Helton, Shana](#)
Subject: RE: status of emergency preparedness rulemaking
Date: Wednesday, March 23, 2011 11:24:00 AM

Hi Steve;

The staff expects to meet its current schedule of providing a draft final rule to the Commission in April. That draft language will reflect the staff's position on the ACRS comments. Any lessons learned from ongoing events in Japan would most likely be implemented by Orders or other interim approaches until additional rulemaking could be undertaken.

Thanks.

Scott

From: Dolley, Steven [mailto:Steven_Dolley@platts.com]
Sent: Tuesday, March 22, 2011 6:33 PM
To: Burnell, Scott
Cc: OPA Resource
Subject: RE: status of emergency preparedness rulemaking

What is the status of the ongoing EP rulemaking, in the wake of the Fukushima events?

<http://www.nrc.gov/about-nrc/emerg-preparedness/rulemaking-for-emergency.html>

Will the rulemaking be revamped to account for lessons learned? Or does the staff still plan to send a draft final rule to the commission in April?

Also, will the staff address the concerns expressed by the ACRS in January before sending a draft final rule to the commission?

I'm writing for Inside NRC on Thursday.

Thanks,
Steve

Steven Dolley
Managing Editor, Inside NRC
Platts Nuclear
202-383-2166 Office
202-383-2187 Fax

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From: [Burnell, Scott](#)
To: [Kahler, Robert](#)
Cc: [Helton, Shana](#)
Subject: FW: status of emergency preparedness rulemaking
Date: Wednesday, March 23, 2011 9:59:00 AM
Importance: High

Bob;

Just spoke to Shana about this and the answer seems to be:

The staff expects to meet its current schedule of providing a draft final rule to the Commission in April. That draft language will reflect the staff's resolution of the ACRS comments. Any lessons learned from ongoing events in Japan would most likely be implemented by Orders or other interim approaches until additional rulemaking could be undertaken.

How's that sound?

Scott

From: Dolley, Steven [mailto:Steven_Dolley@platts.com]
Sent: Tuesday, March 22, 2011 6:33 PM
To: Burnell, Scott
Cc: OPA Resource
Subject: RE: status of emergency preparedness rulemaking

What is the status of the ongoing EP rulemaking, in the wake of the Fukushima events?

<http://www.nrc.gov/about-nrc/emerg-preparedness/rulemaking-for-emergency.html>

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Also, will the staff address the concerns expressed by the ACRS in January before sending a draft final rule to the commission?

I'm writing for Inside NRC on Thursday.

Thanks,
Steve

Steven Dolley
Managing Editor, Inside NRC
Platts Nuclear
202-383-2166 Office
202-383-2187 Fax

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From: Harrington, Holly
To: Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David; Chandrathil, Prema; Dricks, Victor; Hannah, Roger; Ledford, Joey; Mityng, Viktoria; Screnci, Diane; Sheehan, Neil; Uselding, Lara
Cc: Deavers, Ron; Bonaccorso, Amy
Subject: If you get questions related to new warnings about Japan water safety
Date: Wednesday, March 23, 2011 10:47:02 AM

Refer members of the public to radiation.questions@epa.gov

And media to: press@epa.gov or 202-564-6794

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From: [McIntyre, David](#)
To: [Jones, Steve](#); [Burnell, Scott](#)
Subject: RE: Spent fuel pools
Date: Wednesday, March 23, 2011 12:44:35 PM

And Dan's in Tokyo right now, I believe.

From: Jones, Steve
Sent: Wednesday, March 23, 2011 12:13 PM
To: Burnell, Scott
Cc: McIntyre, David
Subject: RE: Spent fuel pools

Scott,

Dan Dorman and Scott Morris were the NSIR managers. I can't recall any NSIR staff that are still available.

Steve

From: Burnell, Scott
Sent: Wednesday, March 23, 2011 11:18 AM
To: Jones, Steve
Cc: McIntyre, David
Subject: FW: Spent fuel pools

Steve;

Hate to keep leaning on you, but who in NSIR would be a good contact on our response to the '04 NAS report? Thanks.

Scott

From: Crowley, Kevin [<mailto:KCrowley@nas.edu>]
Sent: Wednesday, March 23, 2011 11:17 AM
To: Burnell, Scott
Subject: RE: Spent fuel pools

Thanks Scott. I recall that some orders were issued after Diaz's letter but I don't know if they were made public. Kevin

From: Burnell, Scott [<mailto:Scott.Burnell@nrc.gov>]
Sent: Wednesday, March 23, 2011 11:12 AM
To: Crowley, Kevin
Subject: RE: Spent fuel pools

Hi Kevin;

The quickest response is then-Chairman Diaz's March 2005 letter to Sen. Domenici:

TTTT/168

<http://www.nrc.gov/reading-rm/doc-collections/congress-docs/correspondence/2005/domenici-03142005.pdf>

I'm still checking with staff on our specific responses to the recommendations.
Thanks.

Scott

From: Crowley, Kevin [mailto:KCrowley@nas.edu]
Sent: Wednesday, March 23, 2011 11:05 AM
To: Burnell, Scott
Cc: Crowley, Kevin
Subject: Spent fuel pools

Hi Scott:

Since the earthquake/tsunami in Japan I have been deluged with calls from reporters about our 2006 spent fuel report (Safety and Security of Commercial Spent Nuclear Fuel Storage), which was sponsored by your agency at the direction of Congress. One question that I am being asked repeatedly is what steps your agency took in response to our report. I have suggested that reporters talk with your agency directly about that.

For my own edification, it would be helpful to know whether any orders/directives were issued to plant operators as result of our report. Could you direct me to any written public materials that describe your agency's responses?

Many thanks,

Kevin

From: [Burnell, Scott](#)
To: [McIntyre, David](#)
Subject: RE: Spent fuel pools
Date: Wednesday, March 23, 2011 11:53:00 AM

All too true, likely.

From: McIntyre, David
Sent: Wednesday, March 23, 2011 11:53 AM
To: Burnell, Scott
Subject: RE: Spent fuel pools

Last I recall, NRR has something to do with spent fuel pools. ☹ And B5b was moved to NRR from NSIR awhile ago – Eric Bowman helped me answer some of these questions on Sunday.

From: Burnell, Scott
Sent: Wednesday, March 23, 2011 11:51 AM
To: McIntyre, David
Subject: RE: Spent fuel pools

Well, since it's NSIR I would be bugging them, not NRR. But I'm brain-fried, you know that.

From: McIntyre, David
Sent: Wednesday, March 23, 2011 11:50 AM
To: Burnell, Scott
Subject: RE: Spent fuel pools

This might be a good thing to get Bob Nelson's team involved with.

From: Burnell, Scott
Sent: Wednesday, March 23, 2011 11:18 AM
To: Jones, Steve
Cc: McIntyre, David
Subject: FW: Spent fuel pools

Steve;

Hate to keep leaning on you, but who in NSIR would be a good contact on our response to the '04 NAS report? Thanks.

Scott

From: Crowley, Kevin [<mailto:KCrowley@nas.edu>]
Sent: Wednesday, March 23, 2011 11:17 AM
To: Burnell, Scott
Subject: RE: Spent fuel pools

Thanks Scott. I recall that some orders were issued after Diaz's letter but I don't

From: [Burnell, Scott](#)
To: [Jones, Steve](#)
Cc: [McIntyre, David](#)
Subject: FW: Spent fuel pools
Date: Wednesday, March 23, 2011 11:17:00 AM

Steve;

Hate to keep leaning on you, but who in NSIR would be a good contact on our response to the '04 NAS report? Thanks.

Scott

From: Crowley, Kevin [mailto:KCrowley@nas.edu]
Sent: Wednesday, March 23, 2011 11:17 AM
To: Burnell, Scott
Subject: RE: Spent fuel pools

Thanks Scott. I recall that some orders were issued after Diaz's letter but I don't know if they were made public. Kevin

From: Burnell, Scott [mailto:Scott.Burnell@nrc.gov]
Sent: Wednesday, March 23, 2011 11:12 AM
To: Crowley, Kevin
Subject: RE: Spent fuel pools

Hi Kevin;

The quickest response is then-Chairman Diaz's March 2005 letter to Sen. Domenici:

<http://www.nrc.gov/reading-rm/doc-collections/congress-docs/correspondence/2005/domenici-03142005.pdf>

I'm still checking with staff on our specific responses to the recommendations. Thanks.

Scott

From: Crowley, Kevin [mailto:KCrowley@nas.edu]
Sent: Wednesday, March 23, 2011 11:05 AM
To: Burnell, Scott
Cc: Crowley, Kevin
Subject: Spent fuel pools

Hi Scott:

Since the earthquake/tsunami in Japan I have been deluged with calls from reporters about our 2006 spent fuel report (Safety and Security of Commercial Spent Nuclear Fuel Storage), which was sponsored by your agency at the direction of Congress. One question that I am being asked repeatedly is what steps your agency took in response to our report. I have suggested that