Uselding, Lara

From: Uselding, Lara
Sent: Friday, March 11, 2011 11:31 AM
To: Burnell, Scott; Brenner, Eliot; Harrington, Holly
Subject: DC Press release
Attachments: 3-11-11 UE News Release FINAL.doc

From: Raftery, Kory [mailto:MKR6@pge.com]
Sent: Friday, March 11, 2011 10:34 AM
To: Uselding, Lara; Flake, Paul; Gil.Alexander@sce.com; liese.mosher@sce.com
Subject: RE: DRAFT Press Release FYI Only

Hi Lara and Gil,
Here is the news release that we are sending to local media as well.
Kory

Pacific Gas and Electric Company®

External Communications Department
77 Beale Street
San Francisco, CA 94105
415/973-5930

NEWS

FOR IMMEDIATE RELEASE: March 11, 2011 8:15 a.m.

CONTACT: External Communications Department (415) 973-5930

UNUSUAL EVENT DECLARED AT DIABLO CANYON POWER PLANT DUE TO TSUNAMI WARNING

SAN LUIS OBISPO, Calif. – Pacific Gas and Electric Company (PG&E) today responded to a tsunami warning by declaring an Unusual Event at its Diablo Canyon Power Plant Unit 1 and Unit 2 near San Luis Obispo, Calif. All plant safety systems and components remain in normal operating condition and both units are currently operating at 100 percent power. There is no threat to the health and safety of the public from Diablo Canyon Power Plant.

The Unusual Event was declared at approximately 1:23 a.m., Friday, March 11, 2011. As defined by the Nuclear Regulatory Commission, an Unusual Event is any other-than-normal plant-related condition that does not require any emergency action by the general public or any government authorities. An Unusual Event is the lowest of four levels of emergency classification.

PG&E will continue to monitor the situation and work with local authorities throughout the county. DCPP personnel undergo extensive emergency preparedness training and participate in various exercises throughout the year to ensure they are always ready to safely, swiftly and effectively mange emergency events.

The utility is also assisting with local emergency response efforts. In response to a county declaration for Avila Beach residents to relocate to higher elevation, PG&E has opened its Energy Education Center at 6588 Ontario Road off of Highway 101 in San Luis Obispo.

High swell estimates at Port San Luis may cause flooding near the Avila Beach gate entrance. Diablo Canyon has implemented a plan which allows us to continue to operate the facility safely in the event that access to Diablo Canyon Power Plant is restricted.

-30-

Couret, Ivonne

From: HOO Hoc
Sent: Friday, March 11, 2011 5:10 AM
To: HOO Hoc
Subject: HOO HIGHLIGHT - DIABLO CANYON UNUSUAL EVENT
Attachments: image001.jpg

Diablo Canyon declared a Notice of Unusual Event at 0123 PST due to a Tsunami Warning for the coastal areas of California as a result of a 8.9 magnitude earthquake off the coast of Japan. The Agency remains in the NORMAL response mode as of 0452 EST.

Joe O'Hara
Headquarters Operations Officer
U.S. Nuclear Regulatory Commission
Phone: 301-816-5100
Fax: 301-816-5151
email: hoo.hoc@nrc.gov
secure e-mail: hoo1@nrc.sgov.gov

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

44/2

Couret, Ivonne

From: HOO Hoc
Sent: Friday, March 11, 2011 7:50 PM
To: HOO Hoc
Subject: HOO Highlight - NOUE Termination at Diablo Canyon
Attachments: image001.jpg

1528 PST - Diablo Canyon has terminated their Unusual Event because the tsunami warning has been reduced to a tsunami advisory. No damage occurred during this event.

Headquarters Operations Officer
U.S. Nuclear Regulatory Commission
Phone: 301-816-5100
Fax: 301-816-5151
email: hoo.hoc@nrc.gov
secure e-mail: hoo1@nrc.sgov.gov

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

44 3

Couret, Ivonne

From: Harrington, Holly
Sent: Friday, March 11, 2011 7:55 PM
To: Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David
Subject: FW: News Reports of Japanese NPP Status

From: Virgilio, Martin
Sent: Friday, March 11, 2011 7:50 PM
To: McDermott, Brian; Weber, Michael; Harrington, Holly; Morris, Scott; Leeds, Eric
Cc: McCree, Victor
Subject: Fw: News Reports of Japanese NPP Status

All

Please keep these in mind as you develop the key messages/ Q+A's for our communications plan

Marty

From: McCree, Victor
To: Virgilio, Martin
Cc: Dean, Bill; Satorius, Mark; Collins, Elmo
Sent: Fri Mar 11 19:40:15 2011
Subject: News Reports of Japanese NPP Status

I just listened to the NBC and ABC news "experts" accounts of the status of the Fukishima Daiichi Nuclear Power Plant (FDNPP) Units 1 (and 2) and their forecast of what could happen if electrical power was not soon restored. Their accounts included several mis-statements that we ought to be aware of, and perhaps provide clarity in any NRC public response and/or statements that we make on this subject.

i. One expert implied that the BWR core is normally not covered, and that the ECCS systems only inject after core damage has begun.

ii. The expert also indicated that although the release of pressure from the containment at FDNPP would be filtered, that the filtration was highly unlikely to be successful.

iii. Another expert implied that nuclear power plants have a limited ability to withstand an "expected" earthquake, and that they are not designed to handle an "extraordinary" earthquake. [Note: Although the 8.9 Richter scale magnitude earthquake at FDNPP may have been beyond its design basis (or Safe Shutdown Earthquake) the SSE is, by definition, is an extraordinary earthquake.]

Vic

4/4

Couret, Ivonne

From: Manoly, Kamal
Sent: Friday, March 11, 2011 5:43 PM
To: Couret, Ivonne
Subject: RE: ClimateWire interview - OPA Thanks
Attachments: image001.gif

You are quite welcomed.

From: Couret, Ivonne
Sent: Friday, March 11, 2011 4:26 PM
To: Manoly, Kamal
Cc: Grobe, Jack; Hiland, Patrick; Khanna, Meena
Subject: ClimateWire interview - OPA Thanks

Kamal,
Thanks for supporting OPA with this interview.

GS 199/SEISMIC/DIABLO CANYON - OPA coordinated an interview with a ClimateWire reporter and NRC staff on the topics of seismic design requirements at U.S. nuclear plants, Diablo Canyon and the status of the Generic Issue 199, "Implications of Updated Probabilistic Seismic Hazard Estimates in Central and Eastern United States on Existing Plants" and the safety/risk assessment results. In addition, OPA provided reporter the website links on archived webcast on Commission briefings and seismic workshops, as well as provided the fact sheets. ClimateWire will run story Monday, March 14.

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs

USNRC
Protecting People and the Environment

(301) 415-8205
ivonne.couret@nrc.gov

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

2010-2011 Information Digest - Where you can find NRC Facts at a Glance
http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/

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

Please consider the environmental impact before printing this email.

4/5

From: CNN Breaking News
To: textbreakingnews@ema3lsv06.turner.com
Subject: CNN Breaking News
Date: Friday, March 11, 2011 1:29:29 AM

-- An 8.8-magnitude earthquake has struck Japan, the U.S. Geological Survey says. Tsunami warnings have been issued.

One CNN Center Atlanta, GA 30303

4446

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:	Basic earthquake talking points
Date:	Friday, March 11, 2011 8:30:43 AM

Per Diane's request, below are just some generic seismic talking points. Scott and/or Lara/Victor will be producing more specific talking points shortly.

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, the licensing bases for existing nuclear power plants are based on historical data from the area's maximum credible earthquake, with an additional margin included.

147

From: Uselding, Lara
To: Harrington, Holly; Chandrathil, Prema; Dricks, Victor; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Screnci, Diane; Sheehan, Neil; Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David
Subject: RE: Basic earthquake talking points
Date: Friday, March 11, 2011 9:26:46 AM

Scott: Feel free to send DC and SONGS questions to me. I have lots more info about their design features. Below is some basics as we await the tsunami hitting the west coast....We'll have more from RIV once it hits. Licensee plans to send out press release on their efforts.

TSUNAMI

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 designs structures, systems, and components important to safety to withstand the effects of natural phenomenon, including tsunamis.)

At Diablo Canyon, the plant is safe from a tsunami. The plants ability to withstand large waves and the maximum wave height at the intake structure were determined through extensive and detailed scaled model wave testing. To prevent water from entering the intake structure and affecting the pump motors, the structure is equipped with a snorkel valve that can close.

From: Harrington, Holly
Sent: Friday, March 11, 2011 7:31 AM
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: Basic earthquake talking points

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From:	Burnell, Scott
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
Date:	Friday, March 11, 2011 9:28:07 AM
Attachments:	3_11_QUAKE_talk_pts.docx

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

4479

OPA

TALKING POINTS

MARCH 11, 2011 JAPAN EARTHQUAKE AND WEST COAST TSUNAMI

As of 4/21/2011 10:24 AM

- The Nuclear Regulatory Commission is following events on the U.S. West Coast and U.S. Pacific interests in the wake of the March 11 earthquake in Japan and associated tsunami.

- The NRC resident inspector at the Diablo Canyon nuclear power plant on the central California coast is on site and keeping track of the plant's response to the tsunami warning for that area. The plant is operating normally but has declared an Unusual Event; plant employees are taking preplanned actions to prepare for the predicted tsunami effects.

- The San Onofre nuclear power plant on the southern California coast is operating normally and is in the tsunami advisory area.

- The Humboldt Bay spent fuel storage site on the northern California coast is in the tsunami warning area; site personnel have informed the NRC they are prepared for possible effects.

- The tsunami is expected to miss NRC-regulated nuclear materials sites in Hawaii and Alaska; the NRC remains in contact with these facilities.

From:	Akstulewicz, Brenda
To:	Akstulewicz, Brenda; Brenner, Eliot; Jaczko, Gregory
Cc:	Hayden, Elizabeth; Batkin, Joshua; Loyd, Susan; Weber, Michael; james.mcintyre1@dhs.gov; Powell, Amy; Schmidt, Rebecca; Chandrathil, Prema; McIntyre, David; Screnci, Diane; Harrington, Holly; Couret, Ivonne; Janbergs, Holly; Ledford, Joey; Sheehan, Neil; Hannah, Roger; Burnell, Scott; Uselding, Lara; Shannon, Valerie; Dricks, Victor; Mitlyng, Viktoria
Subject:	RE: NRC press release
Date:	Friday, March 11, 2011 11:30:03 AM
Attachments:	11-042.quake.draft.docx

Please note – change "tusnamis" changed to tsunamis.

From: Akstulewicz, Brenda
Sent: Friday, March 11, 2011 11:24 AM
To: Akstulewicz, Brenda; Brenner, Eliot; Jaczko, Gregory
Cc: Hayden, Elizabeth; Batkin, Joshua; Loyd, Susan; Weber, Michael; 'james.mcintyre1@dhs.gov'; Powell, Amy; Schmidt, Rebecca; Chandrathil, Prema; McIntyre, David; Screnci, Diane; Harrington, Holly; Couret, Ivonne; Janbergs, Holly; Ledford, Joey; Sheehan, Neil; Hannah, Roger; Burnell, Scott; Uselding, Lara; Shannon, Valerie; Dricks, Victor; Mitlyng, Viktoria
Subject: RE: NRC press release

Attached contains minor corrections.

From: Akstulewicz, Brenda
Sent: Friday, March 11, 2011 11:14 AM
To: Brenner, Eliot; Jaczko, Gregory
Cc: Hayden, Elizabeth; Batkin, Joshua; Loyd, Susan; Weber, Michael; james.mcintyre1@dhs.gov; Powell, Amy; Schmidt, Rebecca; Chandrathil, Prema; McIntyre, David; Screnci, Diane; Harrington, Holly; Couret, Ivonne; Janbergs, Holly; Ledford, Joey; Sheehan, Neil; Hannah, Roger; Burnell, Scott; Uselding, Lara; Shannon, Valerie; Dricks, Victor; Mitlyng, Viktoria
Subject: RE: NRC press release

With attachment!

From: Brenner, Eliot
Sent: Friday, March 11, 2011 11:12 AM
To: Jaczko, Gregory
Cc: Hayden, Elizabeth; Batkin, Joshua; Loyd, Susan; Weber, Michael; james.mcintyre1@dhs.gov; Powell, Amy; Schmidt, Rebecca; Akstulewicz, Brenda; Chandrathil, Prema; McIntyre, David; Screnci, Diane; Harrington, Holly; Couret, Ivonne; Janbergs, Holly; Ledford, Joey; Sheehan, Neil; Hannah, Roger; Burnell, Scott; Uselding, Lara; Shannon, Valerie; Dricks, Victor; Mitlyng, Viktoria
Subject: NRC press release

Following will be transmitted from NRC in about 10 minutes.

Holly: Pls use this and talking points to assemble a short blog post.

OPA is coordinating with other federal players at our level.

Eliot Brenner
Director, Office of Public Affairs
Nuclear Regulatory Commission

11/10

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. 11-042 March 11, 2011

NRC MONITORS NOTICE OF UNUSUAL EVENT AT DIABLO CANYON POWER PLANT, TSUNAMI ISSUES

The U.S. Nuclear Regulatory Commission, through its regional office in Arlington, Tex., is monitoring a notice of unusual event (NOUE) at the Diablo Canyon Power Plant, located near San Luis Obispo, Calif. Senior NRC officials are working at the agency's Rockville, Md., headquarters to coordinate NRC activities with respect to the Japanese earthquake and subsequent tsunami.

"The NRC is closely monitoring this situation as it unfolds with respect to nuclear facilities within the United States. NRC staff is working closely with its resident inspectors who are on site to ensure safe operations," said NRC Chairman Gregory Jaczko.

Pacific Gas and Electric Co. (PG&E), operator of the Diablo Canyon two-reactor plant, declared a precautionary NOUE Unusual Event at 4:23 a.m. EST today after receiving a tsunami warning from the West California Emergency Management Agency. The tsunami warning was generated after an estimated 8.9 magnitude earthquake occurred off the eastern Japanese coast.

The licensee reported the Diablo Canyon plant is stable and both units remain on line. The plant is well protected against tsunami conditions as required by NRC regulations. The NRC has staff at the plant keeping track of the plant's response.

Nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. 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.

In addition to the Diablo Canyon plant, the NRC is also monitoring the San Onofre nuclear power plant, the Humboldt Bay spent fuel storage site and NRC-regulated nuclear materials sites in Hawaii and Alaska to name a few. Site personnel have informed the NRC they are prepared for possible tsunami effects.

###

From:	Uselding, Lara
To:	Burnell, Scott; Screnci, Diane; Sheehan, Neil; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Chandrathil, Prema; Dricks, Victor; Harrington, Holly; McIntyre, David; Couret, Ivonne
Cc:	Brenner, Eliot
Subject:	RE: Rumor control
Date:	Friday, March 11, 2011 12:17:20 PM

Elaine Hiruo knew Japanese industry is in town for RIC but I didn't tell her that they were at our building, maybe they connected dots

---

From: Burnell, Scott
Sent: Friday, March 11, 2011 11:15 AM
To: Screnci, Diane; Sheehan, Neil; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Chandrathil, Prema; Dricks, Victor; Uselding, Lara; Harrington, Holly; McIntyre, David; Couret, Ivonne
Cc: Brenner, Eliot
Subject: Rumor control

All;

Eliot just took a call from Platts asking about Japanese "utility execs" at HQ responding to the quake. The reporter said another Platts reporter had heard "from the regions" that this was the case. While Eliot told Platts we are allowing Japanese REGULATORS to use our communications facilities as a courtesy, the bottom line is that this topic is off-limits for now. Refer any further questions on this to HQ. Thanks.

Scott

From: Harrington, Holly
To: Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David
Subject: FW: News Reports of Japanese NPP Status
Date: Friday, March 11, 2011 7:55:13 PM

From: Virgilio, Martin
Sent: Friday, March 11, 2011 7:50 PM
To: McDermott, Brian; Weber, Michael; Harrington, Holly; Morris, Scott; Leeds, Eric
Cc: McCree, Victor
Subject: Fw: News Reports of Japanese NPP Status

All

Please keep these in mind as you develop the key messages/ Q+A's for our communications plan

Marty

From: McCree, Victor
To: Virgilio, Martin
Cc: Dean, Bill; Satorius, Mark; Collins, Elmo
Sent: Fri Mar 11 19:40:15 2011
Subject: News Reports of Japanese NPP Status

I just listened to the NBC and ABC news "experts" accounts of the status of the Fukishima Daiichi Nuclear Power Plant (FDNPP) Units 1 (and 2) and their forecast of what could happen if electrical power was not soon restored. Their accounts included several mis-statements that we ought to be aware of, and perhaps provide clarity in any NRC public response and/or statements that we make on this subject.

i. One expert implied that the BWR core is normally not covered, and that the ECCS systems only inject after core damage has begun.

ii. The expert also indicated that although the release of pressure from the containment at FDNPP would be filtered, that the filtration was highly unlikely to be successful.

iii. Another expert implied that nuclear power plants have a limited ability to withstand an "expected" earthquake, and that they are not designed to handle an "extraordinary" earthquake. [Note: Although the 8.9 Richter scale magnitude earthquake at FDNPP may have been beyond its design basis (or Safe Shutdown Earthquake) the SSE is, by definition, is an extraordinary earthquake.]

Vic

4/12

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: Old, but what FEMA was saying
Date: Friday, March 11, 2011 3:24:24 PM
Attachments: Talking Points on FEMA.docx

4/13

Talking Points on FEMA/Federal Family Response to Earthquake, Tsunami in the Pacific

Updated: 03/11/2011, 12:30 pm

President Obama received a briefing this morning at 9:30 a.m. in the Oval Office on the earthquake in Japan and the tsunami warnings across the Pacific from a number of senior US government officials including Homeland Security Secretary Janet Napolitano and Federal Emergency Management Agency Administrator Craig Fugate.

The senior officials provided the President with an update on the evolving situation stemming from the earthquake and subsequent tsunami that struck Japan early this morning including the actions being taken to assist U.S. states and territories that could be affected by the tsunami, as the President directed earlier this morning as well as the work being done to be prepared to assist the people of Japan

FEMA is closely monitoring the effects of the earthquake and subsequent tsunami that struck Japan early this morning, and as directed by the President, FEMA is in close contact and coordination with state and local officials and stands ready to support them in any way needed, through our regional offices in the West Coast and in the pacific area.

The Pacific Tsunami Warning Center has issued Tsunami Warnings and Watches for a number of countries, including parts of U.S. Territories in the Pacific as well as coastal areas along California, Oregon, Washington and Alaska.

We are also in contact with our federal partners at NOAA and other agencies. While there have been no requests for federal assistance from U.S. states or territories at this time, FEMA stands ready to assist if a request is made by a Governor.

FEMA has commodities, such as water, meals, blankets and cots, prepositioned on both Hawaii and Guam, should a request be made.

In addition, U.S. Coast Guard rescue crews are making preparations through the main Hawaiian Islands to provide post-tsunami support following any potential impacts.

Our message to the public is critical and simple: listen to the instructions of state and local officials, and if told to evacuate - evacuate. We urge everyone in the regions who could be impacted to listen to a NOAA Weather Radio and their local news to monitor for updates and directions provided by their local officials.

The United States Agency for International Development (USAID) remains the lead federal agency when it comes to responding to international disasters.

Additional federal coordination efforts include:

The Department of Defense has positioned National Guard personnel in county emergency operation centers in Hawaii, additional aircraft and personnel have been placed on standby if needed.

The U.S. Department of Health and Human Services (HHS) is deploying a Disaster Medical Assistance Team of more than 35 healthcare professionals and an Incident Response Coordination Team to Travis Air Force Base in California, as well as caches of medical equipment and supplies. From the Air Force base, the teams and equipment can deploy quickly wherever they are needed if requested by states or territories in the region or by the government of Japan.

The HHS Administration on Aging is monitoring the situation through its state, tribal and local Agencies on Aging, in impacted areas, to ensure safety of older adults in potentially impacted areas.

The U.S. Nuclear Regulatory Commission (NRC) is closely monitoring conditions near the Diablo Canyon Power Plant, located near San Luis Obispo, CA. The NRC is working closely with its resident inspectors who are on site to ensure safe operating.

The National Oceanic and Atmospheric Administration and its Pacific Tsunami Warning Center are monitoring conditions and issuing warnings and advisory updates as available.

The U.S. Department of State has a call center established for Americans seeking information about family members in Japan. The number is 1-888-407-4747.

While tsunami watches and warning remain in effect, we urge the public to listen to the instructions of state and local officials, and if told to evacuate - evacuate. We urge everyone in the regions who could be impacted to listen to a NOAA Weather Radio and their local news to monitor for updates and directions provided by their local officials.

From:	LIA07 Hoc
To:	LIA12 Hoc; Harrington, Holly
Subject:	*FW: Earthquake/Tsunami Status Update*
Date:	Friday, March 11, 2011 1:08:37 PM
Attachments:	Earthquake-TsunamiUpdate.031111.1300EST.docx

Josh Batkin requested that this update be sent to you for your use and information.
-Sara

From: LIA07 Hoc
Sent: Friday, March 11, 2011 1:05 PM
To: Batkin, Joshua; Pace, Patti
Subject: Earthquake/Tsunami Status Update

Here is the status update as of 1300 EST.
-Sara

Sara Mroz
Communications and Outreach
NSIR

4/14

March 11, 2011
Earthquake / Tsunami
Status Update Compiled by Liaison Team

Status of NRC and Agreement State Facilities (Region IV Update current as of 1230 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 wave surge of approximately 3 feet at the intake structure to occur around 1100 EST. 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, and has evacuated all personnel from the vicinity of the intake structure, invoking 50.54(x) for security measures. 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. RIV is the lead for U.S. sites. Headquarters is the lead for tracking.

At 1130 EST, the licensee observed potential tsunami effects of one foot based on buoy information. The licensee expects this to build to approximately a three foot surge over the ensuing 1-2 hours. This change is within the normal tidal range and not expected to impact plant operation.

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 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 observed a one foot surge from the tsunami.

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 does not currently anticipate activating its Emergency Operations Center. Oregon does not currently anticipate activating its Emergency Operations Center.

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.

FEMA Region 9 has fully activated the Regional Response Coordination Center.

Status of Japanese Facilities (at 1200 EST)

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.

(OUO) Fukushima Daiichi Unit 2 reportedly suffered a loss of feeding water for its cooling system due to lack of power. As many as 4 emergency diesel generators at Fukushima were reported to be unavailable and/or inoperable. At least one temporary diesel generator has been delivered onsite.

The Japanese regulatory authority (NISA) has declared a heightened state of alert at Fukushima Daiichi. Precautionary evacuations (out to 3 kilometers) have been ordered. Residents between 3km and 10km have been advised to stay indoors ("shelter in place").

There are no reports of radiation leakage from any affected facilities.

No NRC staff currently in Japan on official travel.

Federal Liaison Status (at 1300 EST)

The NOC Crisis Action Team is fully activated. We are working to try to send an NRC representative to the NOC. We will be sending situational reports to the NOC via the Federal Liaison as requested by the NOC.

FEMA NRCC is being staffed. Mike Dudek from NRC is reporting to the NRCC.

FEMA HQ (REPP) has offered to send liaison to NRC. NRC will request FEMA assistance should the need arise.

Congressional Liaison has informed Oversight Committees on status of NRC activities.

NRC issued news release at 1215 EST providing overview of NRC activities.

From: Sheehan, Neil
To: Brenner, Eliot; Harrington, Holly; Screnci, Diane
Subject: Fw: [Know_Nukes] Re: Earthquake and tsunami hits Japan
Date: Friday, March 11, 2011 10:24:13 PM

Neil Sheehan
NRC Public Affairs Officer
Sent from NRC Blackberry

From: Know_Nukes@yahoogroups.com <Know_Nukes@yahoogroups.com>
To: Know_Nukes@yahoogroups.com <Know_Nukes@yahoogroups.com>
Sent: Fri Mar 11 22:21:05 2011
Subject: Re: [Know_Nukes] Re: Earthquake and tsunami hits Japan

From this info they are able to maintain core water level inventory but not able to remove heat from the suppression pool. They have similar press releases for Units 2 & 4.

From the TEPCO website:

At 2:48PM on March 11th, the reactor of Fukushima Daini Nuclear Power Station Unit 1 (Boiling Water Reactor, rated output 1,100 Megawatts) shut down due to the impact of the earthquake.

Reactor Core Isolation Cooling System was used to inject water into the reactor to cool it. Today at 3:48AM, water injection by Make-up Water Condensate System begun.
Subsequently, at 5:22AM, the temperature of the suppression chamber exceeded 100 degrees.
As the reactor pressure suppression function was lost, at 5:22AM, it was determined that a specific incident stipulated in article 15, clause 1 has occurred.

Safety and Impact to the Environment
- Currently, water level to cool irradiated fuels in the reactor is maintained.
- Indication of monitoring posts installed in the site boundary is not different from normal. Currently, no radiation impact to the external environment has been confirmed.

We will continue monitoring in detail discharge of radioactive material from exhaust stack and discharge canal.

--- On **Fri, 3/11/11, schedule80 <*schedule80@yahoo.com*>** wrote:

> From: schedule80 <schedule80@yahoo.com>
> Subject: [Know_Nukes] Re: Earthquake and tsunami hits Japan
> To: Know_Nukes@yahoogroups.com
> Date: Friday, March 11, 2011, 9:38 PM
>
> The following link from Tokyo Electric Power Co. says they are reducing pressure in the containment "for those units that cannot confirm certain level of water injection by the Reactor Core Isolation Cooling System..."
>
> http://www.tepco.co.jp/en/press/corp-com/release/11031207-e.html
>
> I am not that familiar with BWR safety systems. Is there too much back pressure in the containment for RCIC flow to be confirmed? That is what it sounds like, but would like someone knowledgeable to comment on what they think it means. Another question - When RCIC is in service, how is decay heat removed from the reactor? The RCIC puts water into the reactor, but how does the heat get out? Is it strictly steam venting to the supression pool?
>
> - Pete
>
> --- In Know_Nukes@yahoogroups.com, "Paul P" <iprimap@...> wrote:
> >
> > From http://www.nei.org/newsandevents/information-on-the-japanese-earthquake-and-reactors-in-that-region

LL4/15

>
> Update as of 5 p.m. EST March 11:
>
> Pressure inside the containment of Unit 1 at Fukushima Daiichi reportedly has been increasing over the time that emergency core cooling systems have not been active. TEPCO reported at 2 a.m. local time that pressure had increased beyond plant reference levels, but was within engineered limits. The company said it will reduce the pressure within containment "for those units that cannot confirm certain level of water injection" by the safety systems. "We will endeavor to restore the units and continue monitoring the environment of the site periphery," TEPCO's press release states.
>
> The Federation of Electric Power Companies in Japan released a statement indicating that "slightly radioactive vapor will be passed through a filtering system and emitted outside via a ventilation stack." TEPCO "is confident that this controlled release will help maintain the integrity of the reactor containment vessel while having no impact on health or the environment."
>
> -----
>
> Never did like the minimalist approach GE took with instrumentation in its BWR design - the Japanese engineers don't even know what RPV water level is. Apparently RCIC and HPCI aren't working (?????) and there are no EDGs available for supplying electical power to the core spray pump motors or for the LPCI mode of the RHR pump motors when the RPV is depressurized (in which case RCIC and HPCI would be useless).
>
> So what has caused the rise in primary containment pressure? Steam relief to the suppression pool? Or an RCS leak?
>
>
>
> --- In Know_Nukes@yahoogroups.com, "schedule80" <schedule80@> wrote:
> >
> > ANS Nuclear Cafe is aggregating news reports on the status of the Japanese nuclear power plants. There appears to be problems with back up power for the cooling systems at at least one plant, including some evacuations.
> >
> > http://ansnuclearcafe.org/2011/03/11/media-updates-on-nuclear-power-stations-in-japan/
> >
> > - Pete
> >
>

From: Brenner, Eliot
To: Harrington, Holly
Subject: RE: HOO Highlight - NOUE Termination at Diablo Canyon
Date: Friday, March 11, 2011 9:11:56 PM

Ok. Also let him know what the white house said. ... fyi .. chairman was on a call with the white house earlier this evening from which this strategy sprung. He is prepared for the white house to throw him to the media tomorrow.

Might tell scott that because of the house I am up to tonight, I may not make it in until 8.

Fyi, I booked a room for neil at the hotel for two nightgs (days really).

From: Harrington, Holly
Sent: Friday, March 11, 2011 9:09 PM
To: Brenner, Eliot
Subject: RE: HOO Highlight - NOUE Termination at Diablo Canyon

I appreciate your faith in my ability to juggle! (I did not realize I was going to be solo'ing it!)

While we were asked by the chairman for the Q&As, this White House edict clearly stops that in its tracks. The White House email also said "close hold" and I'm loathe to spread this all over the OP Center. So my plan now is to walk over and share with Mike Weber. OK?

From: Brenner, Eliot
Sent: Friday, March 11, 2011 9:03 PM
To: Harrington, Holly
Subject: RE: HOO Highlight - NOUE Termination at Diablo Canyon

Look good. Sorry about suggesting you take time away for the blog. Please be sure the see the white house email. If you have not seen it I will forward it.

From: Harrington, Holly
Sent: Friday, March 11, 2011 8:41 PM
To: Brenner, Eliot
Subject: FW: HOO Highlight - NOUE Termination at Diablo Canyon

Now with the attchment

From: Harrington, Holly
Sent: Friday, March 11, 2011 8:40 PM
To: Brenner, Eliot
Subject: RE: HOO Highlight - NOUE Termination at Diablo Canyon

Are you kidding. I don't have time to breath.

Here are the Q&As I drafted for the chairman. He wanted "public answers" followed by technical/background. I've sent this back to Op Center for the technical additions.

Have turned down interviews with CNN and German TV.

From: Brenner, Eliot
Sent: Friday, March 11, 2011 7:51 PM
To: Harrington, Holly
Subject: FW: HOO Highlight - NOUE Termination at Diablo Canyon

You could update our blog post with this if you get the chance. I am out of here.

From: HOO Hoc
Sent: Friday, March 11, 2011 7:50 PM
To: HOO Hoc
Subject: HOO Highlight - NOUE Termination at Diablo Canyon

1528 PST - Diablo Canyon has terminated their Unusual Event because the tsunami warning has been reduced to a tsunami advisory. No damage occurred during this event.

Headquarters Operations Officer
U.S. Nuclear Regulatory Commission
Phone: 301-816-5100
Fax: 301-816-5151
email: hoo.hoc@nrc.gov
secure e-mail: hoo1@nrc.sgov.gov

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

From: Brenner, Eliot
To: Harrington, Holly
Subject: RE: conferdnce call
Date: Friday, March 11, 2011 10:30:55 PM

I am on the line. Had trouble connecting by my cell.

From: Harrington, Holly
Sent: Friday, March 11, 2011 10:30 PM
To: Brenner, Eliot
Subject: RE: conferdnce call

Are you calling in now? Apparently this is the pre-brief to the 11:15 and Mike thought you were calling in

---

From: Brenner, Eliot
Sent: Friday, March 11, 2011 9:51 PM
To: Harrington, Holly
Subject: RE: conferdnce call

I think we will be out on the firing line tomorrow.

From: Harrington, Holly
Sent: Friday, March 11, 2011 9:51 PM
To: Brenner, Eliot
Subject: RE: conferdnce call

I'm here and he's not. Apparently won't be back until 10:30. I'm going to stay here in the Op Center. Scott is sleeping in your office.

Things are a bit confusing here as everyone jumps through hoops trying to figure out what the chairman wants . . . apparently. Victor McCree BTW is complaining to Mike Weber via e-mail that the NRC is not out in front of this . . .

We've got 2,000 views on the blog!

From: Brenner, Eliot
Sent: Friday, March 11, 2011 9:39 PM
To: Harrington, Holly
Cc: Hayden, Elizabeth
Subject: conferdnce call

Chairman wants you back at the Ops center. He will be briefed before the TA call. Ops will put you and me onto that call. Chairman is chomping at the bit to get out front, but I told him we need something concrete to say to do that.

Are you getting any press calls? He was asking.

11/17

From: Harrington, Holly
To: Brenner, Eliot
Cc: Hayden, Elizabeth
Subject: RE: conferdnce call
Date: Friday, March 11, 2011 9:40:00 PM

Not lately, no. did turn down CNN. Just forwarded him the White House information. Will head back to OP Center

---

From: Brenner, Eliot
Sent: Friday, March 11, 2011 9:39 PM
To: Harrington, Holly
Cc: Hayden, Elizabeth
Subject: conferdnce call

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Are you getting any press calls? He was asking.

From:	Harrington, Holly
To:	Burnell, Scott
Subject:	FW: here you go
Date:	Friday, March 11, 2011 9:11:00 PM
Attachments:	Questions and Answers for Chairman Jaczko.docx

Created by request of chairman, but ultimately somewhat overtaken by WH directive

From: Harrington, Holly
Sent: Friday, March 11, 2011 8:36 PM
To: Mroz (Sahm), Sara
Subject: here you go

11/18

Questions and Answers for Chairman Jaczko
March 11, 2011
Japan Earthquake/Tsunami Aftermath

1. What is the NRC doing about the emergencies at the nuclear power plants in Japan? Are you sending staff over there?

Public Answer: We are closely following events in Japan, and have been in direct contact with our counterparts in that country. In addition, we are ready to provide whatever assistance they we them should there be a specific request. Do we want to add more? Are we sending staff? Have we received a request for help?

Additional technical, non-public information:

2. Can this happen here i.e. an earthquake that significantly damages a nuclear power plant? Are the Japanese plants similar to U.S. plants?

Public Answer: All U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes. Even those plants that are located outside of areas with extensive seismic activity are designed for safety in the event of such a natural disaster. The NRC requires that safety-significant structures, systems, and components be designed to take into account the most severe natural phenomena historically reported for the site and surrounding area and then goes further. In other words, the licensing bases for existing nuclear power plants are based on historical data from the area's maximum credible earthquake, with an additional margin included. Are the Japanese plants similar to ours? Is this public information or should we not say anything?

Additional technical, non-public information:

3. What would U.S. plants do in this situation?

Public Answer: The NRC requires plants to test their emergency preparedness capabilities on a regular basis, and plant operators are very capable of responding to significant events. In addition, NRC regulations require plants to have plans in place that would allow them to mitigate even "worst case scenarios" B5b type measures info here?

Additional technical, non-public information:

4. Are U.S. power plants designed to withstand tsunamis?

Public Answer: Yes. Plants are built to withstand a variety of environmental hazards and those plants that might face a threat from tsunami are required to withstand large waves and the maximum wave height at the intake structure (which varies by plant.)

Additional, technical, non-public information:

5. Could the Japanese situation in the nuclear power plants there end up like Chernobyl?

Public Answer: We don't feel it appropriate for the NRC, which has no regulatory responsibility for Japan's nuclear power plants, to make comments about what may or may be happening or happen there in the future. However, it's important to note that Japanese nuclear power plants are built to a significant level of robustness where the Chernobyl facility was definitely not.

Additional, technical, non-public information:

6. What happens when/if a plant "melts down"?

Public Answer: In short, nuclear power plants in the United States are designed to be safe. To prevent the release of radioactive material, there are multiple barriers between the radioactive material and the environment, including the fuel cladding, the heavy steel reactor vessel itself and the containment building, usually a heavily reinforced structure of concrete and steel several feet thick. In a "melt down," these barriers are breached and radiation escapes to the environment.

Additional, technical, non-public information:

7. Should people in Japan take KI?

Public Answer: KI – potassium iodide – is one of the protective measures that might be taken in a radiological emergency in this country. We do not know if this measure is necessary or appropriate in the Japanese situation.

Additional, technical non-public information.

8. Was there any damage to U.S. reactors from either the earthquake or the resulting tsunami?

Public Answer: No

Additional, technical non-public information:

9. Is there a risk that radiation from Japan will reach the U.S.?

Public Answer: The NRC is not in a position to make any statements in this regard. Not only is it premature, but it is not our area of responsibility. When and if the time comes for concern, the question should be directed to the U.S. Environmental Protection Agency.

Additional, technical, non-public information:

10. Has this incident changed the NRC perception about earthquake risk?

Public Answer: As is prudent, the NRC will certainly be looking closely at this incident and the effects on the Japanese nuclear power plant in the future to see if any changes are necessary to NRC regulations.

Additional, technical, non-public information.

11. Will this incident affect new reactor licensing?

Public Answer: It is not appropriate to hypothesize on such a future scenario at this point.

Additional, technical non-public information:

From: Harrington, Holly
To: RST01 Hoc
Subject: q&As
Date: Friday, March 11, 2011 8:51:00 PM
Attachments: Questions and Answers for Chairman Jaczko.docx

44/19

Questions and Answers for Chairman Jaczko
March 11, 2011
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Public Answer: No

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Additional, technical non-public information:

From: Harrington, Holly
To: Mroz (Sahm), Sara
Subject: here you go
Date: Friday, March 11, 2011 8:36:00 PM
Attachments: Questions and Answers for Chairman Jaczko.docx

LL/20

Questions and Answers for Chairman Jaczko
March 11, 2011
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To: Brenner, Eliot
Subject: FW: HOO Highlight - NOUE Termination at Diablo Canyon
Date: Friday, March 11, 2011 8:40:00 PM
Attachments: Questions and Answers for Chairman Jaczko.docx

Now with the attchment

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Sent: Friday, March 11, 2011 8:40 PM
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Headquarters Operations Officer
U.S. Nuclear Regulatory Commission
Phone: 301-816-5100
Fax: 301-816-5151
email: hoo.hoc@nrc.gov
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U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

11/21

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March 11, 2011
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Additional, technical, non-public information.

11. Will this incident affect new reactor licensing?

Public Answer: It is not appropriate to hypothesize on such a future scenario at this point.

Additional, technical non-public information:

From: Virgilio, Martin
To: McDermott, Brian; Weber, Michael; Harrington, Holly; Morris, Scott; Leeds, Eric
Cc: McCree, Victor
Subject: Fw: News Reports of Japanese NPP Status
Date: Friday, March 11, 2011 7:50:15 PM

All

Please keep these in mind as you develop the key messages/ Q+A's for our communications plan

Marty

From: McCree, Victor
To: Virgilio, Martin
Cc: Dean, Bill; Satorius, Mark; Collins, Elmo
Sent: Fri Mar 11 19:40:15 2011
Subject: News Reports of Japanese NPP Status

I just listened to the NBC and ABC news "experts" accounts of the status of the Fukishima Daiichi Nuclear Power Plant (FDNPP) Units 1 (and 2) and their forecast of what could happen if electrical power was not soon restored. Their accounts included several mis-statements that we ought to be aware of, and perhaps provide clarity in any NRC public response and/or statements that we make on this subject.

i. One expert implied that the BWR core is normally not covered, and that the ECCS systems only inject after core damage has begun.

ii. The expert also indicated that although the release of pressure from the containment at FDNPP would be filtered, that the filtration was highly unlikely to be successful.

iii. Another expert implied that nuclear power plants have a limited ability to withstand an "expected" earthquake, and that they are not designed to handle an "extraordinary" earthquake. [Note: Although the 8.9 Richter scale magnitude earthquake at FDNPP may have been beyond its design basis (or Safe Shutdown Earthquake) the SSE is, by definition, is an extraordinary earthquake.]

Vic

uu/22

From: Harrington, Holly
To: Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David
Subject: Just FYI
Date: Friday, March 11, 2011 6:12:00 PM

NEI Off Hours public affairs number: 703-644-8805

LL/23

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:	latest TEPCO press release (dated March 12)
Date:	Friday, March 11, 2011 5:59:00 PM

http://www.tepco.co.jp/en/press/corp-com/release/11031210-e.html

24

From: Burnell, Scott
To: Brenner, Eliot; Harrington, Holly
Subject: USAF denies sending "coolant" to Japan
Date: Friday, March 11, 2011 5:55:22 PM

FINALLY!!!

http://blogs.wsj.com/washwire/2011/03/11/state-department-no-emergency-delivery-to-japanese-nuclear-plant/

The US Air Force denies sending "coolant" to Japanese reactor.

"Regarding the question of whether US Air Force delivered assistance to a nuclear plant in Japan, I'm told that ultimately the Japanese Government handled the situation on its own," State Department spokeswoman Julie Reside said in an email.

For its part, the Air Force said it had no indication that it had delivered coolant or any other supplies to the stricken power plant."

wl/25

From: Brenner, Eliot
To: Burnell, Scott; McIntyre, David; Hayden, Elizabeth; Harrington, Holly
Subject: ratcheting up our effort slightly
Date: Saturday, March 12, 2011 10:23:56 PM

We may start talking off the record or on background more tomorrow with reporters. Both Jackzo and I are leaning heavily on the white house to get off the dime. If we see Bill Nye the Science Guy much more Jackzo is going to tell us to start pushing more background work.

eliot

11/26

From: Harrington, Holly
To: Akstulewicz, Brenda; Couret, Ivonne; Shannon, Valerie
Subject: What to do with citizen inquiries
Date: Saturday, March 12, 2011 9:55:00 PM

HOO has been asked to take messages and send to opa.resource or to ask people to e-mail directly. Whomever is monitoring OPA resource – print these out and ask someone if they need to be responded to. You can use existing "'script" that Brenda has or ignore them or one of us will respond, if appropriate.

11/27

From: Harrington, Holly
To: LIA02 Hoc
Subject: RE: Answer ideas
Date: Saturday, March 12, 2011 9:05:00 PM

Perfect. Thank you

From: LIA02 Hoc
Sent: Saturday, March 12, 2011 9:04 PM
To: Harrington, Holly
Subject: RE: Answer ideas

Thanks for bearing with us Holly. We edited it slightly. Margie approves this.

"NRC has been in contact with IAEA throughout the events and earthquake aftermath in Japan. Via IAEA communication, NRC has received information and reports from Japan. IAEA and Japan are exchanging information and it is up to them to develop INES information and communicate it with the public."

From: Harrington, Holly
Sent: Saturday, March 12, 2011 8:56 PM
To: LIA02 Hoc
Subject: RE: Answer ideas

Were you able to get this OK'd by Margie?

From: LIA02 Hoc
Sent: Saturday, March 12, 2011 7:51 PM
To: Harrington, Holly
Subject: Answer ideas

NRC has been in contact with IAEA throughout the events and earthquake aftermath in Japan. Via IAEA communication, NRC has received information and reports from Japan. The information and manner that information is reported to IAEA regarding this event is at the discretion of Japanese officials.

LL/28

From: Harrington, Holly
To: Burnell, Scott
Subject: RE: Q&As
Date: Saturday, March 12, 2011 8:09:00 PM

You can read these when you get here

From: Burnell, Scott
Sent: Saturday, March 12, 2011 8:05 PM
To: Harrington, Holly; McIntyre, David; Couret, Ivonne; Brenner, Eliot; Hayden, Elizabeth
Subject: RE: Q&As

OK, I'll take a look as I'm awake now -- got several hours sleep anyway.

The reason I'm up is that I just had a very productive off-the-record "as a friend" conversation with Joel Achenbach, a really good science-y writer @ the Post. You'll hopefully see his article up soon, and I do think he's approaching things in a sensible way. I also think the conversation will lead to WaPo writers reaching out more through the Ops Ctr, so be aware. Thanks.

From: Harrington, Holly
Sent: Saturday, March 12, 2011 8:00 PM
To: Burnell, Scott; McIntyre, David; Couret, Ivonne
Subject: FW: Q&As

These are good as of 8 p.m. I expect them to evolve . .. Scott - - these are saved to the desktop to the second computer in the Op Center

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From: Harrington, Holly
Sent: Saturday, March 12, 2011 7:58 PM
To: Jaczko, Gregory
Cc: Brenner, Eliot; Hayden, Elizabeth
Subject: Q&As

These are the current Q&As with both answers suitable for the public and additional technical information. We expect these will continue to evolve.

Holly Harrington

11/29

From: Harrington, Holly
To: Norton, Charles; Kammerer, Annie
Subject: Q&As
Date: Saturday, March 12, 2011 7:54:00 PM
Attachments: boardfile1.docx

Questions and Answers for Chairman Jaczko

March 11, 2011 Japan Earthquake/Tsunami Aftermath
As of 8 p.m., 3/12/2011

1. What is the NRC doing about the emergencies at the nuclear power plants in Japan? Are you sending staff over there?

Public Answer: We are closely following events in Japan, working with other agencies of the federal government, and have been in direct contact with our counterparts in that country. We are ready to provide assistance if there is a specific request. Two NRC staff members knowledgeable about boiling water reactors is participating in the USAID team that has departed for Japan.

Additional technical, non-public information:
We are taking the knowledge that the staff has about the design of the US nuclear plants and we are applying this knowledge to the Japan situation. For example, this includes calculations of severe accident mitigation that have been performed. Tony Ulses has been dispatched to Japan and should arrive Early Sunday.David Jim Trapp left 1600 Saturday should arrive in 20 hours

2. What's going to happen following the steam explosion everyone's seen from the video footage?

Public Answer: If a similar event occurred at a U.S. nuclear power plant, the NRC would be seeking information to answer several questions, including: What's the status of the reactor core, the reactor vessel and the containment building? What radiation measurement equipment is available and what measurements are being reported? What efforts are being taken to keep the public safe? How did the explosion affect efforts to keep the nearby reactors in a safe condition? And most importantly – What can the NRC do to help?

Additional technical, non-public information:

The explosion affected the secondary containment of the reactor plant. The primary containment was not affected by the explosion. The Japanese are taking actions to preserve the primary containment, cool the reactor core, maintain the reactor shut down and limit the spread of radioactive contamination.

The NRC required a back fit to US reactors of the type similar to Fukushima Unit 1 to install a hardened vent line. A hardened vent provides a release path which would prevent an explosion as experienced at Fukushima Unit One.

3. What should done to protect people in Alaska, Hawaii and the West Coast do from radioactive fallout?

Public Answer: The available evidence shows the United States can be expected to avoid any impacts from radioactive material, so no public action is necessary. We believe there is very low risk to the US considering the long distance from the US and the type of event.

Additional technical, non-public information: NRC is working with DHS, EPA and other federal partners to ensure monitoring equipment is properly positioned, based on meteorological and other relevant information.

4. Can this happen here i.e. an earthquake that significantly damages a nuclear power plant? Are the Japanese plants similar to U.S. plants?

Public Answer: All U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. Even those plants that are located outside of areas with low and moderate seismic activity are designed for safety in the event of such a natural disaster. The NRC requires that safety-significant structures, systems, and components be designed to take into account even very rare and extreme seismic and tsunami events.

The Japanese facilities are similar in design to several US facilities.

Additional technical, non-public information:
Currently operating reactors were designed using a "deterministic" or "maximum credible earthquake" approach. Seismic hazard for the new plants is determined using a much more robust probabilistic seismic hazard assessment approach that explicitly addresses uncertainty, as described in RG1.208. The NRC requires that adequate margin beyond the design basis ground shaking levels is assured. The NRC further enhances seismic safety for beyond-design-basis events through the use of a defense-in-depth approach.

In addition, the NRC periodically reviews the seismic risk at operating reactors when information may have changed. Over the last few years the NRC has undertaken a program called Generic Issue 199, which is focused on assessing hazard for plants in the central and eastern US using the latest techniques and determining the possible risk implications of any increase in the anticipated ground shaking levels. This program will help us assure that the plants are safe under exceptionally rare and extreme ground motions that represent beyond-design-basis events.

5. What would U.S. plants do in this situation?

Public Answer: The NRC requires plant designs to include multiple and diverse safety systems, and plants must test their emergency preparedness capabilities on a regular basis. Plant operators are very capable of responding to significant events. In addition, NRC regulations require plants to have plans in place that would allow them to mitigate even "worst case scenarios".

Since 9/11, we have implemented requirements for licensees to have additional response capabilities for extreme situations.

Additional technical, non-public information:
Our nuclear plants have procedures in place to address a variety of accident scenarios, including abnormal operating procedures, emergency operating procedures, sever accident guidelines and emergency plans.

6. Are U.S. power plants designed to withstand tsunamis?

Public Answer: Yes. Plants are built to withstand a variety of environmental hazards and those plants that might face a threat from tsunami are required to withstand large waves and the maximum wave height at the intake structure (which varies by plant.)

Additional, technical, non-public information:
Tsunami have been considered in the design of US nuclear plants since the publication of Regulatory Guide 1.59 in 1977, although the approaches that were used for design of the existing plants varied significantly. Nuclear plants are designed to withstand flooding from not only tsunami, but also hurricane and storm surge; therefore there is often significant margin against tsunami flooding. However, it should be noted that Japanese experience has shown that drawdown can be a significant problem. Drawdown was not generally analyzed in the past. The particular

Currently the US NRC has a tsunami research program that is focused on developing modern hazard assessment techniques and additional guidance through cooperation with the National Oceanic and Atmospheric Administration and the United States Geological Survey. This has already lead to several technical reports and an update to NUREG 0-800. The NOAA and USGS contractors are also assisting with NRO reviews of tsunami hazard. A new regulatory guide on tsunami hazard assessment is currently planned in the office of research, although it is not expected to be available in draft form until 2012.

7. What happens when/if a plant "melts down"?

Public Answer: In short, nuclear power plants in the United States are designed to be safe. To prevent the release of radioactive material, there are multiple barriers between the radioactive material and the environment, including the fuel cladding, the heavy steel reactor vessel itself and the containment building, usually a heavily reinforced structure of concrete and steel several feet thick.

Additional, technical, non-public information:
The melted core may melt through the bottom of the vessel and flow onto the concrete containment floor. The core may melt through the containment liner and release radioactive material to the environment.

8. Why is KI administered during nuclear emergencies?

Public Answer: KI – potassium iodide – is one of the protective measures that might be taken in a radiological emergency in this country. A KI tablet will saturate the thyroid with non radioactive iodine and prevent the absorption of radioactive iodine that could be part of the radioactive material mix of radionuclides in a release.KI does not prevent exposure from these other radionuclides.

Additional, technical non-public information.
There are a range of protective measures that we use ... the most effective is evacuation. Local government officials are responsible for determining the best means to protect their public. KI is another means for protection but evacuation and sheltering are the primary means that are used.

9. Was there any damage to U.S. reactors from either the earthquake or the resulting tsunami?

Public Answer: No

Additional, technical non-public information:
Diablo Canyon Units 1 and 2 declared an "unusual event" based on tsunami warning following the Japanese earthquake. They have since exited the "unusual event" declaration, based on a downgrade to a tsunami advisory.

10. Has this incident changed the NRC perception about earthquake risk?

Public Answer: There has been no change in the NRC's perception of earthquake hazard (i.e. ground shaking levels) for US nuclear plants. As is prudent, the NRC will certainly be looking closely at this incident and the effects on the Japanese nuclear power plant in the future to see if any changes are necessary to NRC regulations.

Additional, technical, non-public information.
We expect that there would be lessons learned, etc.

11. Will this incident affect new reactor licensing?

Public Answer: It is not appropriate to hypothesize on such a future scenario at this point.

Additional, technical non-public information:
This event could potentially call into question the NRC's seismic requirements which could require the staff to re-evaluate the staff's approval of the AP1000 and ESBWR design and certifications.

12. What magnitude earthquake are US plants designed to?

Public Answer: Each plant is designed to a ground-shaking level that is appropriate for its location, given the possible earthquake sources that may affect the site and its tectonic environment. Ground shaking is a function of both the magnitude of and earthquake and the distance from the fault plane to the site. The probabilistic approaches account for a large number of different magnitudes.

Additional, technical non-public information:
In the past, "deterministic" or "scenario based" analyses were used to determine ground shaking (seismic hazard) levels. Now a probabilistic method is used that accounts for all possible earthquakes coming from all possible sources (including background seismicity) and the likelihood that each particular hypothetical earthquake occurs.

13. How many US reactors are located in active earthquake zones (and which reactors)?

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

Additional, technical non-public information: No additional.

14. How many reactors are along coastal areas that could be affected by a tsunami (and which ones)?

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

Additional, technical non-public information: None

15. How many U.S. plants have designs similar to the affected Japanese reactors (and which ones)

Public Answer: Six of the 104 US reactors are General Electric BWR 3 with Mark 1 containments similar to the design used at Fukushima Unit One.

Additional Information:
The units are: Dresden Units 2 and 3, Monticello unit 1, Pilgrim unit 1, Quad Cities Units 1 and 2.

From: Harrington, Holly
To: LIA02 Hoc
Subject: RE: Answer ideas
Date: Saturday, March 12, 2011 8:56:00 PM

Were you able to get this OK'd by Margie?

From: LIA02 Hoc
Sent: Saturday, March 12, 2011 7:51 PM
To: Harrington, Holly
Subject: Answer ideas

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uu/30

From: Harrington, Holly
To: Brenner, Eliot; Burnell, Scott; McIntyre, David
Subject: B-roll
Date: Saturday, March 12, 2011 11:01:01 PM

Just FYI – AV produced six DVDs/b-roll tapes of the op center for possible distribution. They are stacked on the first OPA desk in the Op Center.

11/31

From: Harrington, Holly
To: McIntyre, David
Cc: Burnell, Scott
Subject: these are the " final" talking points.
Date: Saturday, March 12, 2011 10:55:18 PM
Attachments: boardfile1.docx

These also reside on the desktop of the second computer. I've not posted these to WebEOC because they are close hold

Questions and Answers for Chairman Jaczko

[redacted]

March 11, 2011 Japan Earthquake/Tsunami Aftermath
As of 8 p.m., 3/12/2011

1. What is the NRC doing about the emergencies at the nuclear power plants in Japan? Are you sending staff over there?

Public Answer: We are closely following events in Japan, working with other agencies of the federal government, and have been in direct contact with our counterparts in that country. We are ready to provide assistance if there is a specific request. Two NRC staff members knowledgeable about boiling water reactors are participating in the USAID team that has departed for Japan.

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Public Answer: To prevent the release of radioactive material, there are multiple barriers between the radioactive material and the environment, including the fuel cladding, the heavy steel reactor vessel itself and the containment building, usually a heavily reinforced structure of concrete and steel several feet thick. In a so-called "meltdown," some of the nuclear fuel has melted because of extremely high temperatures caused by a lack of adequate cooling. This does not necessarily mean that radiation is released to the environment. But it could be if other barriers fail.

Additional, technical, non-public information: None.

8. Why is KI administered during nuclear emergencies?

Public Answer: KI – potassium iodide – is one of the protective measures that might be taken in a radiological emergency in this country. A KI tablet will saturate the thyroid with non radioactive iodine and prevent the absorption of radioactive iodine that could be part of the radioactive material mix of radionuclides in a release.KI does not prevent exposure from these other radionuclides.

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Additional, technical non-public information: No additional.

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Additional, technical non-public information: None

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Public Answer: Six of the 104 US reactors are General Electric BWR 3 with Mark 1 containments similar to the design used at Fukushima Unit One.

Additional Information:
The units are: Dresden Units 2 and 3, Monticello unit 1, Pilgrim unit 1, Quad Cities Units 1 and 2.

From: Harrington, Holly
To: Couret, Ivonne
Subject: FW: Names/Info Requestsed
Date: Saturday, March 12, 2011 1:56:00 PM

From: Akstulewicz, Brenda
Sent: Saturday, March 12, 2011 1:45 PM
To: Brenner, Eliot; Hayden, Elizabeth; Harrington, Holly
Subject: Names/Info Requestsed

Laura Scheele
American Nuclear Society
Outreach & Volunteer Development, Communications Specialists
708-579-8224
lscheel@ans.org
www.ans.org

Craig H. Piercy, Principal
Bose Public Affairs Group
202-470-1928
cpiercy@bosepublicaffairs.com
www.bosepublicaffairs.com

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

44/33

From: Brenner, Eliot
To: Harrington, Holly
Subject: RE: FYI
Date: Saturday, March 12, 2011 1:11:08 PM

I would like you over here for the time being and I can send Ivonne back to hold the office fort for a while.

From: Harrington, Holly
Sent: Saturday, March 12, 2011 1:10 PM
To: Brenner, Eliot
Subject: RE: FYI

Do you want me to start on the press release? Do you want me here or there?

BTW, I've pushed back on CDC about a 2 p.m. conference call they want to do to coordinate messaging on radiation. I said they did not have the right people on the call to make it worthwhile. i.e. no dhs, fema, epa, etc.

From: Brenner, Eliot
Sent: Saturday, March 12, 2011 1:06 PM
To: Harrington, Holly
Subject: RE: FYI

I need to delete the part about xxx and ongoing consultations between our experts and Japanese nuclear officials, xxx

Right now it could suggest they have sought assistance when they have not. We have offered, they have not taken us up on it.

Further, let's hold this a little bit. I want the latest post to sit there for a while. Next thing I want to do is update our press release to confirm we have a couple of people traveling with AID.

Eliot

From: Harrington, Holly
Sent: Saturday, March 12, 2011 1:02 PM
To: Brenner, Eliot; Akstulewicz, Brenda
Cc: Hayden, Elizabeth
Subject: RE: FYI

Where to Get Accurate Information on the Japanese Situation

The NRC has reactor experts in Japan or en route as part of a U.S. Agency for International Development (USAID) team of federal officials from various areas of expertise. USAID is the federal government agency primarily responsible for providing assistance to countries recovering from disaster administering.

Even with "boots on the ground" in Japan and ongoing consultations between our experts and

Japanese nuclear officials, the NRC cannot provide information on the status of that country's nuclear power plants. Check back to this blog or www.nrc.gov for updates on what actions we're taking. Other good sources of information are:

USAID -- www.usaid.gov/
U.S. Dept. of State -- www.state.gov
FEMA -- www.fema.gov
White House -- www.whitehouse.gov
Nuclear Energy Institute --- www.nei.org
International Atomic Energy Agency -- www.iaea.org/press/

For those calling to offer your advice or guidance on how this situation should be handled, rest assured that some of the most expert people in this field in the world work for the NRC and we are on the job.

Eliot Brenner
Public Affairs Director

From: Brenner, Eliot
Sent: Saturday, March 12, 2011 12:45 PM
To: Harrington, Holly; Akstulewicz, Brenda
Cc: Hayden, Elizabeth
Subject: RE: FYI

Ok ... update the blog now and include a line about the NRC has reactor experts with the U.S. AID team, available to provide assistance if requested. Let me see the final product.

From: Harrington, Holly
Sent: Saturday, March 12, 2011 12:40 PM
To: Akstulewicz, Brenda
Cc: Brenner, Eliot; Hayden, Elizabeth
Subject: RE: FYI

This is what I suggest we say to these folks:

The NRC is in consultation with the Japanese nuclear authorities and offering our assistance to them. However, we cannot speak for them nor provide information on their status or situation. Please follow the NRC efforts on our Web site and on our blog. Other good sources of information are:

www.state.gov
www.fema.gov
www.whitehouse.gov
www.nei.org
http://www.iaea.org/press/

BTW – I'm going to suggest we add these links to the next blog post.

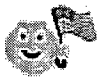
And if they try to offer assistance or idea of how to fix the problem (promise me, they will) This additional statement:

Thank you for your suggestion and interest in this situation. Rest assured that some of the most expert people in this field in the world work for the NRC and are able to assist the Japanese nuclear authorities.

From: Akstulewicz, Brenda
Sent: Saturday, March 12, 2011 12:33 PM
To: Brenner, Eliot; Hayden, Elizabeth; Harrington, Holly
Subject: FYI

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

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



From: Harrington, Holly
To: Brenner, Eliot
Subject: Question about KI expert
Date: Saturday, March 12, 2011 3:28:00 PM

CNN said this: The government was also preparing to distribute iodine tablets to residents, the IAEA said. Iodine is commonly prescribed to help prevent the thyroid gland from taking in too much radioactivity, according to the U.S. Environmental Protection Agency website.

If this comes to pass, we might want to consider bringing Trish in tomorrow to explain KI usage to reporters . . .

From: Brenner, Eliot
To: Sheehan, Neil; Dean, Bill; Lew, David
Cc: Harrington, Holly; Hayden, Elizabeth; Screnci, Diane
Subject: RE: Media calls today on Japan reactor event
Date: Saturday, March 12, 2011 3:57:54 PM

Nothing fresh. Press releases parallel our talking points.

As for tomorrow, I would like you come down and work the overnight tomorrow night in the Ops Center and be prepared to also work Monday night. There is a reservation for you at the Marriott across the street in your name, on my credit card. Strongly suggest you substitute your own card. If you wake up at 4 p.m. and I tell you it is not necessary to work a second night ... the Marriott will only charge for a single night.

-----Original Message-----
From: Sheehan, Neil
Sent: Saturday, March 12, 2011 3:55 PM
To: Brenner, Eliot; Dean, Bill; Lew, David
Subject: Media calls today on Japan reactor event

So far today I have received calls from the Union Leader (of Manchester, N.H.), the York (Pa.) Daily Record, the Journal News (of Westchester, N.Y.) and the Pottstown (Pa.) Daily Record.

Any updates of the talking points would be appreciated.

Neil Sheehan
NRC Public Affairs Officer
Sent from NRC Blackberry

From: Couret, Ivonne
To: Brenner, Eliot; Hayden, Elizabeth; Harrington, Holly
Subject: Kyodo - NEWS ADVISORY: 6th reactor at Fukushima nuke plant loses cooling functions (07:31)
Date: Saturday, March 12, 2011 5:55:03 PM

The AP of Japan...http://english.kyodonews.jp/news/

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

☎ **(301) 415-8205**
✉ **ivonne.couret@nrc.gov**

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

2010-2011 Information Digest - Where you can find NRC Facts at a Glance
http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/

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

44/37

From: Harrington, Holly
To: feigc@who.int
Subject: Some links for us and others -- hope it helps!
Date: Saturday, March 12, 2011 6:16:00 PM

---

http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/bio-effects-radiation.html

http://emergency.cdc.gov/radiation/

http://www.epa.gov/radiation/index.html

http://hps.org/hpspublications/radiationfactsheets.html

Couret, Ivonne

From: Harrington, Holly
Sent: Saturday, March 12, 2011 12:34 PM
To: Hayden, Elizabeth; Burnell, Scott; Brenner, Eliot; Couret, Ivonne
Subject: I'm here and at my desk. If you want me at the op Center let me know

11439

Couret, Ivonne

From: Lee, Jun
Sent: Saturday, March 12, 2011 12:35 PM
To: Couret, Ivonne
Subject: RE: Eliot Please review items in YELLOW - Website updates
Attachments: image001.gif; image002.jpg

Follow Up Flag: Follow up
Flag Status: Flagged

Done, please preview at

http://webwork:300/
http://webwork:300/reactors/bwrs.html
http://webwork:300/reactors/generic-bwr.pdf

Please let me know if I can post.

Thanks,

Jun

From: Couret, Ivonne
Sent: Saturday, March 12, 2011 12:28 PM
To: Lee, Jun
Subject: RE: Eliot Please review items in YELLOW - Website updates

Remove the hypen from Boiling-Water to Boiling Water...on button
Show me hyperlink to generic BWR pdf file. Thanks, ivonne

From: Lee, Jun
Sent: Saturday, March 12, 2011 12:18 PM
To: Couret, Ivonne
Subject: RE: Eliot Please review items in YELLOW - Website updates

Ivonne,

Okay changes have been staged and cab previewed at

http://webwork:300/
http://webwork:300/reactors/bwrs.html

Waiting on the PDF to link the words diagrams that detail elements and any changes from Eliot.

Thanks,

Jun

From: Couret, Ivonne
Sent: Saturday, March 12, 2011 11:43 AM

11/40

To: Lee, Jun
Subject: RE: Eliot Please review items in YELLOW - Website updates

Go ahead and start he may have minor text changes. Ivonne

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs

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ivonne.couret@nrc.gov

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Please consider the environmental impact before printing this email.

From: Lee, Jun
Sent: Saturday, March 12, 2011 11:42 AM
To: Couret, Ivonne
Subject: RE: Eliot Please review items in YELLOW - Website updates

Ivonne,

Just confirming for changes below, waiting on Eliot's review of the changes before proceeding.

Thanks,

Jun

From: Couret, Ivonne
Sent: Saturday, March 12, 2011 11:33 AM
To: Lee, Jun; Brenner, Eliot
Cc: Burnell, Scott; Hardy, Sally; Akstulewicz, Brenda
Subject: Eliot Please review items in YELLOW - Website updates

Update to http://www.nrc.gov/

Add top button under Key Topics

- **Boiling-Water Reactors (BWRs)**

Hyper link button to http://www.nrc.gov/reactors/bwrs.html

Update this page – http://www.nrc.gov/reactors/bwrs.html

Boiling Water Reactors

In a typical commercial boiling-water reactor, (1) the core inside the reactor vessel creates heat, (2) a steam-water mixture is produced when very pure water (reactor coolant) moves upward through the core, absorbing heat, (3) the steam-water mixture leaves the top of the core and enters the two stages of moisture separation where water droplets are removed before the steam is allowed to enter the steam line, and (4) the steam line directs the steam to the main turbine, causing it to turn the turbine generator, which produces electricity. The unused steam is exhausted in to the condenser where it ~~it~~ condensed into water. The resulting water is pumped out of the condenser with a series of pumps, reheated and pumped back to the reactor vessel. The reactor's core contains fuel assemblies that are cooled by water circulated using electrically powered pumps. These pumps and other operating systems in the plant receive their power from the electrical grid. If offsite power is lost emergency cooling water is supplied by other pumps, which can be powered by onsite diesel generators. Other safety systems, such as the containment cooling system, also need electric power. Boiling-water reactor's contain between 370-800 fuel assemblies. See also our animated diagram and other graphic diagrams that detail elements of the boiling-water reactors.

diagrams that detail elements. Hyper link to the compilation of PDFs previously provided

also delete the extra "It" found in text.

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

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ivonne.couret@nrc.gov

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

Please consider the environmental impact before printing this email.

From:	Harrington, Holly
To:	LIA04 Hoc
Subject:	FW: WH points
Date:	Saturday, March 12, 2011 6:55:00 PM

Link: http://www.nei.org/newsandevents/information-on-the-japanese-earthquake-and-reactors-in-that-region

From: Harrington, Holly
Sent: Saturday, March 12, 2011 6:50 PM
To: LIA04 Hoc
Subject: WH points

This is what the department of energy is saying on background:

"There is no indication whatsoever that materials from the incidents in Japan have potential to have any meaningful effect on the US homeland."

This is what Energy has said on the record on an if-asked basis:

"Senior officials and technical experts from the Department of Energy continue to be in close contact with other agencies as well as with our Japanese counterparts as we work to assess what is a very serious and fluid situation. The United States will continue to work closely with the Japanese government and will provide whatever assistance they request to help them bring the reactors under control."

LIA41

From: Harrington, Holly
To: Brenner, Eliot
Subject: NY Times
Date: Saturday, March 12, 2011 7:14:00 PM

Dylan somebody or other from the NY Times wanted confirmation from us related to recent press reports of core damage. I said we did not have independent information on the situation and could not confirm. Just fyi

From: McIntyre, David
To: Harrington, Holly
Subject: Chairman Jaczko QA6 031311.docx
Date: Sunday, March 13, 2011 4:33:48 PM
Attachments: Chairman Jaczko QA6 031311.docx

Questions and Answers for Chairman Jaczko

March 11, 2011 Japan Earthquake/Tsunami Aftermath
As of 2 pm, 3/13/2011

1. What is the NRC doing about the emergencies at the nuclear power plants in Japan? Are you sending staff over there?

Public Answer: We are closely following events in Japan, working with other agencies of the federal government, and have been in direct contact with our counterparts in that country. We are ready to provide assistance if there is a specific request. Two NRC staff members knowledgeable about boiling water reactors are participating in the USAID team that has departed for Japan.

Additional technical, non-public information:
We are taking the knowledge that the staff has about the design of the US nuclear plants and we are applying this knowledge to the Japan situation. For example, this includes calculations of severe accident mitigation that have been performed. Tony Ulses has been dispatched to Japan and should arrive Early Sunday.David Jim Trapp left 1600 Saturday should arrive in 20 hours

2. What's going to happen following the steam explosion everyone's seen from the video footage?

Public Answer: If a similar event occurred at a U.S. nuclear power plant, the NRC would be seeking information to answer several questions, including: What's the status of the reactor core, the reactor vessel and the containment building? What radiation measurement equipment is available and what measurements are being reported? What efforts are being taken to keep the public safe? How did the explosion affect efforts to keep the nearby reactors in a safe condition? And most importantly – What can the NRC do to help?

Additional technical, non-public information:

The explosion affected the secondary containment of the reactor plant. The primary containment was not affected by the explosion. This does expose the spent fuel pools to atmosphere but should not affect the integrity of the spent fuel pool. With the integrity of the Secondary Containment breached it is more essential to maintain Primary Containment intact.

To provide additional protection to Primary Containment, US reactors of the containment type similar to Fukushima Unit 1 installed a hardened vent line from primary containment directly to the vent stack. A hardened vent provides a release path which would prevent an overpressurization of containment as experienced at Fukushima Unit One. Venting from the hardened vent is typically a manual operation that is controlled by the Emergency Operating Procedures as a last resort to protect the containment from failure. This vent path can be directly from the upper containment or from the torus (the preferred vent path due to scrubbing effect of the torus water).

3. What should be done to protect people in Alaska, Hawaii and the West Coast from radioactive fallout?

Public Answer: The available evidence shows the United States can be expected to avoid any impacts from radioactive material, so no public action is necessary. We believe there is very low risk to the US considering the long distance from the US and the type of event.

Additional technical, non-public information: NRC is working with DHS, EPA and other federal partners to ensure monitoring equipment is properly positioned, based on meteorological and other relevant information.

4. Can this happen here i.e. an earthquake that significantly damages a nuclear power plant? Are the Japanese plants similar to U.S. plants?

Public Answer: All U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. Even those plants that are located in areas with low and moderate seismic activity are designed for safety in the event of such a natural disaster. The NRC requires that safety-significant structures, systems, and components be designed to take into account even very rare and extreme seismic and tsunami events.

The Japanese facilities are similar in design to several US facilities.

Additional technical, non-public information:
Currently operating reactors were designed using a "deterministic" or "maximum credible earthquake" approach. Seismic hazard for the new plants is determined using a much more robust probabilistic seismic hazard assessment approach that explicitly addresses uncertainty and very rare events, as described in RG1.208. The NRC requires that adequate margin beyond the design basis ground shaking levels is assured. The NRC further enhances seismic safety for beyond-design-basis events through the use of a defense-in-depth approach.

In addition, the NRC periodically reviews the seismic risk at operating reactors when information may have changed. Over the last few years the NRC has undertaken a program called Generic Issue 199, which is focused on assessing hazard for plants in the central and eastern US using the latest techniques and determining the possible risk implications of any increase in the anticipated ground shaking levels. This program will help us assure that the plants are safe under exceptionally rare and extreme ground motions that represent beyond-design-basis events.

5. What would U.S. plants do in this situation?

Public Answer: The NRC requires plant designs to include multiple and diverse safety systems, and plants must test their emergency preparedness capabilities on a regular basis. Plant operators are very capable of responding to significant events. In addition, NRC regulations require plants to have plans in place that would allow them to mitigate even "worst case scenarios".

Since 9/11, we have implemented requirements for licensees to have additional response capabilities for extreme situations.

Additional technical, non-public information:

U.S. nuclear plants have procedures in place to address a variety of accident scenarios, including abnormal operating procedures, emergency operating procedures, severe accident management guidelines and emergency plans. Additionally, the NRC activates iIncident Response centers in Headquarters and individual Regions as necessary for the event to provide technical monitoring and support.

The NRC is capable of providing access to many external agencies (i.e., FEMA, Homeland Security, Military, etc.) to provide any additional help that individual plant sites may need. Additionally, the NRC has access to real-time plant information through the ERDS System for each site in the US and can monitor the status anytime.

6. Are U.S. power plants designed to withstand tsunamis?

Public Answer: Yes. Plants are built to withstand a variety of environmental hazards. Those plants that might face a threat from tsunami are required to withstand large waves and the maximum and minimum wave heights at the intake structure (which varies by plant.)

Additional, technical, non-public information:
Tsunami have been considered in the design of US nuclear plants since the publication of Regulatory Guide 1.59 in 1977, although the approaches that were used for design of the existing plants varied significantly. Nuclear plants are designed to withstand flooding from not only tsunami, but also hurricane and storm surge; therefore there is often significant margin against tsunami flooding. However, it should be noted that Japanese experience has shown that drawdown can be a significant problem. Drawdown was not generally analyzed in the past.

Currently the US NRC has a tsunami research program that is focused on developing modern hazard assessment techniques and additional guidance through cooperation with the National Oceanic and Atmospheric Administration and the United States Geological Survey. This has already lead to several technical reports and an update to NUREG 0-800. The NOAA and USGS contractors are also assisting with NRO reviews of tsunami hazard. A new regulatory guide on tsunami hazard assessment is currently planned in the office of research, although it is not expected to be available in draft form until 2012.

7. What happens when/if a plant "melts down"?

Public Answer: In short, nuclear power plants in the United States are designed to be safe. To prevent the release of radioactive material, there are multiple barriers between the radioactive material and the environment, including the fuel cladding, the heavy steel reactor vessel itself and the containment building, usually a heavily reinforced structure of concrete and steel several feet thick.

Additional, technical, non-public information:
The melted core may melt through the bottom of the vessel and flow onto the concrete containment floor. The core may melt through the containment liner and release radioactive material to the environment.

8. Why is KI administered during nuclear emergencies?

Public Answer: KI – potassium iodide – is one of the protective measures that might be taken in a radiological emergency in this country. A KI tablet will saturate the thyroid with non radioactive iodine and prevent the absorption of radioactive iodine that could be part of the radioactive material mix of radionuclides in a release.KI does not prevent exposure from these other radionuclides.

Additional, technical non-public information.
There are a range of protective measures that we use ... the most effective is evacuation. Local government officials are responsible for determining the best means to protect their public. KI is another means for protection but evacuation and sheltering are the primary means that are used.

9. Was there any damage to U.S. reactors from either the earthquake or the resulting tsunami?

Public Answer: No

Additional, technical non-public information: Diablo Canyon Units 1 and 2 were the only US plants to declare any type of an emergency classification. The site entered an "unusual event" based on a tsunami warning from the State, NOAA, NWS, Coast Guard or System Dispatcher following the Japanese earthquake. They have since exited the "unusual event" declaration, based on a downgrade to a tsunami advisory.

10. Has this incident changed the NRC perception about earthquake risk?

Public Answer: There has been no change in the NRC's perception of earthquake hazard (i.e. ground shaking levels) for US nuclear plants. As is prudent, the NRC will certainly be looking closely at this incident and the effects on the Japanese nuclear power plant in the future to see if any changes are necessary to NRC regulations.

Additional, technical, non-public information.
We expect that there would be lessons learned, etc. It appears that the sites did not have any critical damage due to the earthquake from the fact that the emergency diesel generators initially responded to provide power to the site. The tsunami and consequential site flooding was responsible for the complete loss of power to the site, including the diesel generators which resulted in a Station Blackout.

11. Will this incident affect new reactor licensing?

Public Answer: It is not appropriate to hypothesize on such a future scenario at this point.

Additional, technical non-public information:
This event could potentially call into question the NRC's seismic requirements which could require the staff to re-evaluate the staff's approval of the AP1000 and ESBWR design and certifications.

12. What magnitude earthquake are US plants designed to?

Public Answer: Each plant is designed to a ground-shaking level that is appropriate for its location, given the possible earthquake sources that may affect the site and its tectonic environment. Ground shaking is a function of both the magnitude of and earthquake and the distance from the fault plane to the site. The probabilistic approaches currently used by the NRC account for a large number of different magnitudes.

Additional, technical non-public information:
In the past, "deterministic" or "scenario based" analyses were used to determine ground shaking (seismic hazard) levels. Now a probabilistic method is used that accounts for all possible earthquakes coming from all possible sources (including background seismicity) and the likelihood that each particular hypothetical earthquake occurs.

13. How many US reactors are located in active earthquake zones (and which reactors)?

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

Additional, technical non-public information: No additional.

14. How many reactors are along coastal areas that could be affected by a tsunami (and which ones)?

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

Additional, technical non-public information: None

15. How many U.S. plants have designs similar to the affected Japanese reactors (and which ones)?

Public answer: Thirty-five of the 104 operating nuclear power plants in the U.S. are boiling water reactors (BWRs), as are the reactors at Fukushima.

Four of the U.S. BWRs are early designs which are similar to Fukushima Unit 1.

Nineteen U.S. BWRs are similar to Fukushima Unit 3.

Additional Information

Fukushima Unit 1 is a BWR-3 with a Mark 1 containment and an isolation condenser. Oyster Creek, Nine Mile Point Unit 1, and Dresden Units 2 and 3 are BWRs with Mark 1 containments and isolation condensers.

Fukushima Unit 3 is a BWR-4 with a Mark 1 containment and a Reactor Core Isolation Cooling (RCIC) system. The remaining 31 U.S. BWRs use a Reactor Core Isolation Cooling (RCIC) system instead of an isolation condenser. Nineteen of those 31 reactors have a Mark 1 containment, while the remainder are more recent designs.

From: McIntyre, David
To: Harrington, Holly
Subject: Chairman Jaczko POTENTIAL QUESTIONS 031311.docx
Date: Sunday, March 13, 2011 4:36:21 PM
Attachments: Chairman Jaczko POTENTIAL QUESTIONS 031311.docx

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wd/44

POTENTIAL QUESTIONS FOR THE CHAIRMAN

Can this happen here?
I live near a nuclear power plant similar to the ones having trouble in Japan. How can we now be confident that this plant won't experience a similar problem?
Has this crisis changed your opinion about the safety of US nuclear power plants?
With all this happening, how can the NRC continue to approve new nuclear power plants?

What is the NRC doing in response to the situation in Japan?
What other US agencies are involved, and what are they doing?
What else can go wrong?
What is the worst-case scenario?
The US has troops in Japan and has sent ships to help the relief effort – are they in danger from the radiation?
Is there a danger of radiation making it to the United States?
Is the US Government tracking the radiation released from the Japanese plants?
Has the government set up radiation monitoring stations to track the release?
The radiation "plume" seems to be going out to sea – what is the danger of it reaching Alaska? Hawaii? The west coast?
I live in the Western United States – should I be taking potassium iodide (KI)?
Are there other protective measures I should be taking?
What are the risks to my children?
My family has planned a vacation to Hawaii/Alaska/Seattle next week – is it safe to go, or should we cancel our plans?
What are the short-term effects of exposure to radiation?
What are the long-term effects of exposure to radiation?

From:	Harrington, Holly
To:	Maier, Bill; McIntyre, David
Cc:	LIA04 Hoc; Milligan, Patricia; McNamara, Nancy; Trojanowski, Robert; Tifft, Doug; Woodruff, Gena; Logaras, Harral; Barker, Allan; Virgilio, Rosetta
Subject:	RE: NEED TO INFORM YOU OF A POTENTIAL ISSUE WITH 11-046
Date:	Sunday, March 13, 2011 4:55:00 PM

Bill – I've cc'd Dave on this response. He wrote the release and I believe had a specific reason for this inclusion.

Holly

From: Maier, Bill
Sent: Sunday, March 13, 2011 4:46 PM
To: Harrington, Holly
Cc: LIA04 Hoc; Milligan, Patricia; McNamara, Nancy; Trojanowski, Robert; Tifft, Doug; Woodruff, Gena; Logaras, Harral; Barker, Allan; Virgilio, Rosetta
Subject: NEED TO INFORM YOU OF A POTENTIAL ISSUE WITH 11-046
Importance: High

Holly,

I noticed in the revised news release (attached) and in its pre-revision predecessor, that the following statement appears:

The United States also uses sheltering in place and potassium iodide, protective measures also available in Japan.

This sentence may cause some issues because the issuance of potassium iodide to the general population is not a protective measure that some states have elected to implement. We may get some feedback from the states complaining that we implied a measure they are not using.

I don't know what the fix is, but I wanted to alert you (and the cc addressees) that some backlash is possible from this.

Bill Maier
RSLO
Region IV

From: opa administrators [mailto:opa@nrc.gov]
Sent: Sunday, March 13, 2011 4:23 PM
To: Maier, Bill
Subject: Revised -NRC Sees No Radiation at Harmful Levels Reaching U.S. From Damaged Japanese Nuclear Power Plants

LLL/45

From:	McIntyre, David
To:	Harrington, Holly; Maier, Bill
Cc:	LIA04 Hoc; Milligan, Patricia; McNamara, Nancy; Trojanowski, Robert; Tifft, Doug; Woodruff, Gena; Logaras, Harral; Barker, Allan; Virgilio, Rosetta; Turtil, Richard; Brenner, Eliot
Subject:	RE: NEED TO INFORM YOU OF A POTENTIAL ISSUE WITH 11-046
Date:	Sunday, March 13, 2011 5:04:02 PM

Bill, et al – we are not revisiting the KI dispute in our press releases. KI is used in the United States, after all, or at least is available for use. The descriptions of protective measures in both versions of the press release were included at the direct request of the Chairman, who was responding to the US Ambassador in Tokyo. The Ambassador was concerned that US citizens in Japan were ignoring the Japanese government's protective measures recommendations, and sought reassurance from us that the measures were comparable to what we would do here in the US.

Dave Mc, OPA

From: Harrington, Holly
Sent: Sunday, March 13, 2011 4:55 PM
To: Maier, Bill; McIntyre, David
Cc: LIA04 Hoc; Milligan, Patricia; McNamara, Nancy; Trojanowski, Robert; Tifft, Doug; Woodruff, Gena; Logaras, Harral; Barker, Allan; Virgilio, Rosetta
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Sent: Sunday, March 13, 2011 4:46 PM
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Region IV

From: opa administrators [mailto:opa@nrc.gov]
Sent: Sunday, March 13, 2011 4:23 PM
To: Maier, Bill
Subject: Revised -NRC Sees No Radiation at Harmful Levels Reaching U.S. From Damaged Japanese Nuclear Power Plants

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. 11-046 March 13, 2011

(Revised)

NRC SEES NO RADIATION AT HARMFUL LEVELS REACHING U.S. FROM DAMAGED JAPANESE NUCLEAR POWER PLANTS

The Nuclear Regulatory Commission is coordinating with the Department of Energy and other federal agencies in providing whatever assistance the Japanese government requests as they respond to conditions at several nuclear power plant sites following the March 11 earthquake and tsunami. The NRC has sent two boiling-water reactor experts to Japan as part of a U.S. Agency for International Development team.

In response to nuclear emergencies, the NRC works with other U.S. agencies to monitor radioactive releases and predict their path. All the available information indicates weather conditions have taken the small releases from the Fukushima reactors out to sea away from the population. Given the thousands of miles between the two countries, Hawaii, Alaska, the U.S. Territories and the U.S. West Coast are not expected to experience any harmful levels of radioactivity.

During a nuclear event the NRC has requirements to protect populations around reactors. For instance, the U.S. evacuation standard at 10 miles is roughly equivalent to the 20-kilometer distance recommended in Japan. The United States also uses sheltering in place and potassium iodide, protective measures also available in Japan. United States citizens in Japan are encouraged to follow the protective measures recommended by the Japanese government. These measures appear to be consistent with steps the United States would take.

The NRC will not comment on hour-to-hour developments at the Japanese reactors. This is an ongoing crisis for the Japanese who have primary responsibility.

###

From: Harrington, Holly
To: Brenner, Eliot
Cc: McIntyre, David
Subject: Blog comments and replies
Date: Sunday, March 13, 2011 2:53:00 PM

Our suggested replies to these blog comments are in bold. They are also mirrored in the Q&As I put in the draft blog post.

Blog Comment:

1. This may be an absolutely crazy and unworkable idea, but given the seriousness of the reactor situation in Japan, I'll offer it to the experts trying to cool off and shut down the reactors. If it has any merit, and if someone at NRC is monitoring this blog today, perhaps you could transmit my idea to the NRC experts in Japan.

Could we outfit helicopters with the fire-fighting water carrying devices often used in wildfires in the US? Is there any way these "water-helicopters" could be used to slowly release water into the reactor containment structures? Various reports say Japanese crews are pumping seawater into the structures, and maybe this is a way to supplement the amount of water and add it more quickly. Additionally, if there are any mid-air refueling Air Force planes close-by, could they be filled with water rather than jet fuel, then used for the same purpose?

Naturally, the crews would have to be outfitted with complete radiation protection, and that might make this idea unworkable. And the aircraft could be contaminated with radiation, making them unuseable for a long time, another reason this idea isn't workable.

Our Answer: I'm sure lots of folks out there have ideas for how the Japanese authorities could be handling their situation. I know that the NRC is willing to offer our advice and guidance and we stand by ready to assist should that be requested.

Blog Comment: I think the dose rate value on Page A14 of the Sunday Washington Post is wrong. They give a site dose rate of 1,015 miillisieverts/hour. Based on what I got from the web last night it should be about 1,000 microsieverts. This later value is more consistent with what NEI currently reports as 128 millirem/hour. The Post value is equivalent to 101 Rem/hour.

Our Answer: We believe there is a lot of inaccurate and misleading information in press reports; however the NRC is not in a position to fact-check these reports. We do encourage folks to consult credible government sources of information in addition to press reports.

Great Job in Japan. My community is organizing a meeting to discuss both local concerns of Fall Out Risks here in the US West Coast and how we can support the Japanese.
Can you give us information on who is monitoring the US West Coast for dangerous environmental radiation levels and how we may contact that entity?

LL/46

We are in a region with NO US atomic energy plants and have no preparedness for nuclear accidents – What agency should we contact to acquire protective equipment and supplies?

Our Answer: See our latest blog post. In short – no, we do not believe the U.S. West Coast (or any part of the U.S.) will receive harmful amounts of radiation from the nuclear power plants in Japan. If you have concerns specifically about your community, you can contact your state radiological or environmental office for information.

Eliot can you let us know the names of the two BWR experts on their way to Japan? Many thanks. They are not named in the news stories.

Our Answer: We have not made the names of these individuals public.

From: Brenner, Eliot
To: Harrington, Holly
Subject: RE: Blog comments and replies
Date: Sunday, March 13, 2011 2:55:43 PM

Ok.

From: Harrington, Holly
Sent: Sunday, March 13, 2011 2:53 PM
To: Brenner, Eliot
Cc: McIntyre, David
Subject: Blog comments and replies

Our suggested replies to these blog comments are in bold. They are also mirrored in the Q&As I put in the draft blog post.

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From: Batkin, Joshua
To: Brenner, Eliot; Harrington, Holly; Loyd, Susan
Subject: Fw: March 13 0730 Update
Date: Sunday, March 13, 2011 8:54:48 AM

Eliot - can your folks check out this link?

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

----- Original Message -----
From: Pearson, Laura
To: Hipschman, Thomas; Batkin, Joshua; Monninger, John; Coggins, Angela; Marshall, Michael; Loyd, Susan; Bradford, Anna
Sent: Sun Mar 13 08:48:20 2011
Subject: RE: March 13 0730 Update

This rather alarming "radioactive fallout map," which says it is a USNRC product, is linked on the Drudge Report: http://www.japan.org/wp-content/uploads/2011/03/falloutmap2.jpg. Is this authentic? If so, some of the messaging may address what it means for people on the West Coast. This kind of context-free raw data might cause public concern.

From: Hipschman, Thomas
Sent: Sunday, March 13, 2011 7:45 AM
To: Batkin, Joshua; Monninger, John; Coggins, Angela; Marshall, Michael; Loyd, Susan; Bradford, Anna; Pearson, Laura
Subject: March 13 0730 Update

Daiichi Unit 1 – there is core damage and a release in progress of fission products. Continuing to use borated seawater. Containment is intact. Release path could be through standby gas treatment system
Unit 2- no core damage, unit is intact
Unit 3 – core damage – using borated seawater similar to Unit 1

Daiini Unit 1 – no core damage, normal makeup, venting
Units 2-4, shutdown, no damage

First NRC person, Tony Ulses has arrived in Japan and Jim Trapp should be arriving soon

Messaging
Want to ensure we are coordinating effectively, lots of misinformation out there.
Waiting for White House to issue a press release – will describe we are assisting and US is not at risk
NRC is preparing a supplemental press release in case it's needed

DOE reports that USS Ronald Reagan is picking up airborne contamination and contamination on helicopters. Approximately 100 miles out to sea. We are looking to see if this consistent with plume calculations

No mention of next update

44/47

From: Brenner, Eliot
To: Batkin, Joshua; Harrington, Holly; Loyd, Susan
Subject: RE: March 13 0730 Update
Date: Sunday, March 13, 2011 9:12:38 AM

Checking.

-----Original Message-----
From: Batkin, Joshua
Sent: Sunday, March 13, 2011 8:55 AM
To: Brenner, Eliot; Harrington, Holly; Loyd, Susan
Subject: Fw: March 13 0730 Update

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From: Brenner, Eliot
To: Batkin, Joshua; Harrington, Holly; Loyd, Susan
Subject: RE: March 13 0730 Update
Date: Sunday, March 13, 2011 9:18:51 AM

For all: the underlying website looks like it is something someone has thrown up by someone looking to to have something to do over the weekend. It's a compilation of cut and paste news nuggets. We are checking the chart and any purported authenticity. First look here everyone in the PMT team is scratching their heads and thinking it's bogus but want to be damned sure before I say that definitively.

Eliot

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From: Batkin, Joshua
Sent: Sunday, March 13, 2011 8:55 AM
To: Brenner, Eliot; Harrington, Holly; Loyd, Susan
Subject: Fw: March 13 0730 Update

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No mention of next update

From: Hayden, Elizabeth
To: Brenner, Eliot
Cc: Burnell, Scott; Harrington, Holly
Subject: Additional Questions re Japan
Date: Sunday, March 13, 2011 4:06:58 AM

We received these questions from Lara. Some of our Q&A will answer a few of these questions while others will need answers. Should we get these into the Reactor Safety Team or some other approach? Maybe Rob could corral these.

Does the Diablo Canyon design basis include protection from both a worse case earthquake combined with a subsequest tsunami?

Could what's happened in Japan, happen at a plant here in the US? [See our Q&A]

Are US plants susceptible to the same sort of loss of all diesel power?

Now after the Japan tragedy, will the NRC finally hear us (ANR) and postpone DC license renewal until seismic studies are complete? How can you be sure that what happened there is not going to happen at Diablo with a worse case quake and tsunami?

SONGS received a white finding in 2008 for a bolt issue related to their EDGs that went undetected for 4 years. NRC issued the white as there was risk the EDGs may not have started under seismic conditions. Aren't all plants susceptible to the unknown? Is there any assurance the emergency cooling systems will function as desired in a Japan like emergency?

From: Kolb, Timothy
To: McIntyre, David; Taylor, Robert
Subject: Updates to Chairman Questions
Date: Sunday, March 13, 2011 10:44:54 AM
Attachments: Questions and Answers for Chairman Jaczko 03-13-11.docx

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Questions and Answers for Chairman Jaczko

March 11, 2011 Japan Earthquake/Tsunami Aftermath
As of 3 p.m., 3/13/2011

1. What is the NRC doing about the emergencies at the nuclear power plants in Japan? Are you sending staff over there?

Public Answer: We are closely following events in Japan, working with other agencies of the federal government, and have been in direct contact with our counterparts in that country. We are ready to provide assistance if there is a specific request. Two NRC staff members knowledgeable about boiling water reactors is participating in the USAID team that has departed for Japan.

Additional technical, non-public information:
We are taking the knowledge that the staff has about the design of the US nuclear plants and we are applying this knowledge to the Japan situation. For example, this includes calculations of severe accident mitigation that have been performed. Tony Ulses has been dispatched to Japan and should arrive Early Sunday.David Jim Trapp left 1600 Saturday should arrive in 20 hours

2. What's going to happen following the steam explosion everyone's seen from the video footage?

Public Answer: If a similar event occurred at a U.S. nuclear power plant, the NRC would be seeking information to answer several questions, including: What's the status of the reactor core, the reactor vessel and the containment building? What radiation measurement equipment is available and what measurements are being reported? What efforts are being taken to keep the public safe? How did the explosion affect efforts to keep the nearby reactors in a safe condition? And most importantly – What can the NRC do to help?

Additional technical, non-public information:

The explosion affected the secondary containment of the reactor plant. The primary containment was not affected by the explosion. The Japanese are taking actions to preserve the primary containment, cool the reactor core, maintain the reactor shut down and limit the spread of radioactive contamination.

The explosion affected the secondary containment of the reactor plant. The primary containment was not affected by the explosion. This does expose the spent fuel pools to atmosphere but should not affect the integrity of the spent fuel pool. With the integrity of the Secondary Containment breached it is more essential to maintain Primary Containment intact.

To provide additional protection to Primary Containment, US reactors of the containment type similar to Fukushima Unit 1 installed a hardened vent line from primary containment directly to the vent stack. A hardened vent provides a release path which would prevent an overpressurization of containment as experienced at Fukushima Unit One. Venting from the hardened vent is typically a manual operation that is controlled by the Emergency Operating Procedures as a last resort to protect the containment from failure. This vent path can be directly from the upper containment or from the torus (the preferred vent path due to scrubbing effect of the torus water).

3. What should done to protect people in Alaska, Hawaii and the West Coast do from radioactive fallout?

Public Answer: The available evidence shows the United States can be expected to avoid any impacts from radioactive material, so no public action is necessary. We believe there is very low risk to the US considering the long distance from the US and the type of event.

Additional technical, non-public information: NRC is working with DHS, EPA and other federal partners to ensure monitoring equipment is properly positioned, based on meteorological and other relevant information.

4. Can this happen here i.e. an earthquake that significantly damages a nuclear power plant? Are the Japanese plants similar to U.S. plants?

Public Answer: All U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. Even those plants that are located outside of areas with low and moderate seismic activity are designed for safety in the event of such a natural disaster. The NRC requires that safety-significant structures, systems, and components be designed to take into account even very rare and extreme seismic and tsunami events.

The Japanese facilities are similar in design to several US facilities.

Additional technical, non-public information:
Currently operating reactors were designed using a "deterministic" or "maximum credible earthquake" approach. Seismic hazard for the new plants is determined using a much more robust probabilistic seismic hazard assessment approach that explicitly addresses uncertainty, as described in RG1.208. The NRC requires that adequate margin beyond the design basis ground shaking levels is assured. The NRC further enhances seismic safety for beyond-design-basis events through the use of a defense-in-depth approach.

In addition, the NRC periodically reviews the seismic risk at operating reactors when information may have changed. Over the last few years the NRC has undertaken a program called Generic Issue 199, which is focused on assessing hazard for plants in the central and eastern US using the latest techniques and determining the possible risk implications of any increase in the anticipated ground shaking levels. This program will help us assure that the plants are safe under exceptionally rare and extreme ground motions that represent beyond-design-basis events.

5. What would U.S. plants do in this situation?

Public Answer: The NRC requires plant designs to include multiple and diverse safety systems, and plants must test their emergency preparedness capabilities on a regular basis. Plant operators are very capable of responding to significant events. In addition, NRC regulations require plants to have plans in place that would allow them to mitigate even "worst case scenarios".

Since 9/11, we have implemented requirements for licensees to have additional response capabilities for extreme situations.

Additional technical, non-public information:

Our nuclear plants have procedures in place to address a variety of accident scenarios, including abnormal operating procedures, emergency operating procedures, severe accident management guidelines and emergency plans. Additionally, the NRC activates iIncident Response centers in Headquarters and individual Regions as necessary for the event to provide technical monitoring and support.

The NRC is capable of providing access to many external agencies (i.e., FEMA, Homeland Security, Military, etc.) to provide any additional help that individual plant sites may need. Addionally, the NRC has access to real-time plant information through the ERDS System for each site in the US and can monitor the status anytime.

6. Are U.S. power plants designed to withstand tsunamis?

Public Answer: Yes. Plants are built to withstand a variety of environmental hazards and those plants that might face a threat from tsunami are required to withstand large waves and the maximum wave height at the intake structure (which varies by plant.)

Additional, technical, non-public information:
Tsunami have been considered in the design of US nuclear plants since the publication of Regulatory Guide 1.59 in 1977, although the approaches that were used for design of the existing plants varied significantly. Nuclear plants are designed to withstand flooding from not only tsunami, but also hurricane and storm surge; therefore there is often significant margin against tsunami flooding. However, it should be noted that Japanese experience has shown that drawdown can be a significant problem. Drawdown was not generally analyzed in the past. The particular

Currently the US NRC has a tsunami research program that is focused on developing modern hazard assessment techniques and additional guidance through cooperation with the National Oceanic and Atmospheric Administration and the United States Geological Survey. This has already lead to several technical reports and an update to NUREG 0-800. The NOAA and USGS contractors are also assisting with NRO reviews of tsunami hazard. A new regulatory guide on tsunami hazard assessment is currently planned in the office of research, although it is not expected to be available in draft form until 2012.

7. What happens when/if a plant "melts down"?

Public Answer: In short, nuclear power plants in the United States are designed to be safe. To prevent the release of radioactive material, there are multiple barriers between the radioactive material and the environment, including the fuel cladding, the heavy steel reactor vessel itself and the containment building, usually a heavily reinforced structure of concrete and steel several feet thick.

Additional, technical, non-public information:
The melted core may melt through the bottom of the vessel and flow onto the concrete containment floor. The core may melt through the containment liner and release radioactive material to the environment.

8. Why is KI administered during nuclear emergencies?

Public Answer: KI – potassium iodide – is one of the protective measures that might be taken in a radiological emergency in this country. A KI tablet will saturate the thyroid with non radioactive iodine and prevent the absorption of radioactive iodine that could be part of the radioactive material mix of radionuclides in a release.KI does not prevent exposure from these other radionuclides.

Additional, technical non-public information.
There are a range of protective measures that we use ... the most effective is evacuation. Local government officials are responsible for determining the best means to protect their public. KI is another means for protection but evacuation and sheltering are the primary means that are used.

9. Was there any damage to U.S. reactors from either the earthquake or the resulting tsunami?

Public Answer: No

Additional, technical non-public information:
Diablo Canyon Units 1 and 2 declared an "unusual event" based on tsunami warning following the Japanese earthquake. They have since exited the "unusual event" declaration, based on a downgrade to a tsunami advisory.

10. Has this incident changed the NRC perception about earthquake risk?

Public Answer: There has been no change in the NRC's perception of earthquake hazard (i.e. ground shaking levels) for US nuclear plants. As is prudent, the NRC will certainly be looking closely at this incident and the effects on the Japanese nuclear power plant in the future to see if any changes are necessary to NRC regulations.

Additional, technical, non-public information.
We expect that there would be lessons learned, etc.

11. Will this incident affect new reactor licensing?

Public Answer: It is not appropriate to hypothesize on such a future scenario at this point.

Additional, technical non-public information:
This event could potentially call into question the NRC's seismic requirements which could require the staff to re-evaluate the staff's approval of the AP1000 and ESBWR design and certifications.

12. What magnitude earthquake are US plants designed to?

Public Answer: Each plant is designed to a ground-shaking level that is appropriate for its location, given the possible earthquake sources that may affect the site and its tectonic environment. Ground shaking is a function of both the magnitude of and earthquake and the distance from the fault plane to the site. The probabilistic approaches account for a large number of different magnitudes.

Additional, technical non-public information:

In the past, "deterministic" or "scenario based" analyses were used to determine ground shaking (seismic hazard) levels. Now a probabilistic method is used that accounts for all possible earthquakes coming from all possible sources (including background seismicity) and the likelihood that each particular hypothetical earthquake occurs.

13. How many US reactors are located in active earthquake zones (and which reactors)?

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

Additional, technical non-public information: No additional.

14. How many reactors are along coastal areas that could be affected by a tsunami (and which ones)?

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

Additional, technical non-public information: None

15. How many U.S. plants have designs similar to the affected Japanese reactors (and which ones)

Public Answer: Six of the 104 US reactors are General Electric BWR 3 with Mark 1 containments similar to the design used at Fukushima Unit One.

Additional Information:
The units are: Dresden Units 2 and 3, Monticello unit 1, Pilgrim unit 1, Quad Cities Units 1 and 2.

From:	Hayden, Elizabeth
To:	Brenner, Eliot
Cc:	Uselding, Lara; Sheehan, Neil; Mitlyng, Viktoria; Screnci, Diane; Chandrathil, Prema; Hannah, Roger; Ledford, Joey; Dricks, Victor; Couret, Ivonne; McIntyre, David
Subject:	FW: Emailing: State Q&A Rev 1.pdf for Distribution to SLOs
Date:	Sunday, March 13, 2011 4:13:44 AM
Attachments:	State Q&A Rev 1.pdf

fyi

-----Original Message-----
From: LIA04 Hoc
Sent: Sunday, March 13, 2011 3:38 AM
To: McNamara, Nancy; Tifft, Doug; Trojanowski, Robert; Woodruff, Gena; Barker, Allan; Logaras, Harral; Maier, Bill; Browder, Rachel; Turtil, Richard
Cc: Hayden, Elizabeth; Harrington, Holly; Burnell, Scott; Thaggard, Mark; Blount, Tom; LIA06 Hoc; LIA04 Hoc; LIA02 Hoc; LIA03 Hoc; LIA12 Hoc; LIA11 Hoc; LIA01 Hoc; LIA10 Hoc
Subject: FW: Emailing: State Q&A Rev 1.pdf for Distribution to SLOs

RSLOs - The information attached has been vetted with OPA and the NRC Executive Team and has been approved for dissemination to the Governor-appointed State Liaison Officers.

Rich Turtil will be reporting to the Ops Center @ 7:00 am Sunday 3/13 and will be your POC.

Thank you for your assistance today.

Rosetta

-----Original Message-----
From: LIA09 Hoc
Sent: Sunday, March 13, 2011 3:28 AM
To: LIA04 Hoc
Subject: Emailing: State Q&A Rev 1.pdf

The message is ready to be sent with the following file or link attachments:

State Q&A Rev 1.pdf

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

LLI/SD

Date: 3/13/2011 Time: 1:55am

State Q&A's:

Q. What is the radiological consequence of the event in Japan for the U.S.?
A. At this time, there is no indication that materials from the incidents in Japan have the potential to have any significant radiological effect on the U.S.

Q. Are there any protective measures that residents in the U.S. should be considering?
A. No, not given current information.

Q. What is the Federal family, i.e., NRC-EPA-DOE, doing to monitor the radiological consequence of the event in Japan on the United States?

A. 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.

U.S. nuclear power plants have sensitive equipment to monitor the status of radiological conditions. Additionally, personnel at nuclear power plants have specific knowledge in radiological field monitoring techniques and could assist State and Federal personnel in environmental sampling activities, should that be necessary to evaluate public health and safety concerns.

EPA has permanent stationary radiological monitoring stations on the West coast. In the event of a confirmed radiological release with a potential to impact the U.S., EPA is the Federal agency responsible for radiological monitoring. DOE would be responsible for aerial monitoring, should there be a confirmed radiological release.

Non-Public Info For States Only: Questions about any radiological impact on the U.S. West coast is Adora Andy, the Deputy Associate Administrator for EPA's Office of External Affairs: cell is 202.527.5866; email andy.adora@epa.gov

Key Messages:

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's headquarters Operations Center in Rockville, MD has been stood up since the beginning of the emergency in Japan and is operating on a 24-hour basis.

NRC officials in Rockville, MD have spoken with the agency's counterpart in Japan and offered the assistance of U.S. technical experts. Two officials from NRC with expertise in boiling water nuclear reactors have deployed to Japan as part of a U.S. International Agency for International Development (USAID) team. USAID is the federal government agency primarily responsible for providing assistance to countries recovering from disaster administering.

U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. 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 estimated for the site and surrounding area.

The NRC will **not** provide information on the status of Japan's nuclear power plants. See NRC's web site at www.nrc.gov or blog at http://public-blog.nrc-gateway.gov for the latest information on NRC actions.

For background information on generic operations at a boiling-water reactor, including an animated graphic, visit the NRC's website at www.nrc.gov

Other sources of information:

USAID -- www.usaid.gov
U.S. Dept. of State -- www.state.gov
FEMA -- www.fema.gov
White House -- www.whitehouse.gov
Nuclear Energy Institute -- www.nei.org
International Atomic Energy Agency -- www.iaea.org/press

From: Burnell, Scott
To: McIntyre, David
Subject: FW: Revised Draft NRC Statement -- with ET edits
Date: Sunday, March 13, 2011 5:23:54 AM

Sorry, forgot to include you... I blame lack of caffeine.

-----Original Message-----
From: Burnell, Scott
Sent: Sunday, March 13, 2011 4:02 AM
To: Hayden, Elizabeth; Brenner, Eliot
Subject: Revised Draft NRC Statement -- with ET edits

The Nuclear Regulatory Commission is coordinating with the Department of Energy and other federal agencies in providing whatever assistance the Japanese government requests as they respond to conditions at several nuclear power plant sites following the March 11 earthquake and tsunami. The NRC has sent two boiling-water reactor experts to Japan as part of a U.S. International Agency for International Development team.

In response to nuclear emergencies, the NRC works with other U.S. agencies to monitor radioactive releases and predict their path. All the available information indicates weather conditions have taken the small releases from the Fukushima reactors out to sea away from the population. Given the thousands of miles between the two countries, Hawaii and the U.S. West Coast should not observe any radioactive releases.

The NRC's rigorous safety regulations ensure that U.S. nuclear power plants are designed to withstand tsunamis, earthquakes and other severe natural hazards. The NRC has been working with several agencies to assess recent seismic research for the central and eastern United States; that work continues to indicate U.S. plants will remain safe. The NRC also took part in multi-agency research following the 2004 Indonesian tsunami, and this effort has led to revised guidance for coastal U.S. nuclear power plants to consider when analyzing potential tsunami hazards.

The NRC will evaluate all the information being gathered from the earthquake, tsunami and reactor accident to determine what lessons might be applied to U.S. regulations and ongoing reviews of applications for new nuclear power plants.

From:	Taylor, Robert
To:	McIntyre, David
Subject:	FW: Additional input for Chairmans questions
Date:	Sunday, March 13, 2011 11:51:04 AM
Attachments:	Questions and Answers for Chairman Jaczko 03-13-11.docx

From: Kolb, Timothy
Sent: Sunday, March 13, 2011 11:46 AM
To: Taylor, Robert
Subject: Additional input for Chairmans questions

Questions and Answers for Chairman Jaczko

March 11, 2011 Japan Earthquake/Tsunami Aftermath
As of 3 p.m., 3/13/2011

1. What is the NRC doing about the emergencies at the nuclear power plants in Japan? Are you sending staff over there?

Public Answer: We are closely following events in Japan, working with other agencies of the federal government, and have been in direct contact with our counterparts in that country. We are ready to provide assistance if there is a specific request. Two NRC staff members knowledgeable about boiling water reactors is participating in the USAID team that has departed for Japan.

Additional technical, non-public information:
We are taking the knowledge that the staff has about the design of the US nuclear plants and we are applying this knowledge to the Japan situation. For example, this includes calculations of severe accident mitigation that have been performed. Tony Ulses has been dispatched to Japan and should arrive Early Sunday.David Jim Trapp left 1600 Saturday should arrive in 20 hours

2. What's going to happen following the steam explosion everyone's seen from the video footage?

Public Answer: If a similar event occurred at a U.S. nuclear power plant, the NRC would be seeking information to answer several questions, including: What's the status of the reactor core, the reactor vessel and the containment building? What radiation measurement equipment is available and what measurements are being reported? What efforts are being taken to keep the public safe? How did the explosion affect efforts to keep the nearby reactors in a safe condition? And most importantly – What can the NRC do to help?

Additional technical, non-public information:

The explosion affected the secondary containment of the reactor plant. The primary containment was not affected by the explosion. The Japanese are taking actions to preserve the primary containment, cool the reactor core, maintain the reactor shut down and limit the spread of radioactive contamination.

The explosion affected the secondary containment of the reactor plant. The primary containment was not affected by the explosion. This does expose the spent fuel pools to atmosphere but should not affect the integrity of the spent fuel pool. With the integrity of the Secondary Containment breached it is more essential to maintain Primary Containment intact.

To provide additional protection to Primary Containment, US reactors of the containment type similar to Fukushima Unit 1 installed a hardened vent line from primary containment directly to the vent stack. A hardened vent provides a release path which would prevent an overpressurization of containment as experienced at Fukushima Unit One. Venting from the hardened vent is typically a manual operation that is controlled by the Emergency Operating Procedures as a last resort to protect the containment from failure. This vent path can be directly from the upper containment or from the torus (the preferred vent path due to scrubbing effect of the torus water).

3. What should done to protect people in Alaska, Hawaii and the West Coast do from radioactive fallout?

Public Answer: The available evidence shows the United States can be expected to avoid any impacts from radioactive material, so no public action is necessary. We believe there is very low risk to the US considering the long distance from the US and the type of event.

Additional technical, non-public information: NRC is working with DHS, EPA and other federal partners to ensure monitoring equipment is properly positioned, based on meteorological and other relevant information.

4. Can this happen here i.e. an earthquake that significantly damages a nuclear power plant? Are the Japanese plants similar to U.S. plants?

Public Answer: All U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. Even those plants that are located outside of areas with low and moderate seismic activity are designed for safety in the event of such a natural disaster. The NRC requires that safety-significant structures, systems, and components be designed to take into account even very rare and extreme seismic and tsunami events.

The Japanese facilities are similar in design to several US facilities.

Additional technical, non-public information:
Currently operating reactors were designed using a "deterministic" or "maximum credible earthquake" approach. Seismic hazard for the new plants is determined using a much more robust probabilistic seismic hazard assessment approach that explicitly addresses uncertainty, as described in RG1.208. The NRC requires that adequate margin beyond the design basis ground shaking levels is assured. The NRC further enhances seismic safety for beyond-design-basis events through the use of a defense-in-depth approach.

In addition, the NRC periodically reviews the seismic risk at operating reactors when information may have changed. Over the last few years the NRC has undertaken a program called Generic Issue 199, which is focused on assessing hazard for plants in the central and eastern US using the latest techniques and determining the possible risk implications of any increase in the anticipated ground shaking levels. This program will help us assure that the plants are safe under exceptionally rare and extreme ground motions that represent beyond-design-basis events.

5. What would U.S. plants do in this situation?

Public Answer: The NRC requires plant designs to include multiple and diverse safety systems, and plants must test their emergency preparedness capabilities on a regular basis. Plant operators are very capable of responding to significant events. In addition, NRC regulations require plants to have plans in place that would allow them to mitigate even "worst case scenarios".

Since 9/11, we have implemented requirements for licensees to have additional response capabilities for extreme situations.

Additional technical, non-public information:

Our nuclear plants have procedures in place to address a variety of accident scenarios, including abnormal operating procedures, emergency operating procedures, severe accident management guidelines and emergency plans. Additionally, the NRC activates Incident Response centers in Headquarters and individual Regions as necessary for the event to provide technical monitoring and support.

The NRC is capable of providing access to many external agencies (i.e., FEMA, Homeland Security, Military, etc.) to provide any additional help that individual plant sites may need. Additionally, the NRC has access to real-time plant information through the ERDS System for each site in the US and can monitor the status anytime.

6. Are U.S. power plants designed to withstand tsunamis?

Public Answer: Yes. Plants are built to withstand a variety of environmental hazards and those plants that might face a threat from tsunami are required to withstand large waves and the maximum wave height at the intake structure (which varies by plant.)

Additional, technical, non-public information:
Tsunami have been considered in the design of US nuclear plants since the publication of Regulatory Guide 1.59 in 1977, although the approaches that were used for design of the existing plants varied significantly. Nuclear plants are designed to withstand flooding from not only tsunami, but also hurricane and storm surge; therefore there is often significant margin against tsunami flooding. However, it should be noted that Japanese experience has shown that drawdown can be a significant problem. Drawdown was not generally analyzed in the past. The particular

Currently the US NRC has a tsunami research program that is focused on developing modern hazard assessment techniques and additional guidance through cooperation with the National Oceanic and Atmospheric Administration and the United States Geological Survey. This has already lead to several technical reports and an update to NUREG 0-800. The NOAA and USGS contractors are also assisting with NRO reviews of tsunami hazard. A new regulatory guide on tsunami hazard assessment is currently planned in the office of research, although it is not expected to be available in draft form until 2012.

7. What happens when/if a plant "melts down"?

Public Answer: In short, nuclear power plants in the United States are designed to be safe. To prevent the release of radioactive material, there are multiple barriers between the radioactive material and the environment, including the fuel cladding, the heavy steel reactor vessel itself and the containment building, usually a heavily reinforced structure of concrete and steel several feet thick.

Additional, technical, non-public information:
The melted core may melt through the bottom of the vessel and flow onto the concrete containment floor. The core may melt through the containment liner and release radioactive material to the environment.

8. Why is KI administered during nuclear emergencies?

Public Answer: KI – potassium iodide – is one of the protective measures that might be taken in a radiological emergency in this country. A KI tablet will saturate the thyroid with non radioactive iodine and prevent the absorption of radioactive iodine that could be part of the radioactive material mix of radionuclides in a release.KI does not prevent exposure from these other radionuclides.

Additional, technical non-public information.
There are a range of protective measures that we use ... the most effective is evacuation. Local government officials are responsible for determining the best means to protect their public. KI is another means for protection but evacuation and sheltering are the primary means that are used.

9. Was there any damage to U.S. reactors from either the earthquake or the resulting tsunami?

Public Answer: No

Additional, technical non-public information: Diablo Canyon Units 1 and 2 were the only US plants to declare any type of an emergency classification. The site entered an "unusual event" based on a tsunami warning from the State, NOAA, NWS, Coast Guard or System Dispatcher following the Japanese earthquake. They have since exited the "unusual event" declaration, based on a downgrade to a tsunami advisory.

10. Has this incident changed the NRC perception about earthquake risk?

Public Answer: There has been no change in the NRC's perception of earthquake hazard (i.e. ground shaking levels) for US nuclear plants. As is prudent, the NRC will certainly be looking closely at this incident and the effects on the Japanese nuclear power plant in the future to see if any changes are necessary to NRC regulations.

Additional, technical, non-public information.
We expect that there would be lessons learned, etc. It appears that the sites did not have any critical damage due to the earthquake from the fact that the emergency diesel generators initially responded to provide power to the site. The tsunami and consequential site flooding was responsible for the complete loss of power to the site, including the diesel generators which resulted in a Station Blackout.

11. Will this incident affect new reactor licensing?

Public Answer: It is not appropriate to hypothesize on such a future scenario at this point.

Additional, technical non-public information:
This event could potentially call into question the NRC's seismic and flooding requirements which could require the staff to re-evaluate the staff's approval of the AP1000 and ESBWR design and certifications.

12. What magnitude earthquake are US plants designed to?

Public Answer: Each plant is designed to a ground-shaking level that is appropriate for its location, given the possible earthquake sources that may affect the site and its tectonic environment. Ground shaking is

a function of both the magnitude of and earthquake and the distance from the fault plane to the site. The probabilistic approaches account for a large number of different magnitudes.

Additional, technical non-public information:
In the past, "deterministic" or "scenario based" analyses were used to determine ground shaking (seismic hazard) levels. Now a probabilistic method is used that accounts for all possible earthquakes coming from all possible sources (including background seismicity) and the likelihood that each particular hypothetical earthquake occurs.

13. How many US reactors are located in active earthquake zones (and which reactors)?

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

Additional, technical non-public information: No additional.

14. How many reactors are along coastal areas that could be affected by a tsunami (and which ones)?

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

Additional, technical non-public information: None

15. How many U.S. plants have designs similar to the affected Japanese reactors (and which ones)

Public Answer: Six of the 104 US reactors are General Electric BWR 3 with Mark 1 containments similar to the design used at Fukushima Unit One.

Additional Information:
The units are: Dresden Units 2 and 3, Monticello unit 1, Pilgrim unit 1, Quad Cities Units 1 and 2.

From:	Williams, Joseph
To:	Taylor, Robert; McIntyre, David
Cc:	Williams, Joseph; Hiland, Patrick
Subject:	Revised Question 15
Date:	Sunday, March 13, 2011 11:41:50 AM
Attachments:	Revised Question 15.doc

The attached file provides a proposed revision to Question 15 of the Chairman's Q&A.

Joe Williams
RST Communicator

44/53

Revised Question 15. How many U.S. plants have designs similar to the affected Japanese reactors (and which ones)?

Public answer: Thirty-five of the 104 operating nuclear power plants in the U.S. are boiling water reactors (BWRs), as are the reactors at Fukushima.

Four of the U.S. BWRs are early designs which are similar to Fukushima Unit 1.

Nineteen U.S. BWRs are similar to Fukushima Unit 3.

Additional Information

Fukushima Unit 1 is a BWR-3 with a Mark 1 containment and an isolation condenser. Oyster Creek, Nine Mile Point Unit 1, and Dresden Units 2 and 3 are BWRs with Mark 1 containments and isolation condensers. Oyster Creek is a BWR-2 design, while the other three plants are BWR-3 designs.

Fukushima Unit 3 is a BWR-4 with a Mark 1 containment and a Reactor Core Isolation Cooling (RCIC) system. The remaining 31 U.S. BWRs use a Reactor Core Isolation Cooling (RCIC) system instead of an isolation condenser. Nineteen of those 31 reactors have a Mark 1 containment, while the remainder are more recent designs.

From: McIntyre, David
To: Shannon, Valerie
Subject: RE: 03-13-11 DRAFT NRC PRESS RELEASE.docx
Date: Sunday, March 13, 2011 1:32:00 PM

One thing to do – send it to Eliot and me! Thanks! ☺

From: Shannon, Valerie
Sent: Sunday, March 13, 2011 1:32 PM
To: McIntyre, David
Subject: RE: 03-13-11 DRAFT NRC PRESS RELEASE.docx

OK, will do

From: McIntyre, David
Sent: Sunday, March 13, 2011 1:31 PM
To: Shannon, Valerie
Subject: 03-13-11 DRAFT NRC PRESS RELEASE.docx

Val – Eliot requests that you put the attached press release into a formal NRC template, numbered, etc. --- and then DO ABSOLUTELY NOTHING ELSE until he or I tell you otherwise.

Thanks,
Dave

DRAFT NRC PRESS RELEASE

NRC SEES NO LIKELIHOOD OF RADIATION REACHING U.S. FROM DAMAGED JAPANESE NUCLEAR POWER PLANTS

The Nuclear Regulatory Commission is coordinating with the Department of Energy and other federal agencies in providing whatever assistance the Japanese government requests as they respond to conditions at several nuclear power plant sites following the March 11 earthquake and tsunami. The NRC has sent two boiling-water reactor experts to Japan as part of a U.S. Agency for International Development team.

In response to nuclear emergencies, the NRC works with other U.S. agencies to monitor radioactive releases and predict their path. All the available information indicates weather conditions have taken the small releases from the Fukushima reactors out to sea away from the population. Given the thousands of miles between the two countries, Hawaii and the U.S. West Coast should not observe any radioactive releases at any level of harm.

During a nuclear event the NRC has requirements to protect populations around reactors. For instance, the U.S. evacuation standard at 10 miles is roughly equivalent to the 20-kilometer distance recommended in some instances in Japan. The United States also uses sheltering in place and potassium iodide, protective measures also available in Japan.

The NRC will not comment on hour-to hour developments at the Japanese reactors. This is an ongoing crisis for the Japanese who have primary responsibility.

###

From: Couret, Ivonne
To: Brenner, Eliot; McIntyre, David
Subject: MEDIA Request Interview - CNN in HONG KONG
Date: Sunday, March 13, 2011 1:14:48 PM

Ramy Incencio
Ramy.incencio@cnn.com
Phone via Skype no hard line if someone can speak to him please email time to call in.
(Reality he was going to sleep going to forward him links and NEI's contact.)

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

(301) 415-8205
ivonne.couret@nrc.gov

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

2010-2011 Information Digest - Where you can find NRC Facts at a Glance
http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/

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

From:	McIntyre, David
To:	Shannon, Valerie
Cc:	Brenner, Eliot
Subject:	11-046.docx
Date:	Sunday, March 13, 2011 1:40:00 PM
Attachments:	11-046.docx

Val – We made SLIGHT changes, so please keep this version in reserve until you hear from us.

Thanks for your quick work!
Dave

uu/56

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. 11-046 March 13, 2011

NRC SEES NO RADIATION AT HARMFUL LEVELS REACHING U.S. FROM DAMAGED JAPANESE NUCLEAR POWER PLANTS

The Nuclear Regulatory Commission is coordinating with the Department of Energy and other federal agencies in providing whatever assistance the Japanese government requests as they respond to conditions at several nuclear power plant sites following the March 11 earthquake and tsunami. The NRC has sent two boiling-water reactor experts to Japan as part of a U.S. Agency for International Development team.

In response to nuclear emergencies, the NRC works with other U.S. agencies to monitor radioactive releases and predict their path. All the available information indicates weather conditions have taken the small releases from the Fukushima reactors out to sea away from the population. Given the thousands of miles between the two countries, Hawaii and the U.S. West Coast should not observe any radioactive releases at any harmful levels.

During a nuclear event the NRC has requirements to protect populations around reactors. For instance, the U.S. evacuation standard at 10 miles is roughly equivalent to the 20-kilometer distance recommended in some instances in Japan. The United States also uses sheltering in place and potassium iodide, protective measures also available in Japan.

The NRC will not comment on hour-to-hour developments at the Japanese reactors. This is an ongoing crisis for the Japanese who have primary responsibility.

###

From: Brenner, Eliot
To: McIntyre, David
Subject: material for release
Date: Sunday, March 13, 2011 1:05:51 PM

The Nuclear Regulatory Commission is coordinating with the Department of Energy and other federal agencies in providing whatever assistance the Japanese government requests as they respond to conditions at several nuclear power plant sites following the March 11 earthquake and tsunami. The NRC has sent two boiling-water reactor experts to Japan as part of a U.S. International Agency for International Development team.

In response to nuclear emergencies, the NRC works with other U.S. agencies to monitor radioactive releases and predict their path. All the available information indicates weather conditions have taken the small releases from the Fukushima reactors out to sea away from the population. Given the thousands of miles between the two countries, Hawaii and the U.S. West Coast should not observe any radioactive releases at any level of harm.

The NRC's rigorous safety regulations ensure that U.S. nuclear power plants are designed to withstand tsunamis, earthquakes and other severe natural hazards. The NRC has been working with several agencies to assess recent seismic research for the central and eastern United States; that work continues to indicate U.S. plants will remain safe. The NRC also took part in multi-agency research following the 2004 Indonesian tsunami, and this effort has led to revised guidance for coastal U.S. nuclear power plants to consider when analyzing potential tsunami hazards.

The NRC will evaluate all the information being gathered from the earthquake, tsunami and reactor accident to determine what lessons might be applied to U.S. regulations and ongoing reviews of applications for new nuclear power plants.

11/57

From: OPA Resource
To: McIntyre, David; Brenner, Eliot
Cc: Couret, Ivonne
Subject: FW: Nuclear fallout map
Date: Sunday, March 13, 2011 2:05:32 PM

-----Original Message-----
From: Lea & Shepherd [mailto:semlin@telus.net]
Sent: Sunday, March 13, 2011 1:35 PM
To: OPA Resource
Subject: Nuclear fallout map

Hello,

I just saw a nuclear fallout map / radiation fallout map produced by the USNRC showing levels from the fallout in Japan and how they are spreading across the pacific.

We live on the Olympic Peninsula in Washington State and would like to know any precautions that you can recommend for our family, especially a pregnant mother & toddler.

Thank you,
Lea & Shepherd

1458

From:	McIntyre, David
To:	Shannon, Valerie
Subject:	PRESS RELEASE - PLS SEND THIS VERSION NOW!
Date:	Sunday, March 13, 2011 2:05:00 PM
Attachments:	03-13-11 PR FINAL11-046.docx

Val – please issue this version of the press release as quickly as possible.

Thanks!

44/59

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. 11-046 March 13, 2011

NRC SEES NO RADIATION AT HARMFUL LEVELS REACHING U.S. FROM DAMAGED JAPANESE NUCLEAR POWER PLANTS

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During a nuclear event the NRC has requirements to protect populations around reactors. For instance, the U.S. evacuation standard at 10 miles is roughly equivalent to the 20-kilometer distance recommended in some instances in Japan. The United States also uses sheltering in place and potassium iodide, protective measures also available in Japan.

The NRC will not comment on hour-to-hour developments at the Japanese reactors. This is an ongoing crisis for the Japanese who have primary responsibility.

###

From: OPA Resource
To: McIntyre, David
Subject: FW: From CNN: Japan/Nuclear Issues
Date: Sunday, March 13, 2011 2:04:59 PM

From: Inocencio, Ramy [mailto:Ramy.Inocencio@turner.com]
Sent: Sunday, March 13, 2011 1:24 PM
To: OPA Resource
Subject: From CNN: Japan/Nuclear Issues

Hello OPA -

This is Ramy Inocencio, CNN International's Asia Business Analyst in Hong Kong.
I was waiting on the phone earlier to speak with David McIntyre regarding questions I have on Japan's issues with its nuclear reactors at Fukushima. I understand he was in a meeting. These are my questions below. I'm working on deadline - thank you very much.

Best,
Ramy Inocencio

****

1. Some analysts are saying a nuclear meltdown could be a death knell for the nuclear power industry – how do you respond to this?

2. What kind of effect will current nuclear reactor troubles have on U.S. nuclear energy policy?

3. Anti-nuclear energy protests are happening in Germany today – do you think U.S. could see something similar? Why or why not.

4. How would the U.S. respond to a nuclear meltdown at one of Japan's problem reactors.

5. What is the likelihood that we could see a meltdown on the scale of Chernobyl in Japan? What are the similarities and differences?

6. What are the economics behind a nuclear meltdown - what would be affected in that region of Japan, what would be affected at a country level?
What are the economics of a nuclear shutdown of problem reactors? Where would energy come from for the region?

111/60

From: Couret, Ivonne
To: McIntyre, David; Brenner, Eliot
Subject: Additional Media to Press Release list
Date: Sunday, March 13, 2011 2:16:36 PM

I'm placing a list of folks to receive our press releases on current matters. Do you want me to include any from your lists. Please advise. Ivonne

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

☎ **(301) 415-8205**
✉ **ivonne.couret@nrc.gov**

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

ltr/es

From: Mail Delivery System
To: Jshiff@bu.edu
Subject: Undeliverable: MEDIA INTERVIEW REQUEST - NPR On Point
Date: Sunday, March 13, 2011 2:17:33 PM
Attachments: RE MEDIA INTERVIEW REQUEST - NPR On Point.msg

Delivery has failed to these recipients or distribution lists:
HYPERLINK "mailto:Jshiff@bu.edu"Jshiff@bu.edu
An error occurred while trying to deliver this message to the recipient's e-mail address. Microsoft Exchange will not try to redeliver this message for you. Please try resending this message, or provide the following diagnostic text to your system administrator.
The following organization rejected your message: [128.197.26.200].

Diagnostic information for administrators:
Generating server: mail2.nrc.gov
Jshiff@bu.edu
[128.197.26.200] #<[128.197.26.200] #5.0.0 smtp; 5.1.0 - Unknown address error 550-'5.1.1 <Jshiff@bu.edu>... Addressee unknown, see http://www.bu.edu/search/' (delivery attempts: 0)> #SMTP#
Original message headers:
Received: from owms01.nrc.gov ([148.184.100.43]) by mail2-private.nrc.gov
with ESMTP; 13 Mar 2011 14:17:32 -0400
X-fn: image001.gif
X-IronPort-AV: E=Sophos;i="4.62,311,1297054800";
d="gif'147?scan'147,208,217,147";a="35895184"
Received: from HQCLSTR02.nrc.gov ([148.184.44.77]) by OWMS01.nrc.gov
([148.184.100.43]) with mapi; Sun, 13 Mar 2011 14:17:32 -0400
From: "McIntyre, David" <David.McIntyre@nrc.gov>
To: "Couret, Ivonne" <Ivonne.Couret@nrc.gov>, "Brenner, Eliot"
<Eliot.Brenner@nrc.gov>, "Jshiff@bu.edu" <Jshiff@bu.edu>
Date: Sun, 13 Mar 2011 14:17:30 -0400
Subject: RE: MEDIA INTERVIEW REQUEST - NPR On Point
Thread-Topic: MEDIA INTERVIEW REQUEST - NPR On Point
Thread-Index: Acvhql7u6EJv/cmnSFiXfoW1iWEx3wAAFh0A
Message-ID: <C37FF65A70772549ACB9C5B6AD2BA05C0B786A5E0C@HQCLSTR02.nrc.gov>
References: <AC20339767ABED49A6E58D6CDB4263C53A86AA0372@HQCLSTR01.nrc.gov>
In-Reply-To: <AC20339767ABED49A6E58D6CDB4263C53A86AA0372@HQCLSTR01.nrc.gov>
Accept-Language: en-US
Content-Language: en-US
X-MS-Has-Attach: yes
X-MS-TNEF-Correlator:
acceptlanguage: en-US
Content-Type: text/plain
MIME-Version: 1.0

From: Hardy, Sally
To: McIntyre, David; Shannon, Valerie; Couret, Ivonne
Subject: RE: Earlier press releases not on web ...
Date: Sunday, March 13, 2011 3:08:11 PM

Sure, normally we only show on days worth of press releases, I can put back the ones from yesterday and have both dates display if you prefer

Sally

From: McIntyre, David
Sent: Sunday, March 13, 2011 3:07 PM
To: Hardy, Sally; Shannon, Valerie; Couret, Ivonne
Subject: Earlier press releases not on web ...

Hi Sally, Val, and Ivonne – it was just pointed out to me that our earlier press releases from this incident are not posted on the website. Can we backfill?

Thanks,
Dave

From: Hardy, Sally
To: McIntyre, David; Shannon, Valerie; Couret, Ivonne
Subject: RE: Earlier press releases not on web ...
Date: Sunday, March 13, 2011 3:10:58 PM

---

ok

From: McIntyre, David
Sent: Sunday, March 13, 2011 3:11 PM
To: Hardy, Sally; Shannon, Valerie; Couret, Ivonne
Subject: RE: Earlier press releases not on web ...

No – just keep with our usual practice.

Thanks,
D

From: Hardy, Sally
Sent: Sunday, March 13, 2011 3:10 PM
To: McIntyre, David; Shannon, Valerie; Couret, Ivonne
Subject: RE: Earlier press releases not on web ...

Working on that now. Let me know if you want them displayed on home page as well

---

From: McIntyre, David
Sent: Sunday, March 13, 2011 3:09 PM
To: Hardy, Sally; Shannon, Valerie; Couret, Ivonne
Subject: RE: Earlier press releases not on web ...

No, I mean the list when you click on "more press releases" ...

From: Hardy, Sally
Sent: Sunday, March 13, 2011 3:08 PM
To: McIntyre, David; Shannon, Valerie; Couret, Ivonne
Subject: RE: Earlier press releases not on web ...

Sure, normally we only show on days worth of press releases, I can put back the ones from yesterday and have both dates display if you prefer

Sally

From: McIntyre, David
Sent: Sunday, March 13, 2011 3:07 PM
To: Hardy, Sally; Shannon, Valerie; Couret, Ivonne
Subject: Earlier press releases not on web ...

Hi Sally, Val, and Ivonne – it was just pointed out to me that our earlier press releases from this incident are not posted on the website. Can we backfill?

Thanks,
Dave

From: Couret, Ivonne
To: McIntyre, David; Brenner, Eliot
Subject: Media Request - FW: Safe radiation levels following meltdown or rdd
Date: Sunday, March 13, 2011 2:38:26 PM

Reporter looking for email response if possible within on hour (UK based,)
Ivonne
-----Original Message-----
From: Eben Harrell [mailto:eben_harrell@timemagazine.com]
Sent: Sunday, March 13, 2011 2:11 PM
To: OPA Resource
Subject: Safe radiation levels following meltdown or rdd

Hi, as discussed,

I know that the NRC has guidelines on safe limits of radiation around nuclear power plants.

But are those limits raised for extraordinary circumstances such as a meltdown?

Similarly, is there a higher limit for what would be considered "safe" exposure following a radiological attack.

The context is Japan but I understand they will have their own guideliness.

PLEASE NOTE: DEADLINE IS VERY TIGHT. PLEASE REPLY ASAP. NO NEED FOR QUOTE OR INTERVIEW--JUST BACKGROUND INFO!

Thanks,

Been Harrell
TIME Magazine
+ 44 (0) 203 148 3200

111/64

From: Harrington, Holly
To: McIntyre, David; Brenner, Eliot; Couret, Ivonne; Hayden, Elizabeth; Burnell, Scott
Subject: RE: You Tube
Date: Sunday, March 13, 2011 3:38:28 PM

Access is good. Still not usage, though. But I don't expect to try and pull that out of our hat this minute anyway . . .

From: McIntyre, David
Sent: Sunday, March 13, 2011 3:34 PM
To: Brenner, Eliot; Harrington, Holly; Couret, Ivonne; Hayden, Elizabeth; Burnell, Scott
Subject: You Tube

The lovely young lady from NSIR just informed me that OIS has agreed that although they have not completed the policy review to allow us to access You Tube and Twitter, due to the exigencies of the moment, all NRC will have access in about 20 minutes.

From: McIntyre, David
To: Shannon, Valerie
Subject: PRESS RELEASE COMING
Date: Sunday, March 13, 2011 3:52:00 PM

Val – be ready for another rush job – we're revising that press release. Eliot should have it to you very shortly.

Dave

From: Shannon, Valerie
To: McIntyre, David
Subject: RE: PRESS RELEASE COMING
Date: Sunday, March 13, 2011 3:53:03 PM

OK, I will let the web folks know that there will be changes.

From: McIntyre, David
Sent: Sunday, March 13, 2011 3:52 PM
To: Shannon, Valerie
Subject: PRESS RELEASE COMING

Val – be ready for another rush job – we're revising that press release. Eliot should have it to you very shortly.

Dave

From: McIntyre, David
To: Shannon, Valerie
Subject: press release revision
Date: Sunday, March 13, 2011 4:06:00 PM
Attachments: 03-13-11 PR FINAL-2 11-046.docx

Val – please issue this asap. Notifications not needed.

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. 11-046 March 13, 2011

(Revised)

NRC SEES NO RADIATION AT HARMFUL LEVELS REACHING U.S. FROM DAMAGED JAPANESE NUCLEAR POWER PLANTS

The Nuclear Regulatory Commission is coordinating with the Department of Energy and other federal agencies in providing whatever assistance the Japanese government requests as they respond to conditions at several nuclear power plant sites following the March 11 earthquake and tsunami. The NRC has sent two boiling-water reactor experts to Japan as part of a U.S. Agency for International Development team.

In response to nuclear emergencies, the NRC works with other U.S. agencies to monitor radioactive releases and predict their path. All the available information indicates weather conditions have taken the small releases from the Fukushima reactors out to sea away from the population. Given the thousands of miles between the two countries, Hawaii, Alaska, the U.S. Territories and the U.S. West Coast are not expected to experience any harmful levels of radioactivity.

During a nuclear event the NRC has requirements to protect populations around reactors. For instance, the U.S. evacuation standard at 10 miles is roughly equivalent to the 20-kilometer distance recommended in Japan. The United States also uses sheltering in place and potassium iodide, protective measures also available in Japan. United States citizens in Japan are encouraged to follow the protective measures recommended by the Japanese government. These measures appear to be consistent with steps the United States would take.

The NRC will not comment on hour-to-hour developments at the Japanese reactors. This is an ongoing crisis for the Japanese who have primary responsibility.

###

From: Shannon, Valerie
To: McIntyre, David
Subject: RE: press release revision
Date: Sunday, March 13, 2011 4:07:16 PM

Do you mean don't send it to the Listserve again (just correct it on the web)?

From: McIntyre, David
Sent: Sunday, March 13, 2011 4:06 PM
To: Shannon, Valerie
Subject: press release revision

Val – please issue this asap. Notifications not needed.

From: McIntyre, David
To: OPA Resource; Touchpattern@lavabit.com
Subject: RE: Fallout hoax etc.
Date: Sunday, March 13, 2011 3:44:00 PM
Attachments: 11-046.pdf

You are correct – that map was bogus! We are glad you recognized that it was a fake.

NRC just issued a press release (attached) addressing the short term projections.

Regards,
David McIntyre
NRC Office of Public Affairs

-----Original Message-----
From: Touchpattern@lavabit.com [mailto:Touchpattern@lavabit.com]
Sent: Sunday, March 13, 2011 2:57 PM
To: OPA Resource
Subject: Fallout hoax etc.

Noticed there was a hoax involving your logo and at first it had concerned me. Then I realized that it was probably fake.

What is the TRUE professional opinion on the reality of fallout radiation reaching the west coast? Any non-media resources or info would be appreciated. Thanks.

Concerned,

Johnny from Portland, OR.

111/67

NRC NEWS

U.S. NUCLEAR REGULATORY COMMISSION

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The NRC will not comment on hour-to-hour developments at the Japanese reactors. This is an ongoing crisis for the Japanese who have primary responsibility.

###

From: McIntyre, David
To: Harrington, Holly
Subject: Chairman Jaczko POTENTIAL QUESTIONS 031311.docx
Date: Sunday, March 13, 2011 4:35:00 PM
Attachments: Chairman Jaczko POTENTIAL QUESTIONS 031311.docx

POTENTIAL QUESTIONS FOR THE CHAIRMAN

Can this happen here?
I live near a nuclear power plant similar to the ones having trouble in Japan. How can we now be confident that this plant won't experience a similar problem?
Has this crisis changed your opinion about the safety of US nuclear power plants?
With all this happening, how can the NRC continue to approve new nuclear power plants?

What is the NRC doing in response to the situation in Japan?
What other US agencies are involved, and what are they doing?
What else can go wrong?
What is the worst-case scenario?
The US has troops in Japan and has sent ships to help the relief effort – are they in danger from the radiation?
Is there a danger of radiation making it to the United States?
Is the US Government tracking the radiation released from the Japanese plants?
Has the government set up radiation monitoring stations to track the release?
The radiation "plume" seems to be going out to sea – what is the danger of it reaching Alaska? Hawaii? The west coast?
I live in the Western United States – should I be taking potassium iodide (KI)?
Are there other protective measures I should be taking?
What are the risks to my children?
My family has planned a vacation to Hawaii/Alaska/Seattle next week – is it safe to go, or should we cancel our plans?
What are the short-term effects of exposure to radiation?
What are the long-term effects of exposure to radiation?

From: McIntyre, David
To: Bill.Berkrot@thomsonreuters.com
Subject: RE: NRC info
Date: Sunday, March 13, 2011 4:40:00 PM

We don't, actually. We might be able to tell you how many we supplied to the various states, but not how much they have. And I can't get you that today, unfortunately, as our KI expert isn't in.

Don't worry about me – I'm in our Operations Center today.

From: Bill.Berkrot@thomsonreuters.com [mailto:Bill.Berkrot@thomsonreuters.com]
Sent: Sunday, March 13, 2011 4:34 PM
To: McIntyre, David
Subject: RE: NRC info

One more thing. I was wondering if you have any stats on current potassium iodide stockpiles for prevention measures either by the U.S. or individual states. Thanks, Bill

From: McIntyre, David [mailto:David.McIntyre@nrc.gov]
Sent: Sunday, March 13, 2011 3:36 PM
To: Bill.Berkrot@reuters.com
Subject: NRC info

Bill – sorry to hang up on you earlier. Turns out we put out a press release now on our website (attached) that may be of interest to your story. I would also refer you to our Fact Sheet on emergency preparedness, which spells out our policy on protective measures such as potassium iodide.

Dave McIntyre
NRC Public Affairs

NRC NEWS

U.S. NUCLEAR REGULATORY COMMISSION

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No. 11-046 March 13, 2011

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In response to nuclear emergencies, the NRC works with other U.S. agencies to monitor radioactive releases and predict their path. All the available information indicates weather conditions have taken the small releases from the Fukushima reactors out to sea away from the population. Given the thousands of miles between the two countries, Hawaii, Alaska, the U.S. Territories and the U.S. West Coast are not expected to experience any harmful levels of radioactivity.

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The NRC will not comment on hour-to-hour developments at the Japanese reactors. This is an ongoing crisis for the Japanese who have primary responsibility.

###

From: McIntyre, David
To: Brenner, Eliot
Subject: Chairman Jaczko QA6 031311.docx
Date: Sunday, March 13, 2011 1:42:00 PM
Attachments: Chairman Jaczko QA6 031311.docx

The Qs&As ...

Questions and Answers for Chairman Jaczko

March 11, 2011 Japan Earthquake/Tsunami Aftermath
As of 1 pm, 3/13/2011

1. What is the NRC doing about the emergencies at the nuclear power plants in Japan? Are you sending staff over there?

Public Answer: We are closely following events in Japan, working with other agencies of the federal government, and have been in direct contact with our counterparts in that country. We are ready to provide assistance if there is a specific request. Two NRC staff members knowledgeable about boiling water reactors is participating in the USAID team that has departed for Japan.

Additional technical, non-public information:
We are taking the knowledge that the staff has about the design of the US nuclear plants and we are applying this knowledge to the Japan situation. For example, this includes calculations of severe accident mitigation that have been performed. Tony Ulses has been dispatched to Japan and should arrive Early Sunday.David Jim Trapp left 1600 Saturday should arrive in 20 hours

2. What's going to happen following the steam explosion everyone's seen from the video footage?

Public Answer: If a similar event occurred at a U.S. nuclear power plant, the NRC would be seeking information to answer several questions, including: What's the status of the reactor core, the reactor vessel and the containment building? What radiation measurement equipment is available and what measurements are being reported? What efforts are being taken to keep the public safe? How did the explosion affect efforts to keep the nearby reactors in a safe condition? And most importantly – What can the NRC do to help?

Additional technical, non-public information:

The explosion affected the secondary containment of the reactor plant. The primary containment was not affected by the explosion. This does expose the spent fuel pools to atmosphere but should not affect the integrity of the spent fuel pool. With the integrity of the Secondary Containment breached it is more essential to maintain Primary Containment intact.

To provide additional protection to Primary Containment, US reactors of the containment type similar to Fukushima Unit 1 installed a hardened vent line from primary containment directly to the vent stack. A hardened vent provides a release path which would prevent an overpressurization of containment as experienced at Fukushima Unit One. Venting from the hardened vent is typically a manual operation that is controlled by the Emergency Operating Procedures as a last resort to protect the containment from failure. This vent path can be directly from the upper containment or from the torus (the preferred vent path due to scrubbing effect of the torus water).

3. What should be done to protect people in Alaska, Hawaii and the West Coast from radioactive fallout?

Public Answer: The available evidence shows the United States can be expected to avoid any impacts from radioactive material, so no public action is necessary. We believe there is very low risk to the US considering the long distance from the US and the type of event.

Additional technical, non-public information: NRC is working with DHS, EPA and other federal partners to ensure monitoring equipment is properly positioned, based on meteorological and other relevant information.

4. Can this happen here i.e. an earthquake that significantly damages a nuclear power plant? Are the Japanese plants similar to U.S. plants?

Public Answer: All U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. Even those plants that are located in areas with low and moderate seismic activity are designed for safety in the event of such a natural disaster. The NRC requires that safety-significant structures, systems, and components be designed to take into account even very rare and extreme seismic and tsunami events.

The Japanese facilities are similar in design to several US facilities.

Additional technical, non-public information:
Currently operating reactors were designed using a "deterministic" or "maximum credible earthquake" approach. Seismic hazard for the new plants is determined using a much more robust probabilistic seismic hazard assessment approach that explicitly addresses uncertainty and very rare events, as described in RG1.208. The NRC requires that adequate margin beyond the design basis ground shaking levels is assured. The NRC further enhances seismic safety for beyond-design-basis events through the use of a defense-in-depth approach.

In addition, the NRC periodically reviews the seismic risk at operating reactors when information may have changed. Over the last few years the NRC has undertaken a program called Generic Issue 199, which is focused on assessing hazard for plants in the central and eastern US using the latest techniques and determining the possible risk implications of any increase in the anticipated ground shaking levels. This program will help us assure that the plants are safe under exceptionally rare and extreme ground motions that represent beyond-design-basis events.

5. What would U.S. plants do in this situation?

Public Answer: The NRC requires plant designs to include multiple and diverse safety systems, and plants must test their emergency preparedness capabilities on a regular basis. Plant operators are very capable of responding to significant events. In addition, NRC regulations require plants to have plans in place that would allow them to mitigate even "worst case scenarios".

Since 9/11, we have implemented requirements for licensees to have additional response capabilities for extreme situations.

Additional technical, non-public information:

U.S. nuclear plants have procedures in place to address a variety of accident scenarios, including abnormal operating procedures, emergency operating procedures, severe accident management guidelines and emergency plans. Additionally, the NRC activates iIncident Response centers in Headquarters and individual Regions as necessary for the event to provide technical monitoring and support.

The NRC is capable of providing access to many external agencies (i.e., FEMA, Homeland Security, Military, etc.) to provide any additional help that individual plant sites may need. Additionally, the NRC has access to real-time plant information through the ERDS System for each site in the US and can monitor the status anytime.

6. Are U.S. power plants designed to withstand tsunamis?

Public Answer: Yes. Plants are built to withstand a variety of environmental hazards and those plants that might face a threat from tsunami are required to withstand large waves and the maximum wave height at the intake structure (which varies by plant.)

Additional, technical, non-public information:
Tsunami have been considered in the design of US nuclear plants since the publication of Regulatory Guide 1.59 in 1977, although the approaches that were used for design of the existing plants varied significantly. Nuclear plants are designed to withstand flooding from not only tsunami, but also hurricane and storm surge; therefore there is often significant margin against tsunami flooding. However, it should be noted that Japanese experience has shown that drawdown can be a significant problem. Drawdown was not generally analyzed in the past.

Currently the US NRC has a tsunami research program that is focused on developing modern hazard assessment techniques and additional guidance through cooperation with the National Oceanic and Atmospheric Administration and the United States Geological Survey. This has already lead to several technical reports and an update to NUREG 0-800. The NOAA and USGS contractors are also assisting with NRO reviews of tsunami hazard. A new regulatory guide on tsunami hazard assessment is currently planned in the office of research, although it is not expected to be available in draft form until 2012.

7. What happens when/if a plant "melts down"?

Public Answer: In short, nuclear power plants in the United States are designed to be safe. To prevent the release of radioactive material, there are multiple barriers between the radioactive material and the environment, including the fuel cladding, the heavy steel reactor vessel itself and the containment building, usually a heavily reinforced structure of concrete and steel several feet thick.

Additional, technical, non-public information:
The melted core may melt through the bottom of the vessel and flow onto the concrete containment floor. The core may melt through the containment liner and release radioactive material to the environment.

8. Why is KI administered during nuclear emergencies?

Public Answer: KI – potassium iodide – is one of the protective measures that might be taken in a radiological emergency in this country. A KI tablet will saturate the thyroid with non radioactive iodine and prevent the absorption of radioactive iodine that could be part of the radioactive material mix of radionuclides in a release.KI does not prevent exposure from these other radionuclides.

Additional, technical non-public information.
There are a range of protective measures that we use ... the most effective is evacuation. Local government officials are responsible for determining the best means to protect their public. KI is another means for protection but evacuation and sheltering are the primary means that are used.

9. Was there any damage to U.S. reactors from either the earthquake or the resulting tsunami?

Public Answer: No

Additional, technical non-public information: Diablo Canyon Units 1 and 2 were the only US plants to declare any type of an emergency classification. The site entered an "unusual event" based on a tsunami warning from the State, NOAA, NWS, Coast Guard or System Dispatcher following the Japanese earthquake. They have since exited the "unusual event" declaration, based on a downgrade to a tsunami advisory.

10. Has this incident changed the NRC perception about earthquake risk?

Public Answer: There has been no change in the NRC's perception of earthquake hazard (i.e. ground shaking levels) for US nuclear plants. As is prudent, the NRC will certainly be looking closely at this incident and the effects on the Japanese nuclear power plant in the future to see if any changes are necessary to NRC regulations.

Additional, technical, non-public information.
We expect that there would be lessons learned, etc. It appears that the sites did not have any critical damage due to the earthquake from the fact that the emergency diesel generators initially responded to provide power to the site. The tsunami and consequential site flooding was responsible for the complete loss of power to the site, including the diesel generators which resulted in a Station Blackout.

11. Will this incident affect new reactor licensing?

Public Answer: It is not appropriate to hypothesize on such a future scenario at this point.

Additional, technical non-public information:
This event could potentially call into question the NRC's seismic requirements which could require the staff to re-evaluate the staff's approval of the AP1000 and ESBWR design and certifications.

12. What magnitude earthquake are US plants designed to?

Public Answer: Each plant is designed to a ground-shaking level that is appropriate for its location, given the possible earthquake sources that may affect the site and its tectonic environment. Ground shaking is a function of both the magnitude of and earthquake and the distance from the fault plane to the site. The probabilistic approaches currently used by the NRC account for a large number of different magnitudes.

Additional, technical non-public information:
In the past, "deterministic" or "scenario based" analyses were used to determine ground shaking (seismic hazard) levels. Now a probabilistic method is used that accounts for all possible earthquakes coming from all possible sources (including background seismicity) and the likelihood that each particular hypothetical earthquake occurs.

13. How many US reactors are located in active earthquake zones (and which reactors)?

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

Additional, technical non-public information: No additional.

14. How many reactors are along coastal areas that could be affected by a tsunami (and which ones)?

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

Additional, technical non-public information: None

15. How many U.S. plants have designs similar to the affected Japanese reactors (and which ones)?

Public answer: Thirty-five of the 104 operating nuclear power plants in the U.S. are boiling water reactors (BWRs), as are the reactors at Fukushima.

Four of the U.S. BWRs are early designs which are similar to Fukushima Unit 1.

Nineteen U.S. BWRs are similar to Fukushima Unit 3.

Additional Information

Fukushima Unit 1 is a BWR-3 with a Mark 1 containment and an isolation condenser. Oyster Creek, Nine Mile Point Unit 1, and Dresden Units 2 and 3 are BWRs with Mark 1 containments and isolation condensers.

Fukushima Unit 3 is a BWR-4 with a Mark 1 containment and a Reactor Core Isolation Cooling (RCIC) system. The remaining 31 U.S. BWRs use a Reactor Core Isolation Cooling (RCIC) system instead of an isolation condenser. Nineteen of those 31 reactors have a Mark 1 containment, while the remainder are more recent designs.

From: McIntyre, David
To: Harrington, Holly
Subject: Chairman Jaczko QA6 031311.docx
Date: Sunday, March 13, 2011 4:33:00 PM
Attachments: Chairman Jaczko QA6 031311.docx

3/14/11

Questions and Answers for Chairman Jaczko

March 11, 2011 Japan Earthquake/Tsunami Aftermath
As of 2 pm, 3/13/2011

1. What is the NRC doing about the emergencies at the nuclear power plants in Japan? Are you sending staff over there?

Public Answer: We are closely following events in Japan, working with other agencies of the federal government, and have been in direct contact with our counterparts in that country. We are ready to provide assistance if there is a specific request. Two NRC staff members knowledgeable about boiling water reactors are participating in the USAID team that has departed for Japan.

Additional technical, non-public information:
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4. Can this happen here i.e. an earthquake that significantly damages a nuclear power plant? Are the Japanese plants similar to U.S. plants?

Public Answer: All U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. Even those plants that are located in areas with low and moderate seismic activity are designed for safety in the event of such a natural disaster. The NRC requires that safety-significant structures, systems, and components be designed to take into account even very rare and extreme seismic and tsunami events.

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Additional, technical, non-public information:
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Currently the US NRC has a tsunami research program that is focused on developing modern hazard assessment techniques and additional guidance through cooperation with the National Oceanic and Atmospheric Administration and the United States Geological Survey. This has already lead to several technical reports and an update to NUREG 0-800. The NOAA and USGS contractors are also assisting with NRO reviews of tsunami hazard. A new regulatory guide on tsunami hazard assessment is currently planned in the office of research, although it is not expected to be available in draft form until 2012.

7. What happens when/if a plant "melts down"?

Public Answer: In short, nuclear power plants in the United States are designed to be safe. To prevent the release of radioactive material, there are multiple barriers between the radioactive material and the environment, including the fuel cladding, the heavy steel reactor vessel itself and the containment building, usually a heavily reinforced structure of concrete and steel several feet thick.

Additional, technical, non-public information:
The melted core may melt through the bottom of the vessel and flow onto the concrete containment floor. The core may melt through the containment liner and release radioactive material to the environment.

8. Why is KI administered during nuclear emergencies?

Public Answer: KI – potassium iodide – is one of the protective measures that might be taken in a radiological emergency in this country. A KI tablet will saturate the thyroid with non radioactive iodine and prevent the absorption of radioactive iodine that could be part of the radioactive material mix of radionuclides in a release.KI does not prevent exposure from these other radionuclides.

Additional, technical non-public information.
There are a range of protective measures that we use ... the most effective is evacuation. Local government officials are responsible for determining the best means to protect their public. KI is another means for protection but evacuation and sheltering are the primary means that are used.

9. Was there any damage to U.S. reactors from either the earthquake or the resulting tsunami?

Public Answer: No

Additional, technical non-public information: Diablo Canyon Units 1 and 2 were the only US plants to declare any type of an emergency classification. The site entered an "unusual event" based on a tsunami warning from the State, NOAA, NWS, Coast Guard or System Dispatcher following the Japanese earthquake. They have since exited the "unusual event" declaration, based on a downgrade to a tsunami advisory.

10. Has this incident changed the NRC perception about earthquake risk?

Public Answer: There has been no change in the NRC's perception of earthquake hazard (i.e. ground shaking levels) for US nuclear plants. As is prudent, the NRC will certainly be looking closely at this incident and the effects on the Japanese nuclear power plant in the future to see if any changes are necessary to NRC regulations.

Additional, technical, non-public information.
We expect that there would be lessons learned, etc. It appears that the sites did not have any critical damage due to the earthquake from the fact that the emergency diesel generators initially responded to provide power to the site. The tsunami and consequential site flooding was responsible for the complete loss of power to the site, including the diesel generators which resulted in a Station Blackout.

11. Will this incident affect new reactor licensing?

Public Answer: It is not appropriate to hypothesize on such a future scenario at this point.

Additional, technical non-public information:
This event could potentially call into question the NRC's seismic requirements which could require the staff to re-evaluate the staff's approval of the AP1000 and ESBWR design and certifications.

12. What magnitude earthquake are US plants designed to?

Public Answer: Each plant is designed to a ground-shaking level that is appropriate for its location, given the possible earthquake sources that may affect the site and its tectonic environment. Ground shaking is a function of both the magnitude of and earthquake and the distance from the fault plane to the site. The probabilistic approaches currently used by the NRC account for a large number of different magnitudes.

Additional, technical non-public information:
In the past, "deterministic" or "scenario based" analyses were used to determine ground shaking (seismic hazard) levels. Now a probabilistic method is used that accounts for all possible earthquakes coming from all possible sources (including background seismicity) and the likelihood that each particular hypothetical earthquake occurs.

13. How many US reactors are located in active earthquake zones (and which reactors)?

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

Additional, technical non-public information: No additional.

14. How many reactors are along coastal areas that could be affected by a tsunami (and which ones)?

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

Additional, technical non-public information: None

15. How many U.S. plants have designs similar to the affected Japanese reactors (and which ones)?

Public answer: Thirty-five of the 104 operating nuclear power plants in the U.S. are boiling water reactors (BWRs), as are the reactors at Fukushima.

Four of the U.S. BWRs are early designs which are similar to Fukushima Unit 1.

Nineteen U.S. BWRs are similar to Fukushima Unit 3.

Additional Information

Fukushima Unit 1 is a BWR-3 with a Mark 1 containment and an isolation condenser. Oyster Creek, Nine Mile Point Unit 1, and Dresden Units 2 and 3 are BWRs with Mark 1 containments and isolation condensers.

Fukushima Unit 3 is a BWR-4 with a Mark 1 containment and a Reactor Core Isolation Cooling (RCIC) system. The remaining 31 U.S. BWRs use a Reactor Core Isolation Cooling (RCIC) system instead of an isolation condenser. Nineteen of those 31 reactors have a Mark 1 containment, while the remainder are more recent designs.

From: Bill.Berkrot@thomsonreuters.com
To: McIntyre, David
Subject: RE: NRC info
Date: Sunday, March 13, 2011 4:33:46 PM

One more thing. I was wondering if you have any stats on current potassium iodide stockpiles for prevention measures either by the U.S. or individual states. Thanks, Bill

---

From: McIntyre, David [mailto:David.McIntyre@nrc.gov]
Sent: Sunday, March 13, 2011 3:36 PM
To: Bill.Berkrot@reuters.com
Subject: NRC info

Bill – sorry to hang up on you earlier. Turns out we put out a press release now on our website (attached) that may be of interest to your story. I would also refer you to our Fact Sheet on emergency preparedness, which spells out our policy on protective measures such as potassium iodide.

Dave McIntyre
NRC Public Affairs

From:	McIntyre, David
To:	Harrington, Holly; Maier, Bill
Cc:	LIA04 Hoc; Milligan, Patricia; McNamara, Nancy; Trojanowski, Robert; Tifft, Doug; Woodruff, Gena; Logaras, Harral; Barker, Allan; Virgilio, Rosetta; Turtil, Richard; Brenner, Eliot
Subject:	RE: NEED TO INFORM YOU OF A POTENTIAL ISSUE WITH 11-046
Date:	Sunday, March 13, 2011 5:04:00 PM

Bill, et al – we are not revisiting the KI dispute in our press releases. KI is used in the United States, after all, or at least is available for use. The descriptions of protective measures in both versions of the press release were included at the direct request of the Chairman, who was responding to the US Ambassador in Tokyo. The Ambassador was concerned that US citizens in Japan were ignoring the Japanese government's protective measures recommendations, and sought reassurance from us that the measures were comparable to what we would do here in the US.

Dave Mc, OPA

From: Harrington, Holly
Sent: Sunday, March 13, 2011 4:55 PM
To: Maier, Bill; McIntyre, David
Cc: LIA04 Hoc; Milligan, Patricia; McNamara, Nancy; Trojanowski, Robert; Tifft, Doug; Woodruff, Gena; Logaras, Harral; Barker, Allan; Virgilio, Rosetta
Subject: RE: NEED TO INFORM YOU OF A POTENTIAL ISSUE WITH 11-046

Bill – I've cc'd Dave on this response. He wrote the release and I believe had a specific reason for this inclusion.

Holly

From: Maier, Bill
Sent: Sunday, March 13, 2011 4:46 PM
To: Harrington, Holly
Cc: LIA04 Hoc; Milligan, Patricia; McNamara, Nancy; Trojanowski, Robert; Tifft, Doug; Woodruff, Gena; Logaras, Harral; Barker, Allan; Virgilio, Rosetta
Subject: NEED TO INFORM YOU OF A POTENTIAL ISSUE WITH 11-046
Importance: High

Holly,

I noticed in the revised news release (attached) and in its pre-revision predecessor, that the following statement appears:

The United States also uses sheltering in place and potassium iodide, protective measures also available in Japan.

This sentence may cause some issues because the issuance of potassium iodide to the general population is not a protective measure that some states have elected to implement. We may get some feedback from the states complaining that we implied a measure they are not using.

I don't know what the fix is, but I wanted to alert you (and the cc addressees) that some backlash is possible from this.

44/72

Bill Maier
RSLO
Region IV

From: opa administrators [mailto:opa@nrc.gov]
Sent: Sunday, March 13, 2011 4:23 PM
To: Maier, Bill
Subject: Revised -NRC Sees No Radiation at Harmful Levels Reaching U.S. From Damaged Japanese Nuclear Power Plants

From: McIntyre, David
To: Bill.Berkrot@thomsonreuters.com
Subject: RE: NRC info
Date: Sunday, March 13, 2011 5:09:00 PM

You're welcome. Note the part in the revised press release about US citizens in Japan urged to follow the protective measures recommended by the Japanese government.

Dave

From: Bill.Berkrot@thomsonreuters.com [mailto:Bill.Berkrot@thomsonreuters.com]
Sent: Sunday, March 13, 2011 4:59 PM
To: McIntyre, David
Subject: RE: NRC info

Ok, no worries. Thanks again. Bill

From: McIntyre, David [mailto:David.McIntyre@nrc.gov]
Sent: Sunday, March 13, 2011 4:41 PM
To: Berkrot, Bill (M Edit Ops)
Subject: RE: NRC info

We don't, actually. We might be able to tell you how many we supplied to the various states, but not how much they have. And I can't get you that today, unfortunately, as our KI expert isn't in.

Don't worry about me – I'm in our Operations Center today.

From: Bill.Berkrot@thomsonreuters.com [mailto:Bill.Berkrot@thomsonreuters.com]
Sent: Sunday, March 13, 2011 4:34 PM
To: McIntyre, David
Subject: RE: NRC info

One more thing. I was wondering if you have any stats on current potassium iodide stockpiles for prevention measures either by the U.S. or individual states. Thanks, Bill

---

From: McIntyre, David [mailto:David.McIntyre@nrc.gov]
Sent: Sunday, March 13, 2011 3:36 PM
To: Bill.Berkrot@reuters.com
Subject: NRC info

Bill – sorry to hang up on you earlier. Turns out we put out a press release now on our website (attached) that may be of interest to your story. I would also refer you to our Fact Sheet on emergency preparedness, which spells out our policy on protective measures such as potassium iodide.

Dave McIntyre
NRC Public Affairs

111/73

From: Couret, Ivonne
To: Harrington, Holly; Brenner, Eliot
Subject: Try again...two different images don"t think we have used either one...
Date: Sunday, March 13, 2011 6:13:41 PM
Attachments: MG_2910r.JPG
MG_2908r.JPG

Here at the NRC's headquarters Operations Center, operating on a 24-hour basis, staff are examining available information to analyze the earthquake and tsunami event and understand their implications both for Japan and the United States. The NRC has sent two boiling-water reactor experts to Japan as part of a U.S. Agency for International Development team. The NRC will not comment on hour-to-hour developments at the Japanese reactors. This is an ongoing crisis for the Japanese who have primary responsibility.

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs

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(301) 415-8205
ivonne.couret@nrc.gov

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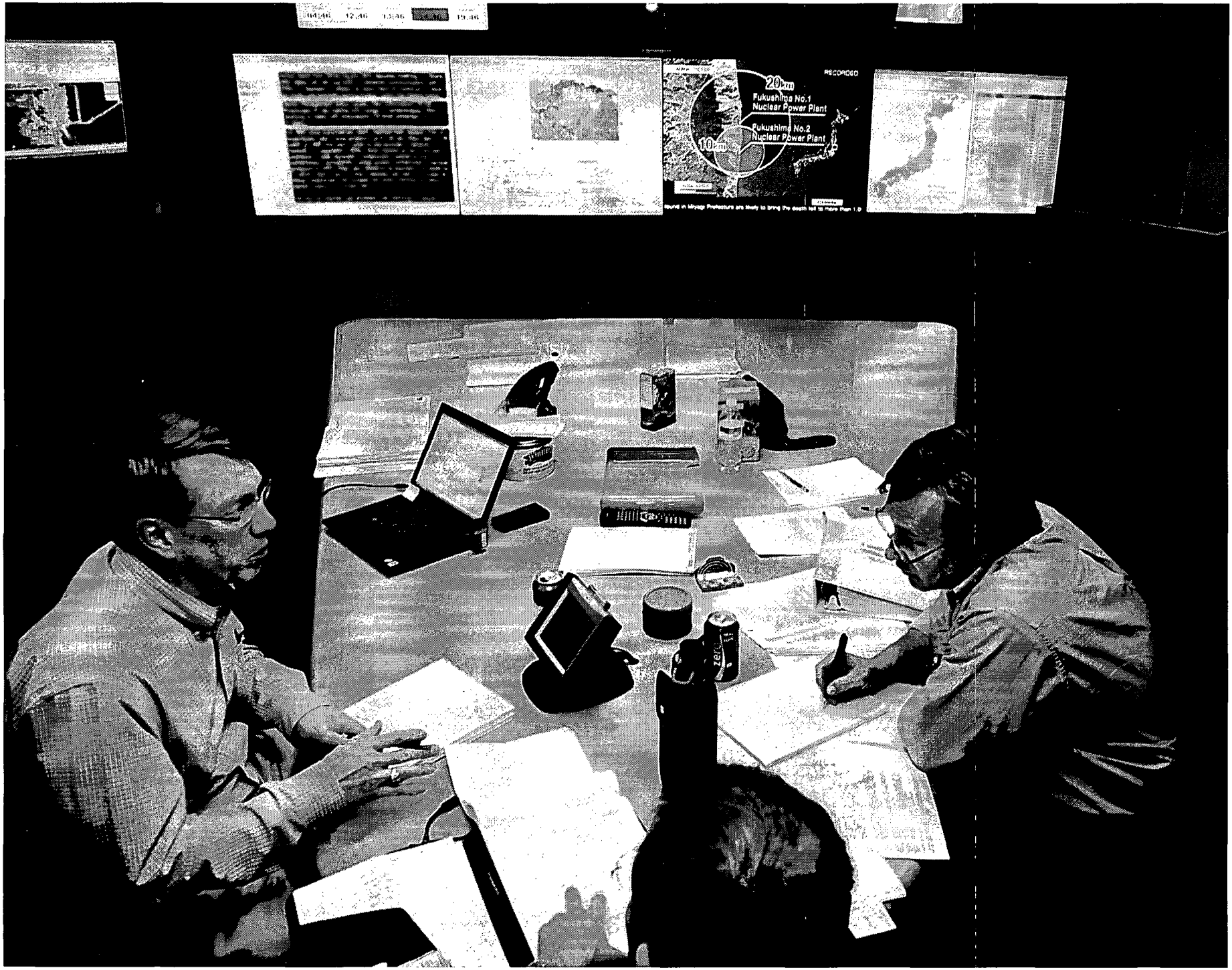
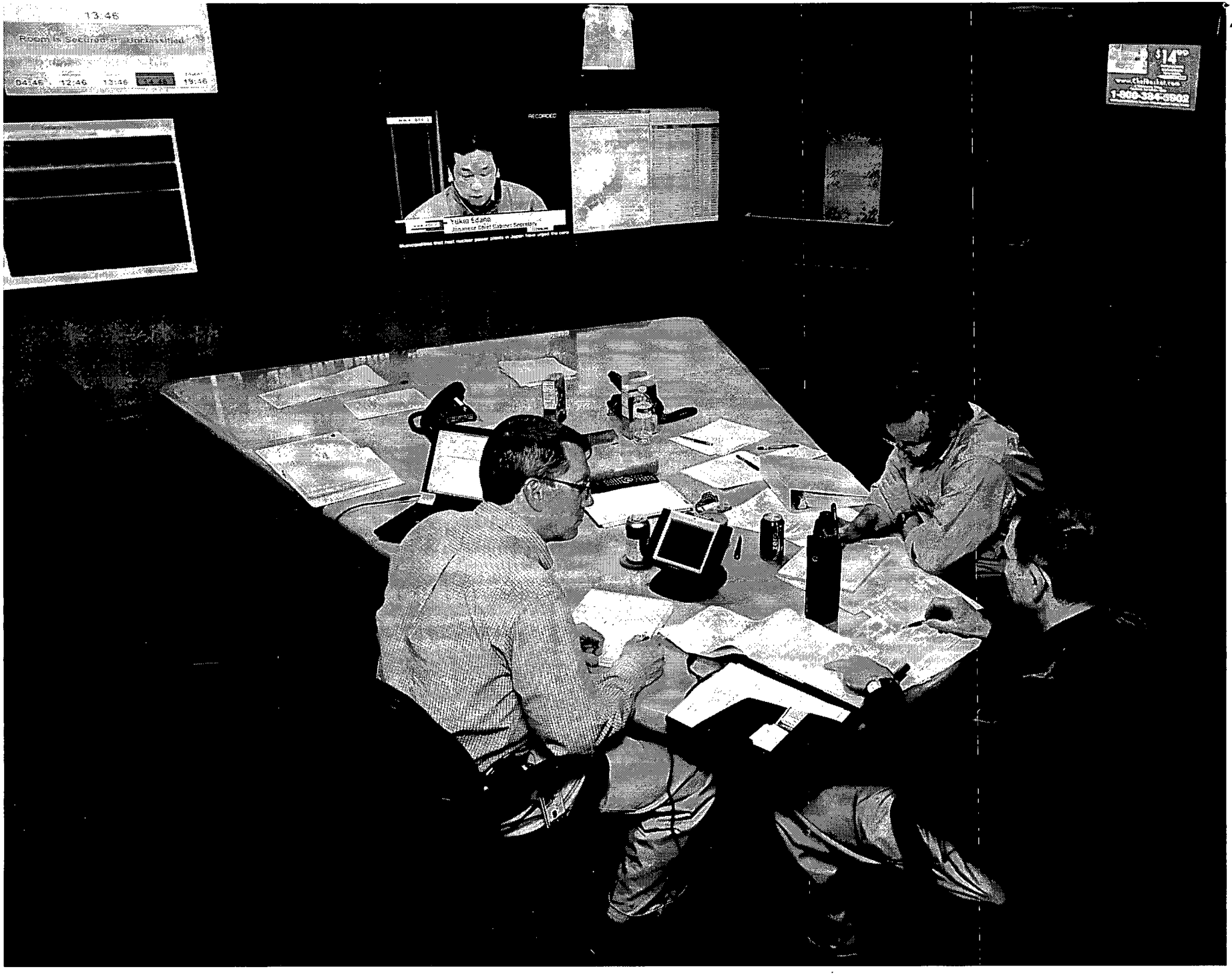
LL/74


20km
Fukushima No.1
Nuclear Power Plant
Fukushima No.2
Nuclear Power Plant
10km


13:46
Room is Secured
RECORDED
Yukio Edano
Japanese Chief Cabinet Secretary

From: Taylor, Robert
To: Harrington, Holly
Subject: Seismic Info
Date: Sunday, March 13, 2011 5:42:57 PM

From PR#3

U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. 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 estimated for the site and surrounding area.

4475

From: Shannon, Valerie
To: McIntyre, David
Subject: Call
Date: Sunday, March 13, 2011 11:26:30 AM

Dave,
Megan from Fox News would like to talk to you again. Please call her 202-824-6369.
Thanks, Val

LL/76

From: McIntyre, David
To: Shannon, Valerie; Brenner, Eliot
Subject: RE: Interview
Date: Sunday, March 13, 2011 12:38:00 PM

Done

From: Shannon, Valerie
Sent: Sunday, March 13, 2011 12:34 PM
To: McIntyre, David; Brenner, Eliot
Subject: Interview

Please call Caroline from Fox on 310-571-2000 re: Interviews.
Val

4477

From: Couret, Ivonne
To: McIntyre, David; Brenner, Eliot
Subject: Media Request - Reuters Reporter
Date: Sunday, March 13, 2011 12:57:58 PM

Please call
Bill Berkrot of Reuters
Wants background information on KI and similar info
Call first - Phone: 646-223-6155 ✓
Email is Bill.Berkrot@reuters.com

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs

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http://portal.nrc.gov/OCM/opa/blog/default.aspx

LLL/78

From: Shannon, Valerie
To: McIntyre, David; Brenner, Eliot
Subject: Interview
Date: Sunday, March 13, 2011 12:49:57 PM

Please call Diedra Hughes from Lou Dobbs – Fox Business on 212-301-5496 re: Interview.
Val

From:	McIntyre, David
To:	Couret, Ivonne; Brenner, Eliot
Cc:	Janbergs, Holly; Powell, Amy
Subject:	RE: Market Watch NY
Date:	Sunday, March 13, 2011 12:47:00 PM

OK good – we definitely don't want to get into this debate today. Apparently Markey issued a Howler suggesting the same thing.

From: Couret, Ivonne
Sent: Sunday, March 13, 2011 12:45 PM
To: Brenner, Eliot; McIntyre, David
Cc: Janbergs, Holly
Subject: Market Watch NY

Comments Reaction on Senator Joe Lieberman's comments on Face the Nation on Halting Nuclear Plant Construction in the United States until we understand what went wrong in Japan.
Steve Gelsi
Market Watch- NY
973-744-6517
sgelsi@marketwatch.com

I provided him some #'s of reactors and website links including the Information Digest and Appendix A. Ivonne

Ivonne L. Couret
Public Affairs Officer
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LLL/80

From: Emma Dallimore
To: McIntyre, David
Subject: Re: Media Request
Date: Sunday, March 13, 2011 12:40:19 PM

Thanks for your time David.
Emma.
-----Original Message-----
From: "McIntyre, David" <David.McIntyre@nrc.gov>
To: Emma Dallimore <edallimore@networkten.com.au>
To: OPA Resource <OPA.Resource@nrc.gov>

Sent: 14/03/2011 2:55:18 AM
Subject: RE: Media Request

Emma - I am afraid the NRC is not in a position to provide experts for TV interviews. We suggest you try to reach someone at Cal Tech Irvine's nuclear physics program.

David McIntyre

NRC Public Affairs

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

From: Emma Dallimore [mailto:edallimore@networkten.com.au]

Sent: Sunday, March 13, 2011 12:02 AM

To: OPA Resource

Subject: Media Request

Below is the result of your feedback form. It was submitted by

Emma Dallimore (edallimore@networkten.com.au) on Sunday, March 13, 2011 at 00:01:39

---

comments: I am a foreign correspondent for Network Ten Australia, based in Los Angeles.

We are seeking an informed nuclear expert to speak to on our evening current affairs program, regarding the current situation unfolding in Japan.

LLL/81

I am hopeful that perhaps, in a time where there is much concern and perhaps confusion about the consequences of a nuclear leak.. that a member of your organisation may help lend an expert voice to the conversation, and assist in explaining what this complex situation might mean.

I thankyou for your time in considering this request.

Regards,

Emma.

organization: Network Ten Australia

address1: 3440 Motor Avenue

address2:

city: Los Angeles

state: CA

zip: 90034

country: United States

phone: 2132801447

From: Couret, Ivonne
To: Brenner, Eliot; McIntyre, David
Subject: MEDIA REQUEST - NBC NEWS NATIONAL
Date: Sunday, March 13, 2011 1:37:17 PM

NBC – all affiliate release
Sheila Conlin
202-783-2615 ✓
Sheila.conlin@nbcuni.com
Wants to be included on future distribution of all NRC press releases

Interview and or want to get answers to question. She is reading online from other media sources that the NRC is "saying" that they are reassuring the public that the NRC is assuring this Japan episode is not going to happen in US ; wants to know what is the NRC doing to reassure the public of this. I asked for media source and quoted other online media there is no quotes just summations. I told her I would forward to PAOs in the cue ... Ivonne

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs

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LL 182

From: Couret, Ivonne
To: Brenner, Eliot; McIntyre, David
Subject: MEDIA INTERVIEW REQUEST
Date: Sunday, March 13, 2011 1:46:51 PM

CNBC
Kevin Flynn
Interview today – 5 min 8:30p.m.
201-290-9476
Kevin.flynn@nbcuni.com

Looking to get someone in authority to reassure the public that this will not happen in the US and what we do to keep the people and environment safe…

Wants to be included in NRC Press Release distributions.

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs

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LL/83

From: Harrington, Holly
To: LIA04 Hoc
Subject: statement
Date: Sunday, March 13, 2011 5:54:00 PM

.. We believe there is a lot of inaccurate and misleading information in press reports; however the NRC is not in a position to fact-check these reports. We do encourage folks to consult credible government sources of information in addition to press reports.

LLL/84

From: Harrington, Holly

To: Abraham, Susan; Bonaccorso, Amy; Campbell, Tison; Crouch, Nicole; Culp, Lisa; Deegan, George; Ellmers, 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

Subject: Blog and the NRC Response to the Japanese Earthquake and Tsunami

Date: Sunday, March 13, 2011 6:32:00 PM

Be sure to check out the multiple posts on the NRC Blog as the agency responded to events in Japan. The blog worked very well to get information out in a way that augmented our press releases. We had more than 2,000 views on Friday alone and about 3,000 total over the weekend.

111/85

From: Brenner, Eliot
To: Hayden, Elizabeth; Burnell, Scott; Harrington, Holly; McIntyre, David; Couret, Ivonne; Shannon, Valerie; Janbergs, Holly; Akstulewicz, Brenda; Screnci, Diane; Sheehan, Neil; Chandrathil, Prema; Mitlyng, Viktoria; Hannah, Roger; Ledford, Joey; Dricks, Victor; Uselding, Lara
Subject: upcoming week
Date: Sunday, March 13, 2011 7:02:15 PM

OPA Staffers:

It has been a very hectic weekend and a good test of our crisis communication planning. Thank you to the headquarter's folks who sacrificed their weekends (and their sleep) to come in. And thank you to the regional folks who fielded a number of calls about our response and the impact of the Japanese situation on our plants. Some things worked very well – the blog was a great way to get information out besides our standard press releases and NSIR released access to YouTube and Twitter by mid-day Sunday so we could do more monitoring of what information was "in the public domain."

Please take the time Monday morning to review all the press releases that went out and the blog posts as well. Please use these to guide any media responses you provide. While we know more than what these say, we're sticking to this story for now.

Stay tuned as the week unfolds. We anticipate staffing the Op Center on a 24-hour basis at least through Wednesday. Neil will be helping us out in that regard, and we may need to ask for further regional assistance if we need to continue the full-court-press through next weekend.

The chairman has a hearing on the hill on Wednesday morning, which will occur a lot of my time and may be the place where we really push out our message.

We expect fall-out over this to continue for a time along the lines of:
Can this happen in the U.S. and what is the NRC doing about it? This is a marathon not a 50-yard dash. While I am expecting us to need full staffing for a while and may ask that you put off non-essential time off, we also need to conserve our energy. So be sure to take time when you need it.

Thank you all for your help!

111/86

From: Landau, Mindy
To: Harrington, Holly
Subject: RE: Blog and the NRC Response to the Japanese Earthquake and Tsunami
Date: Sunday, March 13, 2011 7:29:21 PM

Great timing for the blog, Holly – I've been checking it and it's great!!!

From: Harrington, Holly
Sent: Sunday, March 13, 2011 6:40 PM
To: Abraham, Susan; Bonaccorso, Amy; Campbell, Tison; Crouch, Nicole; Culp, Lisa; Deegan, George; Ellmers, 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
Subject: Blog and the NRC Response to the Japanese Earthquake and Tsunami

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LLL/87

From:	Schwartzman, Jennifer
To:	Harrington, Holly; Abraham, Susan; Bonaccorso, Amy; Campbell, Tison; Crouch, Nicole; Culp, Lisa; Deegan, George; Ellmers, 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; Sentz, Brian; Sexton, Kimberly; Shropshire, Alan; Stahl, Eric; Steger (Tucci), Christine; Usilton, William; VandenBerghe, John; Weil, Jenny; Wellock, Thomas
Subject:	RE: Blog and the NRC Response to the Japanese Earthquake and Tsunami
Date:	Sunday, March 13, 2011 9:10:20 PM

Holly, for what it's worth, the IAEA has been putting out a tremendous amount of information via Facebook (including YouTube videos). I know we're not able to access those things from within network but it might be worth noting as a way to get information (and a way to get notified when new information comes in). I understand DG Amano will be having a press conference tomorrow.

From: Harrington, Holly
Sent: Sunday, March 13, 2011 6:40 PM
To: Abraham, Susan; Bonaccorso, Amy; Campbell, Tison; Crouch, Nicole; Culp, Lisa; Deegan, George; Ellmers, 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
Subject: Blog and the NRC Response to the Japanese Earthquake and Tsunami

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From: McIntyre, David
To: Mitlyng, Viktoria; Chandrathil, Prema
Subject: FW: More media fun
Date: Monday, March 14, 2011 5:44:00 PM

Can you please handle?

Thx
Dave

From: Janbergs, Holly
Sent: Monday, March 14, 2011 5:06 PM
To: McIntyre, David
Subject: More media fun

Don't know if you want to take this or send it off to the regions but –

Steve Elliott from the Moline Dispatch Newspaper is doing a story on Illinois reactors and has some general questions about the GE design. He apparently has already spoken with officials at Exelon and also someone at the Nuclear Information and Resource Center. He wants to confirm safety & security of the design.

309-757-4995
selliot@qconline.com

Beth Janbergs
Public Affairs Assistant
301-415-8211

LL 88

From: Steger (Tucci), Christine
To: McIntyre, David
Subject: Santa Barbara News - Deadline 6pm today
Date: Monday, March 14, 2011 5:20:13 PM

Call from: Michal Elseth
Organization: Santa Barbara News
Number: 805-564-5282

Question: press release yesterday re: radiation levels – want to know if there is any update to this information

Deadline – 6:00pm

11/89

From: Steger (Tucci), Christine
To: McIntyre, David
Subject: Al Jazeera English
Date: Monday, March 14, 2011 5:21:59 PM

Call from: Kristen Saloomey
Organization: Al Jazeera English
Number: 646-251-5032 ✓

Question: IP – fault lines, lawsuits filed

11/90

From: Steger (Tucci), Christine
To: McIntyre, David
Subject: Youth Radio, Oakland California
Date: Monday, March 14, 2011 5:06:44 PM

Call from: Denise Tejada
Organization: Youth Radio, Oakland California
Number: 510-251-1101

Question: Nuclear shipments globally – how to handle shipments in nuclear free zone

Deadline – COB Today NLT 2 hours

11/91

From: Janbergs, Holly
To: McIntyre, David
Subject: More media fun
Date: Monday, March 14, 2011 5:06:14 PM

Don't know if you want to take this or send it off to the regions but –

Steve Elliott from the Moline Dispatch Newspaper is doing a story on Illinois reactors and has some general questions about the GE design. He apparently has already spoken with officials at Exelon and also someone at the Nuclear Information and Resource Center. He wants to confirm safety & security of the design.

309-757-4995 ✓
selliot@qconline.com

Beth Janbergs
Public Affairs Assistant
301-415-8211

11/92

From: McIntyre, David
To: OPA Resource; cmcconville@bostonherald.com
Subject: RE: Emergency Preparedness
Date: Monday, March 14, 2011 5:06:00 PM

Christine – I would refer you to our Emergency Preparedness webpage. On the second question, NRC Chairman Gregory Jaczko spoke today at the White House press briefing; he expressed confidence in the safety of US nuclear plants and their ability to withstand earthquakes and tsunamis, and said that the agency will analyze this situation as more information becomes available for any lessons that will improve our oversight even more.

David McIntyre
Office of Public Affairs
U.S. Nuclear Regulatory Commission
(301) 415-8200

-----Original Message-----
From: Christine McConville [mailto:cmcconville@bostonherald.com]
Sent: Monday, March 14, 2011 1:58 PM
To: OPA Resource
Subject: Emergency Preparedness

Below is the result of your feedback form. It was submitted by

Christine McConville (cmcconville@bostonherald.com) on Monday, March 14, 2011 at 13:58:06
---

comments: Hello.

My name is Christine McConville, and I am a reporter at the Boston Herald. I am doing a story about steps to take in the case of nuclear power leak.

I also want to know if what is happening in Japan could also happen here. Are we exposed to similar risks?

Thanks
Christine Mcconville
617.619.6637 ✓

organization: Boston Herald

LL 93

From: Couret, Ivonne
To: McIntyre, David
Subject: FW: KFI Radio, Los Angeles - Phone Interview Request today at 7pm EST
Date: Monday, March 14, 2011 4:53:44 PM

FYI

From: Steger (Tucci), Christine
Sent: Monday, March 14, 2011 4:23 PM
To: Couret, Ivonne
Subject: KFI Radio, Los Angeles - Phone Interview Request today at 7pm EST

Call from: Ray Lopez
Organization: KFI Radio
Number: 818-653-6730

Request phone interview (doesn't matter who) – one on one interview, will not talk "politics", just want understanding of what is taking place in Japan, more of overview interview.

Interview request today at 7:00pm EST.

1194

From: OPA Resource
To: McIntyre, David
Subject: FW: Emergency Preparedness
Date: Monday, March 14, 2011 4:44:51 PM

-----Original Message-----
From: Christine McConville [mailto:cmcconville@bostonherald.com]
Sent: Monday, March 14, 2011 1:58 PM
To: OPA Resource
Subject: Emergency Preparedness

Below is the result of your feedback form. It was submitted by

Christine McConville (cmcconville@bostonherald.com) on Monday, March 14, 2011 at 13:58:06
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comments: Hello.

My name is Christine McConville, and I am a reporter at the Boston Herald. I am doing a story about steps to take in the case of nuclear power leak.

I also want to know if what is happening in Japan could also happen here. Are we exposed to similar risks?

Thanks
Christine Mcconville
617.619.6637

organization: Boston Herald

address1: Harrison Ave

address2:

city: Boston

state: MA

zip:

country:

phone: 617.619.6637

11/95

From: OPA Resource
To: McIntyre, David
Subject: FW: CNN Question
Date: Monday, March 14, 2011 4:44:21 PM

-----Original Message-----
From: Deborah Feyerick [mailto:deborah.feyerick@turner.com]
Sent: Monday, March 14, 2011 4:40 PM
To: OPA Resource
Subject: CNN Question

Below is the result of your feedback form. It was submitted by

Deborah Feyerick (deborah.feyerick@turner.com) on Monday, March 14, 2011 at 16:40:17
---

comments: I am on deadline working on a piece about the National Atmospheric Release Advisory Center that does plume modeling for any radioactive releases. I'm hoping you can help. 917-673-4315
Deborah Feyerick
CNN Correspondent

organization: CNN

address1: 1 Time Warner Center

address2:

city: NY

state: NY

zip: 10019

country: USA

phone: 917-673-4315

LL/96

From: Steger (Tucci), Christine
To: McIntyre, David
Subject: Nature - from London
Date: Monday, March 14, 2011 4:40:22 PM

Call from: Jeff Brumfield, Scientific Reporter
Organization: Nature
Number: (44) 2078434645

Calling from London

Question: Whether the NRC is planning or considering making changes to the regulatory framework as a result of the events in Japan

ww97

From: OPA Resource
To: McIntyre, David
Subject: FW: CNNMoney license extention story
Date: Monday, March 14, 2011 4:38:42 PM

From: Hargreaves, Steve [mailto:Steve.Hargreaves@turner.com]
Sent: Monday, March 14, 2011 4:37 PM
To: OPA Resource
Subject: CNNMoney license extention story

Hello,

I'd doing a story on the age of U.S. nuclear plants, and the number of plants that have asked for license extensions.

I'm wondering if anyone at NRC could confirm some of the numbers I have – that 52 reactors are over 30 year old, the original license period was for 40 years, the extensions are for 20 years, the agency has granted 56 extensions so far, and has 19 pending before it.

Also, if someone could respond to some of the criticism I've heard, that would be great too. Namely, it's that the Mark I containment structure is not strong enough, the spend fuel pools are vulnerable and should be put in dry storage, and the plants are not shut down for a 3-6 month period for a complete check up before the licenses are extended.

I'm trying to wrap up the reporting on this story by 6:30 tonight.

Thanks,
Steve

Steve Hargreaves
Senior Writer
CNNMoney.com
212-275-8276

11/98

From: Steger (Tucci), Christine
To: McIntyre, David
Subject: San Jose Mercury News
Date: Monday, March 14, 2011 4:26:43 PM

Call from: Dana Hull
Organization: San Jose Mercury News
Number: 408-920-2706

Questions regarding the safety of the U.S. Nuclear Power Plants.

11/99

From: Steger (Tucci), Christine
To: McIntyre, David
Subject: Discovery Channel
Date: Monday, March 14, 2011 4:20:40 PM

Call from: Irene Klotz
Organization: Discovery Channel
Number: 321-432-0220 ✓

Question: Seawater use in Japan reactors

Someone from OPA called her back earlier but didn't leave a message.

LLL/100

From: Steger (Tucci), Christine
To: McIntyre, David
Subject: New York Daily News
Date: Monday, March 14, 2011 4:11:16 PM

Call from: Michael Daily
Organization: New York Daily News
Number: 917-968-8827 ✓

Question: 2008 Report from Columbia University states that the area where IP is located has highest risk for seismic event.... Wants to know if NRC has taken this into consideration when looking at LR for IP – do we have any new earthquake information.

111/101

From: OPA Resource
To: McIntyre, David
Subject: FW: article
Date: Monday, March 14, 2011 4:10:12 PM

From: Grace, Virginia [mailto:virginia.grace@FOXNEWS.COM]
Sent: Monday, March 14, 2011 3:48 PM
To: OPA Resource
Subject: article

Hi,
I am hoping to find out whether or not NRC agrees with this article:

http://bravenewclimate.com/2011/03/13/fukushima-simple-explanation/

This is for a 5 PM EST broadcast today on Fox News Channel.

I can be reached at 212-301-5786. ✓

Thanks so much,
Virginia

111/102

From: Sheehan, Neil
To: Brenner, Eliot; Harrington, Holly; Burnell, Scott; Screnci, Diane; Dean, Bill; Lew, David
Subject: Graphic on Japan reactor explosions
Date: Monday, March 14, 2011 5:05:12 AM

There's a good interactive graphic on The New York Times' web site showing how secondary containment was involved in the two hydrogen explosions: http://www.nytimes.com/interactive/2011/03/12/world/asia/the-explosion-at-the-japanese-reactor.html .

From: Harrington, Holly
To: Leong, Edwin
Subject: we got this comment on the blog. is this possible?
Date: Monday, March 14, 2011 4:11:00 PM

Could you consider adding delicious.com to your "sharethis" please, you currently are facilitating only:
Facebook, Twitter, Digg, stumledupon and reddit

Thanks in advance

104

From:	Brenner, Eliot
To:	Harrington, Holly; Chandrathil, Prema; Dricks, Victor; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Screnci, Diane; Sheehan, Neil; Uselding, Lara; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David
Subject:	RE: Per eliot
Date:	Monday, March 14, 2011 4:41:27 PM

Additionally, you should know that we may make these generally available within the agency Wednesday. I know this puts you in a bit of an awkward position, but no one ever said life was easy.

From: Harrington, Holly
Sent: Monday, March 14, 2011 4:40 PM
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: Per eliot

You can talk from these Q&As (prepared for the Chairman), but do not disseminate them.

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:	Per eliot
Date:	Monday, March 14, 2011 4:40:00 PM
Attachments:	Chairman Jaczko QA5 earthquake031111.docx Additional Chairman QAs.docx

You can talk from these Q&As (prepared for the Chairman), but do not disseminate them.

Questions and Answers for Chairman Jaczko
Note: Talk from but do not distribute

March 11, 2011 Japan Earthquake/Tsunami Aftermath
As of 8 p.m., 3/12/2011

1. What is the NRC doing about the emergencies at the nuclear power plants in Japan? Are you sending staff over there?

Public Answer: We are closely following events in Japan, working with other agencies of the federal government, and have been in direct contact with our counterparts in that country. We are ready to provide assistance if there is a specific request. Two NRC staff members knowledgeable about boiling water reactors are participating in the USAID team that has departed for Japan.

Additional technical, non-public information:
We are taking the knowledge that the staff has about the design of the US nuclear plants and we are applying this knowledge to the Japan situation. For example, this includes calculations of severe accident mitigation that have been performed. Tony Ulses has been dispatched to Japan and should arrive Early Sunday.David Jim Trapp left 1600 Saturday should arrive in 20 hours

2. What's going to happen following the hydrogen explosion everyone's seen from the video footage?

Public Answer: If a similar event occurred at a U.S. nuclear power plant, the NRC would be seeking information to answer several questions, including: What's the status of the reactor core, the reactor vessel and the containment building? What radiation measurement equipment is available and what measurements are being reported? What efforts are being taken to keep the public safe? How did the explosion affect efforts to keep the nearby reactors in a safe condition? And most importantly – What can the NRC do to help?

Additional technical, non-public information:

The explosion affected the secondary containment of the reactor plant. The primary containment was not affected by the explosion. The Japanese are taking actions to preserve the primary containment, cool the reactor core, maintain the reactor shut down and limit the spread of radioactive contamination.

The NRC required a back fit to US reactors of the type similar to Fukushima Unit 1 to install a hardened vent line. A hardened vent provides a release path which would prevent an explosion as experienced at Fukushima Unit One.

3. What should done to protect people in Alaska, Hawaii and the West Coast do from radioactive fallout?

Public Answer: The available evidence shows the United States can be expected to avoid any impacts from radioactive material, so no public action is necessary. We believe there is very low risk to the US considering the long distance from the US and the type of event.

Additional technical, non-public information: NRC is working with DHS, EPA and other federal partners to ensure monitoring equipment is properly positioned, based on meteorological and other relevant information.

4. Can this happen here i.e. an earthquake that significantly damages a nuclear power plant? Are the Japanese plants similar to U.S. plants?

Public Answer: All U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. Even those plants that are located outside of areas with low and moderate seismic activity are designed for safety in the event of such a natural disaster. The NRC requires that safety-significant structures, systems, and components be designed to take into account even very rare and extreme seismic and tsunami events.

The Japanese facilities are similar in design to several US facilities.

Additional technical, non-public information:
Currently operating reactors were designed using a "deterministic" or "maximum credible earthquake" approach. Seismic hazard for the new plants is determined using a much more robust probabilistic seismic hazard assessment approach that explicitly addresses uncertainty, as described in RG1.208. The NRC requires that adequate margin beyond the design basis ground shaking levels is assured. The NRC further enhances seismic safety for beyond-design-basis events through the use of a defense-in-depth approach.

In addition, the NRC periodically reviews the seismic risk at operating reactors when information may have changed. Over the last few years the NRC has undertaken a program called Generic Issue 199, which is focused on assessing hazard for plants in the central and eastern US using the latest techniques and determining the possible risk implications of any increase in the anticipated ground shaking levels. This program will help us assure that the plants are safe under exceptionally rare and extreme ground motions that represent beyond-design-basis events.

5. What would U.S. plants do in this situation?

Public Answer: The NRC requires plant designs to include multiple and diverse safety systems, and plants must test their emergency preparedness capabilities on a regular basis. Plant operators are very capable of responding to significant events. In addition, NRC regulations require plants to have plans in place that would allow them to mitigate even "worst case scenarios".

Since 9/11, we have implemented requirements for licensees to have additional response capabilities for extreme situations.

Additional technical, non-public information:
Our nuclear plants have procedures in place to address a variety of accident scenarios, including abnormal operating procedures, emergency operating procedures, sever accident guidelines and emergency plans.

6. Are U.S. power plants designed to withstand tsunamis?

Public Answer: Yes. Plants are built to withstand a variety of environmental hazards and those plants that might face a threat from tsunami are required to withstand large waves and the maximum wave height at the intake structure (which varies by plant.)

Additional, technical, non-public information:
Tsunami have been considered in the design of US nuclear plants since the publication of Regulatory Guide 1.59 in 1977, although the approaches that were used for design of the existing plants varied significantly. Nuclear plants are designed to withstand flooding from not only tsunami, but also hurricane and storm surge; therefore there is often significant margin against tsunami flooding. However, it should be noted that Japanese experience has shown that drawdown can be a significant problem. Drawdown was not generally analyzed in the past. The particular

Currently the US NRC has a tsunami research program that is focused on developing modern hazard assessment techniques and additional guidance through cooperation with the National Oceanic and Atmospheric Administration and the United States Geological Survey. This has already lead to several technical reports and an update to NUREG 0-800. The NOAA and USGS contractors are also assisting with NRO reviews of tsunami hazard. A new regulatory guide on tsunami hazard assessment is currently planned in the office of research, although it is not expected to be available in draft form until 2012.

7. What happens when/if a plant "melts down"?

Public Answer: To prevent the release of radioactive material, there are multiple barriers between the radioactive material and the environment, including the fuel cladding, the heavy steel reactor vessel itself and the containment building, usually a heavily reinforced structure of concrete and steel several feet thick. In a so-called "meltdown," some of the nuclear fuel has melted because of extremely high temperatures caused by a lack of adequate cooling. This does not necessarily mean that radiation is released to the environment. But it could be if other barriers fail.

Additional, technical, non-public information: None.

8. Why is KI administered during nuclear emergencies?

Public Answer: KI – potassium iodide – is one of the protective measures that might be taken in a radiological emergency in this country. A KI tablet will saturate the thyroid with non radioactive iodine and prevent the absorption of radioactive iodine that could be part of the radioactive material mix of radionuclides in a release.KI does not prevent exposure from these other radionuclides.

Additional, technical non-public information.
There are a range of protective measures that we use ... the most effective is evacuation. Local government officials are responsible for determining the best means to protect their public. KI is another means for protection but evacuation and sheltering are the primary means that are used.

9. Was there any damage to U.S. reactors from either the earthquake or the resulting tsunami?

Public Answer: No

Additional, technical non-public information:
Diablo Canyon Units 1 and 2 declared an "unusual event" based on tsunami warning following the Japanese earthquake. They have since exited the "unusual event" declaration, based on a downgrade to a tsunami advisory.

10. Has this incident changed the NRC perception about earthquake risk?

Public Answer: There has been no change in the NRC's perception of earthquake hazard (i.e. ground shaking levels) for US nuclear plants. As is prudent, the NRC will certainly be looking closely at this incident and the effects on the Japanese nuclear power plant in the future to see if any changes are necessary to NRC regulations.

Additional, technical, non-public information.
We expect that there would be lessons learned, etc.

11. Will this incident affect new reactor licensing?

Public Answer: It is not appropriate to hypothesize on such a future scenario at this point.

12. What magnitude earthquake are US plants designed to?

Public Answer: Each plant is designed to a ground-shaking level that is appropriate for its location, given the possible earthquake sources that may affect the site and its tectonic environment. Ground shaking is a function of both the magnitude of and earthquake and the distance from the fault plane to the site. The probabilistic approaches account for a large number of different magnitudes.

Additional, technical non-public information:
In the past, "deterministic" or "scenario based" analyses were used to determine ground shaking (seismic hazard) levels. Now a probabilistic method is used that accounts for all possible earthquakes coming from all possible sources (including background seismicity) and the likelihood that each particular hypothetical earthquake occurs.

13. How many US reactors are located in active earthquake zones (and which reactors)?

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

Additional, technical non-public information: No additional.

14. How many reactors are along coastal areas that could be affected by a tsunami (and which ones)?

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

Additional, technical non-public information: None

15. How many U.S. plants have designs similar to the affected Japanese reactors (and which ones)

Public Answer: Six of the 104 US reactors are General Electric BWR 3 with Mark 1 containments similar to the design used at Fukushima Unit One.

Additional Information:
The units are: Dresden Units 2 and 3, Monticello unit 1, Pilgrim unit 1, Quad Cities Units 1 and 2.

POTENTIAL ADDITIONAL QUESTIONS FOR THE CHAIRMAN

1. **Can this happen here?**

   The events that have occurred in Japan are the result of a combination of highly unlikely natural disasters. It is extremely unlikely that a similar event could occur in the United States.

2. **I live near a nuclear power plant similar to the ones having trouble in Japan. How can we now be confident that this plant won't experience a similar problem?**

   U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. 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 is confident that the robust design of these plants makes it extremely unlikely that a similar event could occur it then U.S.

3. **Has this crisis changed your opinion about the safety of US nuclear power plants?**

   No. The NRC remains confident that the design of U.S. nuclear power plants ensure the continued protection of public health and safety.

4. **With all this happening, how can the NRC continue to approve new nuclear power plants?**

   It is premature to speculate what, if any, effect the events in Japan will have on the licensing of new nuclear power plants.

5. **What is the NRC doing in response to the situation in Japan?**

   The NRC has taken a number of actions:
   a. Since the beginning of the event, the NRC has continuously manned its Operations Center in Rockville, MD in order to gather and examine all available information as part of the effort to analyze the event and understand its implications both for Japan and the United States.
   b. A team of officials from the U.S. Nuclear Regulatory Commission with expertise in boiling water nuclear reactors have deployed to Japan as part of a U.S. International Agency for International Development (USAID) team.
   c. The Nuclear Regulatory Commission has spoken with its counterpart agency in Japan, offering the assistance of U.S. technical experts.
   d. The NRC is coordinating its actions with other Federal agencies as part of the U.S. government response.

6. **What other US agencies are involved, and what are they doing?**

   The entire federal family is responding to this event. The NRC is closely coordinating its efforts with the White House, DOE, DOD, USAID, and others. The U.S. government is providing whatever support requested by the Japanese government.

7. **What else can go wrong?**

   The NRC is continuously monitoring the developments at the nuclear power plants in Japan. Circumstances are constantly evolving and it would be inappropriate to speculate on how this situation might develop over the coming days.

8. **What is the worst-case scenario?**

   In a nuclear emergency, the most important action is ensure the core is covered with water to provide cooling to remove any heat from the fuel rods. Without adequate cooling, the fuel rods will melt.

9. **The US has troops in Japan and has sent ships to help the relief effort – are they in danger from the radiation?**

   The NRC is not the appropriate federal agency to answer this question. DOD is better suited to provide information regarding its personnel.

10. **Is there a danger of radiation making it to the United States?**

    In response to nuclear emergencies, the NRC works with other U.S. agencies to monitor radioactive releases and predict their path. All the available information indicates weather conditions have taken the small releases from the Fukushima reactors out to sea away from the population. Given the thousands of miles between the two countries, Hawaii, Alaska, the U.S. Territories and the U.S. West Coast are not expected to experience any harmful levels of radioactivity.

11. **Is the US Government tracking the radiation released from the Japanese plants?**

    See response to Question 10.

12. **Has the government set up radiation monitoring stations to track the release?**

    All U.S. nuclear power plants have existing monitoring stations with the ability to measure and track external radiation sources. However, should the federal government decide that additional monitoring stations are needed, the NRC will support that effort.

13. The radiation "plume" seems to be going out to sea – what is the danger of it reaching Alaska? Hawaii? The west coast?

See response to Question 10.

14. I live in the Western United States – should I be taking potassium iodide (KI)?

No protective measures are necessary in the United States. We do not expect any U.S. states or territories to experience harmful levels of radioactivity.

15. Are there other protective measures I should be taking?

The NRC supports the states with making protective measure recommendations for their residents. The NRC is not recommending any protective measures to the states as a result of the events in Japan. United States citizens in Japan are encouraged to follow the protective measures recommended by the Japanese government. These measures appear to be consistent with steps the United States would take.

16. What are the risks to my children?

See response to Question 15.

17. My family has planned a vacation to Hawaii/Alaska/Seattle next week – is it safe to go, or should we cancel our plans?

The NRC does not believe that the events in Japan warrant any travel restrictions within the United States or its territories.

18. What are the short-term and long-term effects of exposure to radiation?

The NRC does not expect that residents of the United States or it territories are at any risk of exposure to harmful levels of radiation resulting from the events in Japan.

On a daily basis, people are exposed to naturally occurring sources of radiation, such as from the sun or medical X-rays. The resulting effects are dependent on the strength and type of radiation as well as the duration of exposure.

From: Hayden, Elizabeth
To: Brenner, Eliot
Cc: Harrington, Holly
Subject: Fw: Google Alert - Nuclear Regulatory Commission
Date: Monday, March 14, 2011 4:38:44 PM

Getting Diaz and Klein out there would be good balance to Bradford.

From: Google Alerts <googlealerts-noreply@google.com>
To: Hayden, Elizabeth
Sent: Mon Mar 14 10:19:54 2011
Subject: Google Alert - Nuclear Regulatory Commission

News **4** new results for **Nuclear Regulatory Commission**

The week ahead: **Nuclear** safety, EPA climate rules in focus
The Hill (blog)
By Ben Geman - 03/14/11 08:05 AM ET The crisis at quake-damaged Japanese nuclear reactors will lead to questions about US nuclear safety on Capitol Hill this week. **Nuclear Regulatory Commission** Chairman Gregory Jaczko and Energy Secretary Steven Chu **...**
See all stories on this topic »

Former **Nuclear Regulatory** Commissioner Warns State
Clean Energy News (press release)
What: State Representative Pricey Harrison will host a press conference with Mr. Peter Bradford, former Commissioner with the US **Nuclear Regulatory Commission** and former Chair of the Maine and New York Public Utility Commissions. **...**
See all stories on this topic »

Japan earthquake: **Nuclear** power under fire
Telegraph.co.uk
India plans to build at least 20 during this decade and Russia is aiming to double its nuclear capacity within the same timescale. The US **Nuclear Regulatory Commission** (**NRC**) has received applications for 25 new ones, while Japan is planning another 15 **...**
Telegraph.co.uk
See all stories on this topic »

Yucca Mountain site still alive under GOP **nuclear** power plan
Bellingham Herald
If approved, the US would begin building nuclear plants on an unprecedented scale: Currently, the nation gets 20 percent of its electricity from 104 nuclear reactors. Among other things, the legislation would require the **Nuclear Regulatory Commission ...**
See all stories on this topic »

Tip: Use site restrict in your query to search within a site (site:nytimes.com or site:.edu). Learn more.

Remove this alert.
Create another alert.
Manage your alerts.

111/106

From: Brenner, Eliot
To: Hayden, Elizabeth
Cc: Harrington, Holly
Subject: RE: Google Alert - Nuclear Regulatory Commission
Date: Monday, March 14, 2011 4:39:35 PM

I've been priming diaz and feeding Klein a little. In fact, diaz was on CNN as you were headed to the airport!

From: Hayden, Elizabeth
Sent: Monday, March 14, 2011 4:39 PM
To: Brenner, Eliot
Cc: Harrington, Holly
Subject: Fw: Google Alert - Nuclear Regulatory Commission

Getting Diaz and Klein out there would be good balance to Bradford.

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To: Hayden, Elizabeth
Sent: Mon Mar 14 10:19:54 2011
Subject: Google Alert - Nuclear Regulatory Commission

News **4** new results for **Nuclear Regulatory Commission**

The week ahead: **Nuclear** safety, EPA climate rules in focus
The Hill (blog)
By Ben Geman - 03/14/11 08:05 AM ET The crisis at quake-damaged Japanese nuclear reactors will lead to questions about US nuclear safety on Capitol Hill this week. **Nuclear Regulatory Commission** Chairman Gregory Jaczko and Energy Secretary Steven Chu ...
See all stories on this topic »

Former **Nuclear Regulatory** Commissioner Warns State
Clean Energy News (press release)
What: State Representative Pricey Harrison will host a press conference with Mr. Peter Bradford, former Commissioner with the US **Nuclear Regulatory Commission** and former Chair of the Maine and New York Public Utility Commissions. ...
See all stories on this topic »

Japan earthquake: **Nuclear** power under fire
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See all stories on this topic »


Telegraph.co.uk

Yucca Mountain site still alive under GOP **nuclear** power plan
Bellingham Herald
If approved, the US would begin building nuclear plants on an unprecedented scale: Currently, the nation gets 20 percent of its electricity from 104 nuclear reactors. Among other things, the legislation would require the **Nuclear Regulatory Commission** ...
See all stories on this topic »

Tip: Use site restrict in your query to search within a site (site:nytimes.com or site:.edu). Learn more.

Remove this alert.
Create another alert.
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From: Harrington, Holly
To: Shannon, Valerie; Janbergs, Holly; Steger (Tucci), Christine; Akstulewicz, Brenda; Couret, Ivonne
Subject: Calls From States, Fire Departments, etc.
Date: Monday, March 14, 2011 10:22:00 PM

If you get calls from state officials, fire officials, police departments, etc., take the message and forward to:

Liao4.hoc@nrc.gov

They will handle them.

This is not an e-mail for members of the public with questions, though. Continue to try and get them to their own state or local environmental/radiological/health offices.

Holly

uu/107

From: Harrington, Holly
To: Leong, Edwin
Subject: RE: we got this comment on the blog. is this possible?
Date: Monday, March 14, 2011 10:02:00 PM

---

thanks

From: Leong, Edwin
Sent: Monday, March 14, 2011 10:00 PM
To: Harrington, Holly
Subject: RE: we got this comment on the blog. is this possible?

Holly,

I added code to allow sharing with Delicious.com

Edwin

From: Harrington, Holly
Sent: Monday, March 14, 2011 4:11 PM
To: Leong, Edwin
Subject: we got this comment on the blog. is this possible?

Could you consider adding delicious.com to your "sharethis" please, you currently are facilitating only:
Facebook, Twitter, Digg, stumledupon and reddit
Thanks in advance

111108

From: Shoop, Undine
To: Harrington, Holly; Burnell, Scott
Subject: RE: For tuesday morning
Date: Monday, March 14, 2011 9:51:26 PM

This is what I know off the top of my head.

From: Harrington, Holly
Sent: Monday, March 14, 2011 8:26 PM
To: Burnell, Scott; Shoop, Undine; Droggitis, Spiros
Subject: For tuesday morning

See the information below. Can one of you begin working on this first thing Tuesday morning, if at all possible? This is for OCA. Check with Spiros in the LT room for where it should be sent

Thank you,

Holly

The White House is coordinating an interagency briefing for Senate and House leadership and committee staff Tuesday, March 14th, at 1pm; Bill Borchardt is going down with Becky Schmidt for that. There are four questions that OCA have received, which we would like to have answers for, if possible, the Tuesday briefing and the Wednesday hearing. The first question we believe most critical to have an answer for.

1. **What are US plants required to have for backup power? More than what the Japanese reactors did?**

US plants need to meet 10 CFR 50 Appendix A criterion 17. You need 2 independent systems. Most US plants have diesels and batteries. I have no idea what the regulations in Japan requires, if Scott doesn't know we may need OIPs help to get that information.

2. Some in the media and in Hill briefings are suggesting that Mark 1 containment is flawed. What are the concerns about this type of containment? Are the US plants with this safe?

This issue has been around for a long time but I don't know specifics.

3. Any quick-hit info about how the Southeast Reactors performed during Katrina? What damage did the flood water do? Any power loss?

The reactors came through ok, Waterford was the most impacted and was shutdown before the hurricane hit. We'll have to get details from the Region.

We may want to add Turkey point being hit by a Cat 5 hurricane and how well it came through since there was very little damage (mostly the security fences getting blown over but no damage to safety equipment.)

4. With NRC moving to design certification, at what point is seismic capability tested – during design or modified to be site-specific? If in design, what strength seismic event must these be built to withstand?

44109

The regulations for seismic is 10 CFR 50 Appendix A criterion 2. I'm not 100% sure about the rest, I think it is ESP, and COL because it is site specific but will have to check up.

From: Leong, Edwin
To: Harrington, Holly
Subject: RE: we got this comment on the blog. is this possible?
Date: Monday, March 14, 2011 10:00:31 PM

Holly,

I added code to allow sharing with Delicious.com

Edwin

From: Harrington, Holly
Sent: Monday, March 14, 2011 4:11 PM
To: Leong, Edwin
Subject: we got this comment on the blog. is this possible?

Could you consider adding delicious.com to your "sharethis" please, you currently are facilitating only:
Facebook, Twitter, Digg, stumledupon and reddit
Thanks in advance

From: Harrington, Holly
To: Brenner, Eliot
Date: Monday, March 14, 2011 9:12:00 PM

Blog Post

NRC Sends Eight More Experts to Tokyo

Eight more experts from the NRC are being sent to Japan to help that country respond to its nuclear emergency. They join two other NRC staff who were dispatched Saturday. All NRC staff members are acting as part of a U.S. Agency for International Development assistance team, and are being sent at the request of the Japanese government.

The additional team members include more reactor experts, international affairs professional staffers, and a senior manager from one of the NRC's four region offices. They come from NRC headquarters and regional offices in King of Prussia, Pa., and Atlanta, Ga.

The team will do whatever is necessary to understand the status of safely shutting down the affected Japanese reactors; better understand the potential impact on people and the environment and, if asked, provide technical advice and support through the U.S. ambassador.

The team is led by Charles A. Casto, deputy regional administrator of the NRC's Center of Construction Inspection, and members will be in communication with the Japanese regulator, the U.S. Embassy, NRC headquarters, and other government stakeholders as appropriate.

We'll keep you up to date on their experiences. They are expected to arrive Wednesday, Japanese time.

Eliot Brenner
Public Affairs Director

3/14/11

From:	Harrington, Holly
To:	Riley (OCA), Timothy
Subject:	RE: Emailing: Chairman Jaczko_QA5_earthquake031111.docx, Questions for EOC Meetings.docx, Additional Chairman Q&As.docx
Date:	Monday, March 14, 2011 8:17:00 PM

Please call me at 415-8203

From: Riley (OCA), Timothy
Sent: Monday, March 14, 2011 8:16 PM
To: Harrington, Holly
Subject: RE: Emailing: Chairman Jaczko_QA5_earthquake031111.docx, Questions for EOC Meetings.docx, Additional Chairman Q&As.docx

Holly,
I didn't have the information yet, but I now see that:

- The White House is coordinating an interagency briefing for Senate and House leadership and committee staff Tuesday, March 14th at 1pm; Bill Borchardt is going down with Becky Schmidt for that

There are four questions that OCA have received, which we would like to have answers for, if possible, the Tuesday briefing and the Wednesday hearing. The first question we believe most critical to have an answer for.

1. What are US plants required to have for backup power? More than what the Japanese reactors did?

2. Some in the media and in Hill briefings are suggesting that Mark 1 containment is flawed. What are the concerns about this type of containment? Are the US plants with this safe?

3. Any quick-hit info about how the Southeast Reactors performed during Katrina? What damage did the flood water do? Any power loss?

4. With NRC moving to design certification, at what point is seismic capability tested – during design or modified to be site-specific? If in design, what strength seismic event must these be built to withstand?

-----Original Message-----
From: Harrington, Holly
Sent: Monday, March 14, 2011 8:01 PM
To: Riley (OCA), Timothy
Subject: FW: Emailing: Chairman Jaczko_QA5_earthquake031111.docx, Questions for EOC Meetings.docx, Additional Chairman Q&As.docx

There are three sets of Q&As going.

The one that is QA5 has been thoroughly vetted, but is considered not suitable to be published for the public i.e. can be talked from but not printed and distributed.
The additional Chairman QAs were, I believe, requested by OCA. They are being developed by Rob Taylor and are not complete.

2/4/12

The questions for EOC meetings came from our regions and is for future use and incomplete.

-----Original Message-----
From: Taylor, Robert
Sent: Monday, March 14, 2011 6:57 PM
To: Harrington, Holly
Cc: McIntyre, David
Subject: Emailing: Chairman Jaczko_QA5_earthquake031111.docx, Questions for EOC Meetings.docx, Additional Chairman Q&As.docx

Holly,

As discussed, attached are three sets of Q&As under development. Ultimately, we will need to merge these together.

Rob

From: Harrington, Holly
To: Burnell, Scott; Shoop, Undine; Droggitis, Spiros
Subject: For tuesday morning
Date: Monday, March 14, 2011 8:25:00 PM

See the information below. Can one of you begin working on this first thing Tuesday morning, if at all possible? This is for OCA. Check with Spiros in the LT room for where it should be sent

Thank you,

Holly

The White House is coordinating an interagency briefing for Senate and House leadership and committee staff Tuesday, March 14th, at 1pm; Bill Borchardt is going down with Becky Schmidt for that. There are four questions that OCA have received, which we would like to have answers for, if possible, the Tuesday briefing and the Wednesday hearing. The first question we believe most critical to have an answer for.

1. **What are US plants required to have for backup power? More than what the Japanese reactors did?**
2. Some in the media and in Hill briefings are suggesting that Mark 1 containment is flawed. What are the concerns about this type of containment? Are the US plants with this safe?
3. Any quick-hit info about how the Southeast Reactors performed during Katrina? What damage did the flood water do? Any power loss?
4. With NRC moving to design certification, at what point is seismic capability tested – during design or modified to be site-specific? If in design, what strength seismic event must these be built to withstand?

LL/113

From: Harrington, Holly
To: Taylor, Robert
Subject: FW: Per eliot
Date: Monday, March 14, 2011 5:28:00 PM
Attachments: Chairman Jaczko QA5 earthquake031111.docx
Additional Chairman QAs.docx

From: Harrington, Holly
Sent: Monday, March 14, 2011 4:40 PM
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: Per eliot

You can talk from these Q&As (prepared for the Chairman), but do not disseminate them.

LLL/114

Questions and Answers for Chairman Jaczko
Note: Talk from but do not distribute

March 11, 2011 Japan Earthquake/Tsunami Aftermath
As of 8 p.m., 3/12/2011

1. What is the NRC doing about the emergencies at the nuclear power plants in Japan? Are you sending staff over there?

Public Answer: We are closely following events in Japan, working with other agencies of the federal government, and have been in direct contact with our counterparts in that country. We are ready to provide assistance if there is a specific request. Two NRC staff members knowledgeable about boiling water reactors are participating in the USAID team that has departed for Japan.

Additional technical, non-public information:
We are taking the knowledge that the staff has about the design of the US nuclear plants and we are applying this knowledge to the Japan situation. For example, this includes calculations of severe accident mitigation that have been performed. Tony Ulses has been dispatched to Japan and should arrive Early Sunday.David Jim Trapp left 1600 Saturday should arrive in 20 hours

2. What's going to happen following the hydrogen explosion everyone's seen from the video footage?

Public Answer: If a similar event occurred at a U.S. nuclear power plant, the NRC would be seeking information to answer several questions, including: What's the status of the reactor core, the reactor vessel and the containment building? What radiation measurement equipment is available and what measurements are being reported? What efforts are being taken to keep the public safe? How did the explosion affect efforts to keep the nearby reactors in a safe condition? And most importantly – What can the NRC do to help?

Additional technical, non-public information:

The explosion affected the secondary containment of the reactor plant. The primary containment was not affected by the explosion. The Japanese are taking actions to preserve the primary containment, cool the reactor core, maintain the reactor shut down and limit the spread of radioactive contamination.

The NRC required a back fit to US reactors of the type similar to Fukushima Unit 1 to install a hardened vent line. A hardened vent provides a release path which would prevent an explosion as experienced at Fukushima Unit One.

3. What should done to protect people in Alaska, Hawaii and the West Coast do from radioactive fallout?

Public Answer: The available evidence shows the United States can be expected to avoid any impacts from radioactive material, so no public action is necessary. We believe there is very low risk to the US considering the long distance from the US and the type of event.

Additional technical, non-public information: NRC is working with DHS, EPA and other federal partners to ensure monitoring equipment is properly positioned, based on meteorological and other relevant information.

4. Can this happen here i.e. an earthquake that significantly damages a nuclear power plant? Are the Japanese plants similar to U.S. plants?

Public Answer: All U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. Even those plants that are located outside of areas with low and moderate seismic activity are designed for safety in the event of such a natural disaster. The NRC requires that safety-significant structures, systems, and components be designed to take into account even very rare and extreme seismic and tsunami events.

The Japanese facilities are similar in design to several US facilities.

Additional technical, non-public information:
Currently operating reactors were designed using a "deterministic" or "maximum credible earthquake" approach. Seismic hazard for the new plants is determined using a much more robust probabilistic seismic hazard assessment approach that explicitly addresses uncertainty, as described in RG1.208. The NRC requires that adequate margin beyond the design basis ground shaking levels is assured. The NRC further enhances seismic safety for beyond-design-basis events through the use of a defense-in-depth approach.

In addition, the NRC periodically reviews the seismic risk at operating reactors when information may have changed. Over the last few years the NRC has undertaken a program called Generic Issue 199, which is focused on assessing hazard for plants in the central and eastern US using the latest techniques and determining the possible risk implications of any increase in the anticipated ground shaking levels. This program will help us assure that the plants are safe under exceptionally rare and extreme ground motions that represent beyond-design-basis events.

5. What would U.S. plants do in this situation?

Public Answer: The NRC requires plant designs to include multiple and diverse safety systems, and plants must test their emergency preparedness capabilities on a regular basis. Plant operators are very capable of responding to significant events. In addition, NRC regulations require plants to have plans in place that would allow them to mitigate even "worst case scenarios".

Since 9/11, we have implemented requirements for licensees to have additional response capabilities for extreme situations.

Additional technical, non-public information:
Our nuclear plants have procedures in place to address a variety of accident scenarios, including abnormal operating procedures, emergency operating procedures, sever accident guidelines and emergency plans.

6. Are U.S. power plants designed to withstand tsunamis?

Public Answer: Yes. Plants are built to withstand a variety of environmental hazards and those plants that might face a threat from tsunami are required to withstand large waves and the maximum wave height at the intake structure (which varies by plant.)

Additional, technical, non-public information:
Tsunami have been considered in the design of US nuclear plants since the publication of Regulatory Guide 1.59 in 1977, although the approaches that were used for design of the existing plants varied significantly. Nuclear plants are designed to withstand flooding from not only tsunami, but also hurricane and storm surge; therefore there is often significant margin against tsunami flooding. However, it should be noted that Japanese experience has shown that drawdown can be a significant problem. Drawdown was not generally analyzed in the past. The particular

Currently the US NRC has a tsunami research program that is focused on developing modern hazard assessment techniques and additional guidance through cooperation with the National Oceanic and Atmospheric Administration and the United States Geological Survey. This has already lead to several technical reports and an update to NUREG 0-800. The NOAA and USGS contractors are also assisting with NRO reviews of tsunami hazard. A new regulatory guide on tsunami hazard assessment is currently planned in the office of research, although it is not expected to be available in draft form until 2012.

7. What happens when/if a plant "melts down"?

Public Answer: To prevent the release of radioactive material, there are multiple barriers between the radioactive material and the environment, including the fuel cladding, the heavy steel reactor vessel itself and the containment building, usually a heavily reinforced structure of concrete and steel several feet thick. In a so-called "meltdown," some of the nuclear fuel has melted because of extremely high temperatures caused by a lack of adequate cooling. This does not necessarily mean that radiation is released to the environment. But it could be if other barriers fail.

Additional, technical, non-public information: None.

8. Why is KI administered during nuclear emergencies?

Public Answer: KI – potassium iodide – is one of the protective measures that might be taken in a radiological emergency in this country. A KI tablet will saturate the thyroid with non radioactive iodine and prevent the absorption of radioactive iodine that could be part of the radioactive material mix of radionuclides in a release.KI does not prevent exposure from these other radionuclides.

Additional, technical non-public information.
There are a range of protective measures that we use … the most effective is evacuation. Local government officials are responsible for determining the best means to protect their public. KI is another means for protection but evacuation and sheltering are the primary means that are used.

9. Was there any damage to U.S. reactors from either the earthquake or the resulting tsunami?

Public Answer: No

Additional, technical non-public information:
Diablo Canyon Units 1 and 2 declared an "unusual event" based on tsunami warning following the Japanese earthquake. They have since exited the "unusual event" declaration, based on a downgrade to a tsunami advisory.

10. Has this incident changed the NRC perception about earthquake risk?

Public Answer: There has been no change in the NRC's perception of earthquake hazard (i.e. ground shaking levels) for US nuclear plants. As is prudent, the NRC will certainly be looking closely at this incident and the effects on the Japanese nuclear power plant in the future to see if any changes are necessary to NRC regulations.

Additional, technical, non-public information.
We expect that there would be lessons learned, etc.

11. Will this incident affect new reactor licensing?

Public Answer: It is not appropriate to hypothesize on such a future scenario at this point.

12. What magnitude earthquake are US plants designed to?

Public Answer: Each plant is designed to a ground-shaking level that is appropriate for its location, given the possible earthquake sources that may affect the site and its tectonic environment. Ground shaking is a function of both the magnitude of and earthquake and the distance from the fault plane to the site. The probabilistic approaches account for a large number of different magnitudes.

Additional, technical non-public information:
In the past, "deterministic" or "scenario based" analyses were used to determine ground shaking (seismic hazard) levels. Now a probabilistic method is used that accounts for all possible earthquakes coming from all possible sources (including background seismicity) and the likelihood that each particular hypothetical earthquake occurs.

13. How many US reactors are located in active earthquake zones (and which reactors)?

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

Additional, technical non-public information: No additional.

14. How many reactors are along coastal areas that could be affected by a tsunami (and which ones)?

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

Additional, technical non-public information: None

15. How many U.S. plants have designs similar to the affected Japanese reactors (and which ones)

Public Answer: Six of the 104 US reactors are General Electric BWR 3 with Mark 1 containments similar to the design used at Fukushima Unit One.

Additional Information:
The units are: Dresden Units 2 and 3, Monticello unit 1, Pilgrim unit 1, Quad Cities Units 1 and 2.

POTENTIAL ADDITIONAL QUESTIONS FOR THE CHAIRMAN

1. **Can this happen here?**

   The events that have occurred in Japan are the result of a combination of highly unlikely natural disasters. It is extremely unlikely that a similar event could occur in the United States.

2. **I live near a nuclear power plant similar to the ones having trouble in Japan. How can we now be confident that this plant won't experience a similar problem?**

   U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. 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 is confident that the robust design of these plants makes it extremely unlikely that a similar event could occur it then U.S.

3. **Has this crisis changed your opinion about the safety of US nuclear power plants?**

   No. The NRC remains confident that the design of U.S. nuclear power plants ensure the continued protection of public health and safety.

4. **With all this happening, how can the NRC continue to approve new nuclear power plants?**

   It is premature to speculate what, if any, effect the events in Japan will have on the licensing of new nuclear power plants.

5. **What is the NRC doing in response to the situation in Japan?**

   The NRC has taken a number of actions:
   a. Since the beginning of the event, the NRC has continuously manned its Operations Center in Rockville, MD in order to gather and examine all available information as part of the effort to analyze the event and understand its implications both for Japan and the United States.
   b. A team of officials from the U.S. Nuclear Regulatory Commission with expertise in boiling water nuclear reactors have deployed to Japan as part of a U.S. International Agency for International Development (USAID) team.
   c. The Nuclear Regulatory Commission has spoken with its counterpart agency in Japan, offering the assistance of U.S. technical experts.
   d. The NRC is coordinating its actions with other Federal agencies as part of the U.S. government response.

6. **What other US agencies are involved, and what are they doing?**

   The entire federal family is responding to this event. The NRC is closely coordinating its efforts with the White House, DOE, DOD, USAID, and others. The U.S. government is providing whatever support requested by the Japanese government.

7. **What else can go wrong?**

   The NRC is continuously monitoring the developments at the nuclear power plants in Japan. Circumstances are constantly evolving and it would be inappropriate to speculate on how this situation might develop over the coming days.

8. **What is the worst-case scenario?**

   In a nuclear emergency, the most important action is ensure the core is covered with water to provide cooling to remove any heat from the fuel rods. Without adequate cooling, the fuel rods will melt.

9. **The US has troops in Japan and has sent ships to help the relief effort – are they in danger from the radiation?**

   The NRC is not the appropriate federal agency to answer this question. DOD is better suited to provide information regarding its personnel.

10. **Is there a danger of radiation making it to the United States?**

    In response to nuclear emergencies, the NRC works with other U.S. agencies to monitor radioactive releases and predict their path. All the available information indicates weather conditions have taken the small releases from the Fukushima reactors out to sea away from the population. Given the thousands of miles between the two countries, Hawaii, Alaska, the U.S. Territories and the U.S. West Coast are not expected to experience any harmful levels of radioactivity.

11. **Is the US Government tracking the radiation released from the Japanese plants?**

    See response to Question 10.

12. **Has the government set up radiation monitoring stations to track the release?**

    All U.S. nuclear power plants have existing monitoring stations with the ability to measure and track external radiation sources. However, should the federal government decide that additional monitoring stations are needed, the NRC will support that effort.

13. The radiation "plume" seems to be going out to sea – what is the danger of it reaching Alaska? Hawaii? The west coast?

See response to Question 10.

14. I live in the Western United States – should I be taking potassium iodide (KI)?

No protective measures are necessary in the United States. We do not expect any U.S. states or territories to experience harmful levels of radioactivity.

15. Are there other protective measures I should be taking?

The NRC supports the states with making protective measure recommendations for their residents. The NRC is not recommending any protective measures to the states as a result of the events in Japan. United States citizens in Japan are encouraged to follow the protective measures recommended by the Japanese government. These measures appear to be consistent with steps the United States would take.

16. What are the risks to my children?

See response to Question 15.

17. My family has planned a vacation to Hawaii/Alaska/Seattle next week – is it safe to go, or should we cancel our plans?

The NRC does not believe that the events in Japan warrant any travel restrictions within the United States or its territories.

18. What are the short-term and long-term effects of exposure to radiation?

The NRC does not expect that residents of the United States or it territories are at any risk of exposure to harmful levels of radiation resulting from the events in Japan.

On a daily basis, people are exposed to naturally occurring sources of radiation, such as from the sun or medical X-rays. The resulting effects are dependent on the strength and type of radiation as well as the duration of exposure.

From: Hayden, Elizabeth
To: Harrington, Holly; Couret, Ivonne; McIntyre, David
Subject: Re: Per eliot
Date: Monday, March 14, 2011 6:14:31 PM

These need to be updated so #w reflects we have sent help and others will go over shortly.

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
Sent: Mon Mar 14 16:40:03 2011
Subject: Per eliot

You can talk from these Q&As (prepared for the Chairman), but do not disseminate them.

From: Harrington, Holly
To: Hayden, Elizabeth; Couret, Ivonne; McIntyre, David
Subject: RE: Per eliot
Date: Monday, March 14, 2011 6:15:00 PM

Will update

From: Hayden, Elizabeth
Sent: Monday, March 14, 2011 6:15 PM
To: Harrington, Holly; Couret, Ivonne; McIntyre, David
Subject: Re: Per eliot

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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
Sent: Mon Mar 14 16:40:03 2011
Subject: Per eliot

You can talk from these Q&As (prepared for the Chairman), but do not disseminate them.

From: Couret, Ivonne
To: Brenner, Eliot; Harrington, Holly; McIntyre, David
Subject: Please Review - New image for Website Front Page and suggested caption
Date: Monday, March 14, 2011 6:54:05 PM
Attachments: OPS_JapanIMG_2654.jpg
Importance: High

Suggested Caption –
The NRC has been monitoring the Japanese reactor events via its Headquarters Operations Center in Rockville, Md., on a 24-hour-a-day basis. As part of a larger U.S. government response, the NRC is considering possible replies to the request, which includes providing technical advice. The NRC will not comment on hour-to-hour developments at the Japanese reactors. This is an ongoing crisis for the Japanese who have primary responsibility.
MORE –

Link to this press release http://www.nrc.gov/reading-rm/doc-collections/news/2011/11-047.pdf

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

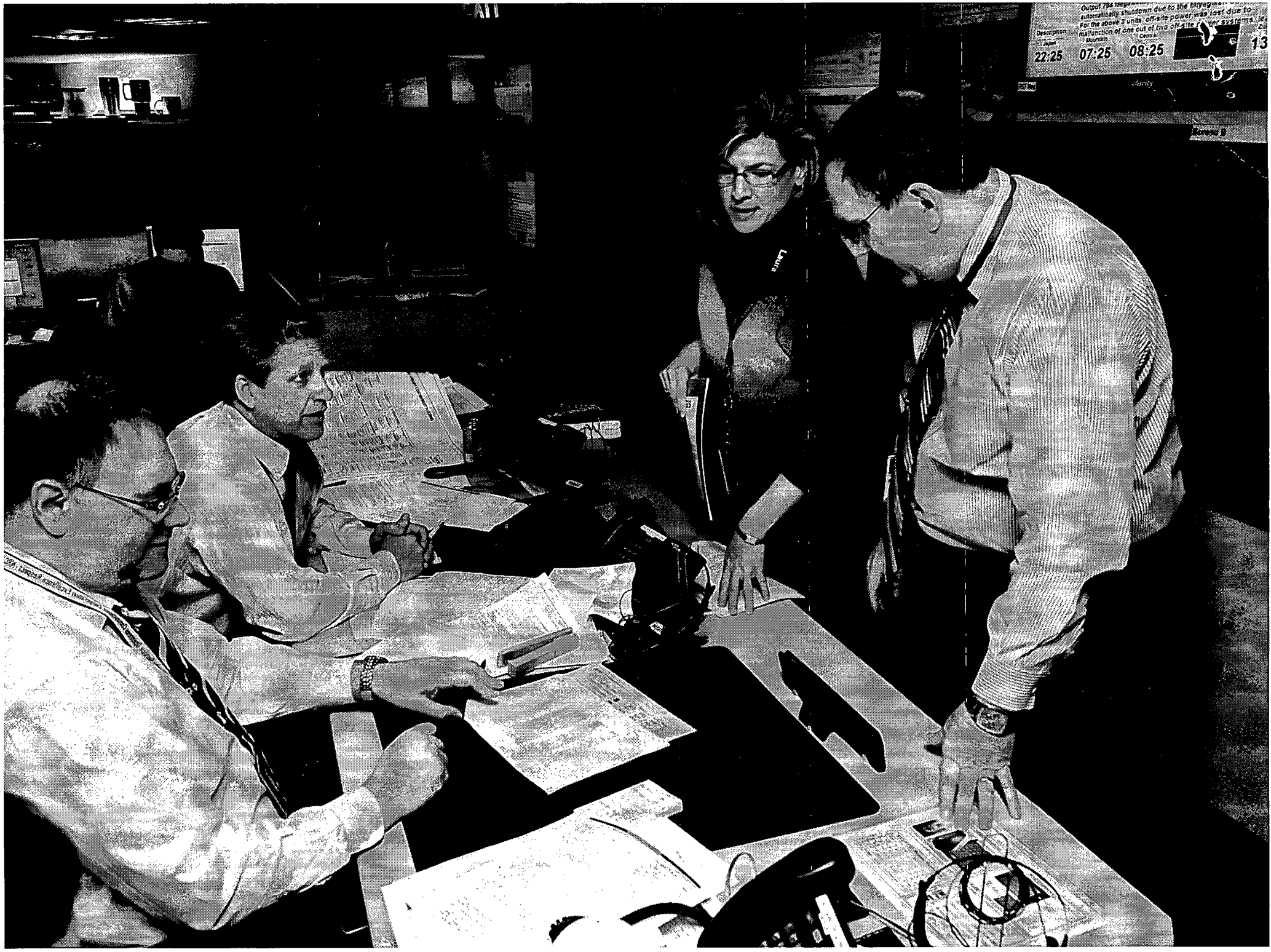
(301) 415-8205
ivonne.couret@nrc.gov

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

2010-2011 Information Digest - Where you can find NRC Facts at a Glance
http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/

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

11/15


Description
22:25
07:25
08:25

From: Leong, Edwin
To: Harrington, Holly
Subject: RE: we got this comment on the blog. is this possible?
Date: Monday, March 14, 2011 5:29:47 PM

Holly,

I'll look into this addition. I may have to submit a request to WordPress.com.

Edwin Leong
EASB IT Specialist
OIS BPIAD
NRC
w: 301-415-6704

From: Harrington, Holly
Sent: Monday, March 14, 2011 4:12 PM
To: Leong, Edwin
Subject: we got this comment on the blog. is this possible?

Could you consider adding delicious.com to your "sharethis" please, you currently are facilitating only:
Facebook, Twitter, Digg, stumledupon and reddit

Thanks in advance

11/116

From: Harrington, Holly
To: Burnell, Scott
Subject: RE: blog comment reply
Date: Monday, March 14, 2011 4:44:00 PM

Btw, call me when you have a minute

From: Burnell, Scott
Sent: Monday, March 14, 2011 4:44 PM
To: Harrington, Holly; Taylor, Robert
Subject: RE: blog comment reply

Howsabout:

The NRC is satisfied that Diablo Canyon meets all applicable seismic requirements, which are based on a detailed assessment of the faults and possible earthquake activity in the area.

From: Harrington, Holly
Sent: Monday, March 14, 2011 4:14 PM
To: Burnell, Scott; Taylor, Robert
Subject: blog comment reply

Any thoughts on how to reply to this comment:

I was reading about Diablo Canyon today and how the seismic supports were built in the mirror image of their proper positions. Does this pose any sort of threat or problem?

ud 17

From: Harrington, Holly
To: Burnell, Scott
Subject: RE: blog comment reply
Date: Monday, March 14, 2011 4:44:00 PM

You are the man

From: Burnell, Scott
Sent: Monday, March 14, 2011 4:44 PM
To: Harrington, Holly; Taylor, Robert
Subject: RE: blog comment reply

Howsabout:

The NRC is satisfied that Diablo Canyon meets all applicable seismic requirements, which are based on a detailed assessment of the faults and possible earthquake activity in the area.

From: Harrington, Holly
Sent: Monday, March 14, 2011 4:14 PM
To: Burnell, Scott; Taylor, Robert
Subject: blog comment reply

Any thoughts on how to reply to this comment:

I was reading about Diablo Canyon today and how the seismic supports were built in the mirror image of their proper positions. Does this pose any sort of threat or problem?

From: Taylor, Robert
To: Harrington, Holly; Burnell, Scott
Subject: RE: blog comment reply
Date: Monday, March 14, 2011 4:19:58 PM

I don't understand the comment. Is there any more context? Do you want me to search for someone who might know what this individual is talking about?

From: Harrington, Holly
Sent: Monday, March 14, 2011 4:14 PM
To: Burnell, Scott; Taylor, Robert
Subject: blog comment reply

Any thoughts on how to reply to this comment:

I was reading about Diablo Canyon today and how the seismic supports were built in the mirror image of their proper positions. Does this pose any sort of threat or problem?

From: Brenner, Eliot
To: Akstulewicz, Brenda; Burnell, Scott; Harrington, Holly; Couret, Ivonne
Subject: RE: Addition to latest press release
Date: Monday, March 14, 2011 4:17:27 PM

Transcript is done by the white house. Check the white house web site.

From: Akstulewicz, Brenda
Sent: Monday, March 14, 2011 3:41 PM
To: Brenner, Eliot; Burnell, Scott; Harrington, Holly; Couret, Ivonne
Subject: RE: Addition to latest press release

Does anyone know if the transcript is on line? Would OCA have done this?

From: Brenner, Eliot
Sent: Monday, March 14, 2011 3:40 PM
To: Akstulewicz, Brenda; Burnell, Scott; Harrington, Holly; Couret, Ivonne
Subject: RE: Addition to latest press release

If the transcript is on line, please make the link. Also, please be sure all regional folks have the transcript, and would you cut and paste the transcript into a message for me? Thanks.

From: Akstulewicz, Brenda
Sent: Monday, March 14, 2011 3:39 PM
To: Burnell, Scott; Harrington, Holly; Couret, Ivonne
Cc: Brenner, Eliot
Subject: RE: Addition to latest press release
Importance: High

Regarding the last sentence...do we want to link "White House's transcript" to the transcript on line?

From: Burnell, Scott
Sent: Monday, March 14, 2011 2:15 PM
To: Harrington, Holly; Akstulewicz, Brenda; Couret, Ivonne
Cc: Brenner, Eliot
Subject: Addition to latest press release
Importance: High

Eliot just called and asked for the following "Media Advisory – Note to Editors" be added to the release:

U.S. Nuclear Regulatory Commission Chairman Gregory B. Jackzo briefed reporters at the White House today along with Deputy Energy Secretary (full name?) Poneman. This briefing will constitute the NRC's sole media appearance for Monday and we direct attention to the White House's transcript of the Chairman's remarks.

4/18

From: Akstulewicz, Brenda
To: Burnell, Scott; Brenner, Eliot; Harrington, Holly; Couret, Ivonne
Subject: RE: Addition to latest press release
Date: Monday, March 14, 2011 3:57:16 PM

Will do!

From: Burnell, Scott
Sent: Monday, March 14, 2011 3:52 PM
To: Akstulewicz, Brenda; Brenner, Eliot; Harrington, Holly; Couret, Ivonne
Subject: RE: Addition to latest press release

Send as-is, we can update later. Eliot concurs.

From: Akstulewicz, Brenda
Sent: Monday, March 14, 2011 3:49 PM
To: Burnell, Scott; Brenner, Eliot; Harrington, Holly; Couret, Ivonne
Subject: RE: Addition to latest press release

Since it's not there yet, in the essence of time, should I just send the media advisory.

From: Burnell, Scott
Sent: Monday, March 14, 2011 3:42 PM
To: Akstulewicz, Brenda; Brenner, Eliot; Harrington, Holly; Couret, Ivonne
Subject: RE: Addition to latest press release

It'll be on whitehouse.gov, but I haven't seen it yet.

From: Akstulewicz, Brenda
Sent: Monday, March 14, 2011 3:41 PM
To: Brenner, Eliot; Burnell, Scott; Harrington, Holly; Couret, Ivonne
Subject: RE: Addition to latest press release

Does anyone know if the transcript is on line? Would OCA have done this?

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Cc: Brenner, Eliot
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Subject: Addition to latest press release
Importance: High

Eliot just called and asked for the following "Media Advisory – Note to Editors" be added to the release:

U.S. Nuclear Regulatory Commission Chairman Gregory B. Jackzo briefed reporters at the White House today along with Deputy Energy Secretary (full name?) Poneman. This briefing will constitute the NRC's sole media appearance for Monday and we direct attention to the White House's transcript of the Chairman's remarks.

From:	Harrington, Holly
To:	Schwartzman, Jennifer; Abraham, Susan; Bonaccorso, Amy; Campbell, Tison; Crouch, Nicole; Culp, Lisa; Deegan, George; Ellmers, 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; Sentz, Brian; Sexton, Kimberly; Shropshire, Alan; Stahl, Eric; Steger (Tucci), Christine; Usilton, William; VandenBerghe, John; Weil, Jenny; Wellock, Thomas
Subject:	RE: Blog and the NRC Response to the Japanese Earthquake and Tsunami
Date:	Monday, March 14, 2011 3:54:00 PM

Please note that YouTube and Twitter is actually now available for viewing as of yesterday. We are not prepared to actually use it at this point, though, given staff resource problems that I'm sure you understand . . .

From: Schwartzman, Jennifer
Sent: Sunday, March 13, 2011 9:07 PM
To: Harrington, Holly; Abraham, Susan; Bonaccorso, Amy; Campbell, Tison; Crouch, Nicole; Culp, Lisa; Deegan, George; Ellmers, 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; Sentz, Brian; Sexton, Kimberly; Shropshire, Alan; Stahl, Eric; Steger (Tucci), Christine; Usilton, William; VandenBerghe, John; Weil, Jenny; Wellock, Thomas
Subject: RE: Blog and the NRC Response to the Japanese Earthquake and Tsunami

Holly, for what it's worth, the IAEA has been putting out a tremendous amount of information via Facebook (including YouTube videos). I know we're not able to access those things from within network but it might be worth noting as a way to get information (and a way to get notified when new information comes in). I understand DG Amano will be having a press conference tomorrow.

From: Harrington, Holly
Sent: Sunday, March 13, 2011 6:40 PM
To: Abraham, Susan; Bonaccorso, Amy; Campbell, Tison; Crouch, Nicole; Culp, Lisa; Deegan, George; Ellmers, 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
Subject: Blog and the NRC Response to the Japanese Earthquake and Tsunami

Be sure to check out the multiple posts on the NRC Blog as the agency responded to events in Japan. The blog worked very well to get information out in a way that augmented our press releases. We had more than 2,000 views on Friday alone and about 3,000 total over the weekend.

From: Harrington, Holly
To: Brenner, Eliot
Subject: Please review and approve blog post
Date: Monday, March 14, 2011 3:47:00 PM

NRC Chairman Addresses the Media Today

The NRC Chairman Gregory Jaczko was at the White House today to brief the media there on the NRC response to the Japanese nuclear emergency. We will supply a link to the transcript as soon as we get it.

But in part, he said that the type and design of the Japanese reactors and the way events have unfolded give us confidence in saying radiation at harmful levels will not reach the U.S.

He also said that we believe the protective steps the Japanese are taking are comparable to ones we would use here and that we advise Americans in Japan to follow the guidance of Japanese officials.

In other news, the Japanese government has formally asked for assistance from the United States as it continues to respond to nuclear power plant cooling issues triggered by an earthquake and tsunami on March 11. The NRC is assembling a team to send over in response to the request for help. As we've said before, we already have two boiling-water experts from the NRC in Tokyo as part of an USAID team.

The NRC will continue monitoring the Japanese reactor events via its Headquarters Operations Center in Rockville, Md., on a 24-hour-a-day basis for the foreseeable future.

Finally, there is a lot of erroneous information in the media and online about this event and its ramifications. One plume model in particular is especially egregious. We urge you to continue to seek information from credible sources, including the NRC and other federal agencies.

Eliot Brenner
Public Affairs Director

11/120

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: chairman at white house
Date:	Monday, March 14, 2011 3:37:00 PM
Attachments:	QUAKE talkMARCH14.docx

These are approved by Eliot

From: Harrington, Holly
Sent: Monday, March 14, 2011 3:36 PM
To: Brenner, Eliot
Cc: Burnell, Scott
Subject: RE: chairman at white house

I married info below with the other talking points based on past press releases. Please review and if OK, I'll post on WebEOC and send to regions

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From: Brenner, Eliot
Sent: Monday, March 14, 2011 3:17 PM
To: Harrington, Holly
Subject: chairman at white house

1: the type and design of these reactors and the way events have unfolded give us confidence in saying radiation at harmful levels will not reach the u.s.

2: we believe the protective steps the Japanese are taking are comparable to ones we would use here.

3: we advise Americans in japan to follow the guidance of Japanese officials

4: we are providing technical assistance to the Japanese government. We have dispatched two BWR experts and are assembling a team to send over in response to the request for help from the Japanese.

--

In the q-anmd-a ... he said that obviously we always look to learn information that can be applied to the U.S> reactors and we will certainly be looking at the information that comes from this incident. (He was very careful not to rule out any changes down the line domestically, as I think your OPED made a similar point. He did say we had a review of tsunami information in 2004

3/14/11

OPA

TALKING POINTS

JAPAN NUCLEAR SITUATION

As of 3/14/2011 3 P.M. EST

In a White House briefing this morning, Chairman Jaczko said the type and design of the Japanese reactors and the way events have unfolded give us confidence in saying radiation at harmful levels will not reach the U.S.

Jaczko also said today that we believe the protective steps the Japanese are taking are comparable to ones we would use here and that we advise Americans in Japan to follow the guidance of Japanese officials.

According to Chairman Jaczko, the NRC is always looking to learn information that can be applied to the U.S. reactors and we will certainly be looking at the information that comes from this incident.

The Japanese government has formally asked for assistance from the United States as it continues to respond to nuclear power plant cooling issues triggered by an earthquake and tsunami on March 11. The NRC is assembling a team to send over in response to the request for help.

The NRC already has two experts in boiling-water reactors (BWR) in Tokyo offering technical assistance. They are part of a USAID team.

The NRC is working with other U.S. agencies to monitor radioactive releases from Japan and to predict their path. All the available information indicates weather conditions have taken the small releases from the Fukushima reactors out to sea away from the population.

Given the results of the monitoring and distance between Japan and Hawaii, Alaska, the U.S. Territories and the U.S. West Coast, the NRC does NOT expect the U.S. to experience any harmful levels of radioactivity.

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.

The NRC is coordinating its actions with other federal agencies as part of the U.S. government response. The NRC's headquarters Operations Center is activated and monitoring the situation on a 24-hour basis.

From: Harrington, Holly
To: Brenner, Eliot
Subject: FW: Lisa Nelson, MSNBC
Date: Monday, March 14, 2011 3:24:00 PM
Importance: High

I know you were thinking no more Jaczko interviews today. What about tomorrow?

From: Steger (Tucci), Christine
Sent: Monday, March 14, 2011 3:01 PM
To: Harrington, Holly
Subject: Lisa Nelson, MSNBC
Importance: High

Call from: Lisa Nelson
Organization: MSNBC
Number: 212-664-1744

Changing focus of interview – request Chairman for a few minute interview tomorrow at 2:00pm
Focus: Nuclear Plant Preparedness.

LL/122

From: Harrington, Holly
To: Couret, Ivonne; McIntyre, David
Subject: ep questions from reporters
Date: Monday, March 14, 2011 2:54:00 PM

Send them here: http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/fs-emerg-plan-prep-nuc-power.html . Eliot doesn't want to give interviews on the subject.

LL/123

From: Harrington, Holly
To: Taylor, Robert
Subject: RE: Additional Chairman Q&As.docx
Date: Monday, March 14, 2011 2:50:00 PM

These are outstanding. Only one thing, see below

What is the worst-case scenario?

> In a nuclear emergency, the most important action is ensure the core is covered with water to provide cooling to remove any heat from the fuel rods. Without adequate cooling, the fuel rods will melt. Should the final containment structure fail, radiation from these melting fuel rods would be released to the atmosphere . . .

From: Taylor, Robert
Sent: Monday, March 14, 2011 2:46 PM
To: Harrington, Holly
Subject: Additional Chairman Q&As.docx

Holly,

Eliot asked me to craft responses to some of Dave's "additional Chairman questions." Can you take a look at these and give me your thoughts?

Rob

LL/124

From: Benney, Kristen
To: Harrington, Holly
Subject: RE: concern about NRC blog
Date: Monday, March 14, 2011 12:14:52 PM

Thanks for the quick response, Holly. Just a thought.

Kristen

From: Harrington, Holly
Sent: Thursday, March 10, 2011 2:49 PM
To: Benney, Kristen
Subject: FW: concern about NRC blog

Thanks for your observation. So far, I've not gotten any feedback that anyone is confused. Each post moved over clearly states that at the bottom (although not at the top). I can move the "this has been moved" comment to the top, I suppose, to make it clearer . . .

From: OPA Resource
Sent: Thursday, March 10, 2011 2:42 PM
To: Harrington, Holly
Subject: FW: concern about NRC blog

From: Benney, Kristen
Sent: Thursday, March 10, 2011 2:27 PM
To: OPA Resource
Subject: concern about NRC blog

Good afternoon,

I was reading the OPA blog after seeing the link on the NRC Reporter and I wanted to raise a concern:

When the moderator moves a comment from one section to another, it appears to the reader that the Moderator is the one *making* the comment. For example, on "An Open Forum Now Available", see the post about "industry ghost stories." For regular commenter posts, the first line contains the commenter's screen name. The posts that have been moved by the moderator show the word "Moderator" first, which gives the impression that the comment is being made by the moderator.

To make this more confusing, comments made by the moderator start out the same way as comments moved by the moderator.

Can this be corrected so it is clearer what the agency is saying vs. what commenters are saying? I can imagine some public confusion over this.

Kristen

LL4125

Kristen Benney
Office of Information Services
Information Collections Team
(301) 415 - 6355
T5-F50

From: Couret, Ivonne
To: Harrington, Holly
Subject: RE: (Action) Tsunami Fact Sheet - NUREG issued in March 2009 Link
Date: Monday, March 14, 2011 6:22:36 PM

Yeah I'm very confused too....chat with Eliot about this....when he is calm, NRR is very aggressive in serving up assistance when required. I'm have been included on the "in the loop" email only because I have been pounding in their brains to keep me informed on activities that involves OPA or may be news worthy items. Ivonne

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From: Harrington, Holly
Sent: Monday, March 14, 2011 6:19 PM
To: Couret, Ivonne
Subject: RE: (Action) Tsunami Fact Sheet - NUREG issued in March 2009 Link

WTF???????

From: Couret, Ivonne
Sent: Monday, March 14, 2011 6:18 PM
To: Harrington, Holly
Subject: FW: (Action) Tsunami Fact Sheet - NUREG issued in March 2009 Link

TO DEAL with tomorrow here is the email items. Ivonne

From: Nguyen, Quynh
Sent: Monday, March 14, 2011 5:34 PM
To: Stone, Rebecca
Cc: McDermott, Brian; Brenner, Eliot; Leeds, Eric; Boger, Bruce; Grobe, Jack; Couret, Ivonne; Azeem, Almas; Cartwright, William; Cusumano, Victor; Heida, Bruce; Mahoney, Michael; Meighan, Sean; Nguyen, Quynh; Roquecruz, Carla; Susco, Jeremy; Titus, Brett; Valentine, Nicholee; Wertz, Trent
Subject: FW: (Action) Tsunami Fact Sheet - NUREG issued in March 2009 Link

Rebecca,

I understand Eliot's requirements. Ivonne can attest to how quickly we can modify the SharePoint site to fulfill needs.

Per Eric Leeds' direction, I have set up the SharePoint Portal (It resides in its current location so I can serve as Site Administrator. Later on, we can set up links to point to it at appropriate locations.)

It is a document library. I have given you Contributor rights (let me know who else in NSIR/OPA needs it).

I can change descriptions, columns (heading names, add/subtract), and will prepare how to "search" guidance.

"FAQ Related to Events Occurring in Japan"
http://portal.nrc.gov/edo/nrr/NRR%20TA/FAQ%20Related%20to%20Events%20Occuring%20in%20Japan/Forms/AllItems.aspx

Again, Eric wants to go "live" by the end-of-the-week so Regions and other internal stakeholders can access the information. Any idea when we will start populating?

Thanks,
Quynh

From: Stone, Rebecca
Sent: Monday, March 14, 2011 4:25 PM
To: Nguyen, Quynh
Cc: Meighan, Sean
Subject: FW: (Action) Tsunami Fact Sheet - NUREG issued in March 2009 Link

Quynh,

I have been coordinating with Brian McDermott and Eliot Brenner and here is what we have come up with. You are to go ahead and begin building the site. It should be READ ONLY (this is very important because OPA doesn't want anybody to change what they have approved) and have search capabilities. When Eliot or his team approve a Q&A or Talking Points document, they will send it to an Ops Center email address. Only a few specified people will be able to access this address. These same people (and only these people) will have the capability to upload to the SharePoint site. That way, anyone can see our internal information as it becomes available without changing it.

It is important to note that Eliot has tentatively approved this plan. He is going to check with some people to make sure this is a acceptable course of action. I will get back to you with an update tomorrow.

Rebecca Stone

LLL/126

Response Program
Office of Nuclear Security and Incident Response
U.S. Nuclear Regulatory Commission
301-415-5634 (Office)
e-mail: Rebecca.Stone@nrc.gov

From: Nguyen, Quynh
Sent: Monday, March 14, 2011 4:02 PM
To: Stone, Rebecca
Subject: FW: (Action) Tsunami Fact Sheet - NUREG issued in March 2009 Link

Rebecca,

OK, here's the official tasking... Sorry for putting you on the spot – Eric Leeds (NRR Office Director) was in my office. Jack Grobe is my direct supervisor.

Sean Meighan is my equivalent so keep him in the loop as you gather the requested documents.

I will set up the SharePoint and give you Contributor Rights.

I'll be out on Thursday as I'll be celebrating St. Patty's Day and March Madness (I'm gonna be at the opening rounds at Verizon – I hope there is a team I dislike so I can distract them at the foul line!).

Given recent events, I'll have to be good so I can come back to the office on Friday!

Quynh

From: Leeds, Eric
Sent: Monday, March 14, 2011 3:39 PM
To: Grobe, Jack; Virgilio, Martin; Weber, Michael
Cc: Nguyen, Quynh; Ruland, William; Skeen, David; Brown, Frederick; Brenner, Eliot; Collins, Elmo; Dean, Bill; Satorius, Mark; McCree, Victor; Schmidt, Rebecca; Boger, Bruce
Subject: FW: (Action) Tsunami Fact Sheet - NUREG issued in March 2009 Link

FYI – I've asked Quynh Nguyen to work with the Ops Center to create a share-point site to house our Q&As from the Japanese quake and tsunami. Attached is a list of Q&As we created during the last tsunami, which we should consider. The regions requested Q&As to support their EOC meetings next week with members of the public. I'd like to have something completed by the end of the week for the regions.

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

From: Boger, Bruce
Sent: Monday, March 14, 2011 9:21 AM
To: Leeds, Eric
Subject: FW: (Action) Tsunami Fact Sheet - NUREG issued in March 2009 Link

FYI—this is a knowledge management challenge. We've collected information in the past, but we have to drag it out and it's not available in the Ops center.

From: King, Mark
Sent: Monday, March 14, 2011 7:23 AM
To: Boger, Bruce; Brown, Frederick; Thorp, John
Cc: Thomas, Eric
Subject: RE: (Action) Tsunami Fact Sheet - NUREG issued in March 2009 Link

I think the attached is what Bruce is referring to – a natural phenomena limitations document. See attached.

From: Boger, Bruce
Sent: Monday, March 14, 2011 7:20 AM
To: Brown, Frederick; King, Mark; Thorp, John
Cc: Thomas, Eric
Subject: RE: (Action) Tsunami Fact Sheet - NUREG issued in March 2009 Link

Great. Thanks. This is a start. I still remember something that was created to provide some plant-specific protection information. (e.g., Diablo Canyon has some tsunami protection). I believe we explored west coast plants for tsunamis and

east coast plants for hurricane flooding protection. If you can't find it easily (or if Bruce's gray matter failed again), please reach out to the west coast plant PMs to see what tsunami protection they have. I suspect we'll receive some cards and letters. Thanks again.

From: Brown, Frederick
Sent: Monday, March 14, 2011 7:10 AM
To: King, Mark; Thorp, John
Cc: Thomas, Eric; Boger, Bruce
Subject: RE: (Action) Tsunami Fact Sheet - NUREG issued in March 2009 Link

Thanks Mark

From: King, Mark
Sent: Monday, March 14, 2011 7:08 AM
To: Thorp, John; Boger, Bruce
Cc: Brown, Frederick; Thomas, Eric
Subject: RE: (Action) Tsunami Fact Sheet - NUREG issued in March 2009 Link

We had a NUREG issued on this subject back in March 2009.

TSUNAMI HAZARD ASSESSMENT AT NUCLEAR POWER PLANT SITES IN THE UNITED STATES OF AMERICA
Click link to view: [NUREG/CR-6966]

http://pbadupws.nrc.gov/docs/ML0915/ML091590193.pdf

From: Thorp, John
Sent: Monday, March 14, 2011 6:57 AM
To: Boger, Bruce
Cc: Brown, Frederick; King, Mark; Thomas, Eric
Subject: RE: (Action) Tsunami Fact Sheet

We'll look for it; If we don't find it quickly, we'll start producing one. (Mark King, please start looking)

I take it we would define & describe the tsunami phenomena, then address which nuclear stations in the U.S. are located in areas subject to tsunami waves, and describe what we can regarding the design of plants to withstand tsunami impacts?

Thanks,

John

From: Boger, Bruce
Sent: Monday, March 14, 2011 6:48 AM
To: Thorp, John
Cc: Brown, Frederick
Subject: Tsunami Fact Sheet

I seem to recall that OpE developed a tsunami fact sheet? Should we dust it off?

From: Hayden, Elizabeth
To: Burnell, Scott; Taylor, Robert
Cc: Harrington, Holly
Subject: Talking Points
Date: Monday, March 14, 2011 12:02:24 PM

Can one of you update the Talking Points on WEB EOC with the latest press release and blog information? We would like to provide an update to all of OPA.

Also, there is a list of phone numbers for ANS, DOE, NEI on a yellow sticky that I left on the desk there to the left of the computer, could you send me that information so that I can send reporters there.

Beth

LL/127

From: Burnell, Scott
To: Hayden, Elizabeth; Taylor, Robert
Cc: Harrington, Holly
Subject: RE: Talking Points
Date: Monday, March 14, 2011 12:05:22 PM

NEI – 202-739-8023 media@nei.org

DOE – 202-586-4948

ANS – Laura Steele 708-579-8224 Craig Piercy 202-470-1928 (??) ans.org

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From: Hayden, Elizabeth
Sent: Monday, March 14, 2011 12:02 PM
To: Burnell, Scott; Taylor, Robert
Cc: Harrington, Holly
Subject: Talking Points

Can one of you update the Talking Points on WEB EOC with the latest press release and blog information? We would like to provide an update to all of OPA.

Also, there is a list of phone numbers for ANS, DOE, NEI on a yellow sticky that I left on the desk there to the left of the computer, could you send me that information so that I can send reporters there.

Beth

From: Hayden, Elizabeth
To: Brenner, Eliot
Cc: Harrington, Holly; Burnell, Scott; McIntyre, David
Subject: Calls on press release
Date: Monday, March 14, 2011 11:36:46 AM

I've fielded a number of calls (I believe we've had some e-mails also) asking about the basis for our statement in the last press release re no harm to U.S. from radiation and questions on plume dispersal. Other than what we say in the press release about hundreds of miles out over the ocean diluting the radiation, is there anything else we can say? Source of information? We should probably add this to our Qs and As.

Beth

LL/128

From: Harrington, Holly
To: ruthg@iii.org
Subject: FW: Coverage for Nuclear accidents, march 2010
Date: Monday, March 14, 2011 4:30:00 PM
Attachments: Coverage for Nuclear accidents, march 2010.doc

I had someone quickly look this over and it appears generally correct, although that individual was not able to thoroughly fact check. I'm sorry, but due to the events in Japan, we do not have resources at this time to do more.

Holly Harrington
Office of Public Affairs

From: OPA Resource
Sent: Monday, March 14, 2011 4:12 PM
To: Harrington, Holly
Subject: FW: Coverage for Nuclear accidents, march 2010

From: Gastel, Ruth [mailto:ruthg@iii.org]
Sent: Monday, March 14, 2011 3:31 PM
To: OPA Resource
Subject: Coverage for Nuclear accidents, march 2010

Dear Reviewer,

I am sending you a short article that we would like to post on our Web site. The Insurance Information Institute is an educational/communications organization funded by the property/casualty insurance industry to provide information about insurance and how it works. Because the earthquake in Japan seems to have damaged nuclear reactors and people living close by have been evacuated, we want to reassure the public that there is a mechanism here to address liability claims filed in the aftermath of a nuclear incident in the United States.

Please review the attached for accuracy. Please feel free to delete, add or modify. Thanks, Ruth Gastel, Special Consultant, 212-346-5530

111/129

Insurance Coverage For Nuclear Accidents

The use of nuclear fission for peaceful purposes brought with it a demand for limits of liability insurance to compensate the public that were significantly higher than individual nuclear power companies alone were able to provide.

To address this problem, the Price Anderson Act was passed in 1957. The legislation encourages private investment in commercial nuclear power by placing a cap on the amount that each nuclear reactor owner must pay in the event of a nuclear incident. At the same time, it commits the federal government to pay any claims above the industry's limit of liability. The legislation has been extended several times, most recently in 2005 under the Energy Policy Act, and now covers nuclear accidents until 2025.

Currently, owners of nuclear power plants pay a premium for $375 million in private liability coverage for each nuclear reactor they own. If there is an incident at a nuclear plant, and the $375 million in coverage is not sufficient, the owner's coverage is supplemented by second layer of protection supplied by the industry as a whole. Under the Act, each reactor owner is committed to paying its share of damages in excess of the incident reactor owner's first tier limit of $375 million up to $111.9 million per reactor. Since are 104 reactors in operation, the amount that would be available in the industry pool to pay claims totals $12.6 billion (2011). If this second tier is depleted, state and local governments can petition Congress for additional disaster relief.

All claims resulting from nuclear accidents are covered under Price Anderson, allowing all property/casualty insurance policies issued in the United States to exclude coverage for property damage and personal injury caused by such accidents. Claims can be for any incident including those that result from theft, sabotage, transporting or storing nuclear fuel or waste and the operation of nuclear reactors. Claims covered include bodily injury, sickness, disease of resulting death, property damage and loss as well as reasonable living expenses for individuals evacuated.

The Act specifies that in the event of an accident, jurisdiction for all claims is transferred to federal courts and claims from the same incident are consolidated. In addition, Price Anderson created a type of no-fault system under which damages are paid regardless of whether or not the incident was the operator's fault.

There has been only one major accident involving large scale payments to the public since Price Anderson was enacted: That was the 1979 Three-Mile Island Nuclear Power Plant accident in Middletown, Pennsylvania. At the time, private insurers had $140 million of coverage available from industry pools. Insurance adjusters advanced money to evacuated families to cover their living expenses and reimbursed more than 600 individuals and families for lost wages. In addition, a class action lawsuit was filed for economic loss on behalf of the residents who lived near the accident site. Insurers have paid about $72 million in claims and litigation costs associated with the accident.

There is only one insurance pool, American Nuclear Insurers, currently writing nuclear insurance. It is made up of investor-owned stock insurance companies with about half of the pool's total liability capacity coming from foreign sources.

From:	Harrington, Holly
To:	Taylor, Robert
Subject:	FW: Coverage for Nuclear accidents, march 2010
Date:	Monday, March 14, 2011 4:22:00 PM
Attachments:	Coverage for Nuclear accidents, march 2010.doc

Do you have time to review?

From: OPA Resource
Sent: Monday, March 14, 2011 4:12 PM
To: Harrington, Holly
Subject: FW: Coverage for Nuclear accidents, march 2010

From: Gastel, Ruth [mailto:ruthg@iii.org]
Sent: Monday, March 14, 2011 3:31 PM
To: OPA Resource
Subject: Coverage for Nuclear accidents, march 2010

Dear Reviewer,

I am sending you a short article that we would like to post on our Web site. The Insurance Information Institute is an educational/communications organization funded by the property/casualty insurance industry to provide information about insurance and how it works. Because the earthquake in Japan seems to have damaged nuclear reactors and people living close by have been evacuated, we want to reassure the public that there is a mechanism here to address liability claims filed in the aftermath of a nuclear incident in the United States.

Please review the attached for accuracy. Please feel free to delete, add or modify. Thanks, Ruth Gastel, Special Consultant, 212-346-5530

LLL/130

Insurance Coverage For Nuclear Accidents

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From: Akstulewicz, Brenda
To: Brenner, Eliot; Harrington, Holly
Subject: RE: voice of america
Date: Monday, March 14, 2011 6:37:51 PM

He has been added to the visitor access system.

From: Brenner, Eliot
Sent: Monday, March 14, 2011 6:35 PM
To: Akstulewicz, Brenda; Harrington, Holly
Subject: voice of america

I have agreed to do a VOA interview tomorrow at noon. The reporter, ira mellman, will come to the guard desk at OWFN at noon and we can escort him to my office for the interview.

Eliot

uu/131

From: McIntyre, David
To: Harrington, Holly
Subject: briefing link
Date: Monday, March 14, 2011 7:33:21 PM

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http://www.whitehouse.gov/the-press-office/2011/03/14/press-briefing-press-secretary-jay-carney-nuclear-regulatory-commission-

From:	Riley (OCA), Timothy
To:	Harrington, Holly
Subject:	RE: Emailing: Chairman Jaczko_QA5_earthquake031111.docx, Questions for EOC Meetings.docx, Additional Chairman Q&As.docx
Date:	Monday, March 14, 2011 8:02:46 PM

Thank you, Holly. I'll go through them and find out which, if any, of the questions Amy provided are not represented on the other documents.

-----Original Message-----
From: Harrington, Holly
Sent: Monday, March 14, 2011 8:01 PM
To: Riley (OCA), Timothy
Subject: FW: Emailing: Chairman Jaczko_QA5_earthquake031111.docx, Questions for EOC Meetings.docx, Additional Chairman Q&As.docx

There are three sets of Q&As going.

The one that is QA5 has been thoroughly vetted, but is considered not suitable to be published for the public i.e. can be talked from but not printed and distributed.
The additional Chairman QAs were, I believe, requested by OCA. They are being developed by Rob Taylor and are not complete.
The questions for EOC meetings came from our regions and is for future use and incomplete.

-----Original Message-----
From: Taylor, Robert
Sent: Monday, March 14, 2011 6:57 PM
To: Harrington, Holly
Cc: McIntyre, David
Subject: Emailing: Chairman Jaczko_QA5_earthquake031111.docx, Questions for EOC Meetings.docx, Additional Chairman Q&As.docx

Holly,

As discussed, attached are three sets of Q&As under development. Ultimately, we will need to merge these together.

Rob

From:	Harrington, Holly
To:	Riley (OCA), Timothy
Subject:	FW: Emailing: Chairman Jaczko_QA5_earthquake031111.docx, Questions for EOC Meetings.docx, Additional Chairman Q&As.docx
Date:	Monday, March 14, 2011 8:00:00 PM
Attachments:	Chairman Jaczko_QA5_earthquake031111.docx Questions for EOC Meetings.docx Additional Chairman Q&As.docx

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From: Taylor, Robert
Sent: Monday, March 14, 2011 6:57 PM
To: Harrington, Holly
Cc: McIntyre, David
Subject: Emailing: Chairman Jaczko_QA5_earthquake031111.docx, Questions for EOC Meetings.docx, Additional Chairman Q&As.docx

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Rob

Questions and Answers for Chairman Jaczko
Note: Talk from but do not distribute

March 11, 2011 Japan Earthquake/Tsunami Aftermath
As of 8 p.m., 3/12/2011

1. What is the NRC doing about the emergencies at the nuclear power plants in Japan? Are you sending staff over there?

Public Answer: We are closely following events in Japan, working with other agencies of the federal government, and have been in direct contact with our counterparts in that country. We are ready to provide assistance if there is a specific request. Two NRC staff members knowledgeable about boiling water reactors are participating in the USAID team that has departed for Japan.

Additional technical, non-public information:
We are taking the knowledge that the staff has about the design of the US nuclear plants and we are applying this knowledge to the Japan situation. For example, this includes calculations of severe accident mitigation that have been performed. Tony Ulses has been dispatched to Japan and should arrive Early Sunday.David Jim Trapp left 1600 Saturday should arrive in 20 hours

2. What's going to happen following the hydrogen explosion everyone's seen from the video footage?

Public Answer: If a similar event occurred at a U.S. nuclear power plant, the NRC would be seeking information to answer several questions, including: What's the status of the reactor core, the reactor vessel and the containment building? What radiation measurement equipment is available and what measurements are being reported? What efforts are being taken to keep the public safe? How did the explosion affect efforts to keep the nearby reactors in a safe condition? And most importantly – What can the NRC do to help?

Additional technical, non-public information:

The explosion affected the secondary containment of the reactor plant. The primary containment was not affected by the explosion. The Japanese are taking actions to preserve the primary containment, cool the reactor core, maintain the reactor shut down and limit the spread of radioactive contamination.

The NRC required a back fit to US reactors of the type similar to Fukushima Unit 1 to install a hardened vent line. A hardened vent provides a release path which would prevent an explosion as experienced at Fukushima Unit One.

3. What should done to protect people in Alaska, Hawaii and the West Coast do from radioactive fallout?

Public Answer: The available evidence shows the United States can be expected to avoid any impacts from radioactive material, so no public action is necessary. We believe there is very low risk to the US considering the long distance from the US and the type of event.

Additional technical, non-public information: NRC is working with DHS, EPA and other federal partners to ensure monitoring equipment is properly positioned, based on meteorological and other relevant information.

4. Can this happen here i.e. an earthquake that significantly damages a nuclear power plant? Are the Japanese plants similar to U.S. plants?

Public Answer: All U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. Even those plants that are located outside of areas with low and moderate seismic activity are designed for safety in the event of such a natural disaster. The NRC requires that safety-significant structures, systems, and components be designed to take into account even very rare and extreme seismic and tsunami events.

The Japanese facilities are similar in design to several US facilities.

Additional technical, non-public information:
Currently operating reactors were designed using a "deterministic" or "maximum credible earthquake" approach. Seismic hazard for the new plants is determined using a much more robust probabilistic seismic hazard assessment approach that explicitly addresses uncertainty, as described in RG1.208. The NRC requires that adequate margin beyond the design basis ground shaking levels is assured. The NRC further enhances seismic safety for beyond-design-basis events through the use of a defense-in-depth approach.

In addition, the NRC periodically reviews the seismic risk at operating reactors when information may have changed. Over the last few years the NRC has undertaken a program called Generic Issue 199, which is focused on assessing hazard for plants in the central and eastern US using the latest techniques and determining the possible risk implications of any increase in the anticipated ground shaking levels. This program will help us assure that the plants are safe under exceptionally rare and extreme ground motions that represent beyond-design-basis events.

5. What would U.S. plants do in this situation?

Public Answer: The NRC requires plant designs to include multiple and diverse safety systems, and plants must test their emergency preparedness capabilities on a regular basis. Plant operators are very capable of responding to significant events. In addition, NRC regulations require plants to have plans in place that would allow them to mitigate even "worst case scenarios".

Since 9/11, we have implemented requirements for licensees to have additional response capabilities for extreme situations.

Additional technical, non-public information:
Our nuclear plants have procedures in place to address a variety of accident scenarios, including abnormal operating procedures, emergency operating procedures, sever accident guidelines and emergency plans.

6. Are U.S. power plants designed to withstand tsunamis?

Public Answer: Yes. Plants are built to withstand a variety of environmental hazards and those plants that might face a threat from tsunami are required to withstand large waves and the maximum wave height at the intake structure (which varies by plant.)

Additional, technical, non-public information:
Tsunami have been considered in the design of US nuclear plants since the publication of Regulatory Guide 1.59 in 1977, although the approaches that were used for design of the existing plants varied significantly. Nuclear plants are designed to withstand flooding from not only tsunami, but also hurricane and storm surge; therefore there is often significant margin against tsunami flooding. However, it should be noted that Japanese experience has shown that drawdown can be a significant problem. Drawdown was not generally analyzed in the past. The particular

Currently the US NRC has a tsunami research program that is focused on developing modern hazard assessment techniques and additional guidance through cooperation with the National Oceanic and Atmospheric Administration and the United States Geological Survey. This has already lead to several technical reports and an update to NUREG 0-800. The NOAA and USGS contractors are also assisting with NRO reviews of tsunami hazard. A new regulatory guide on tsunami hazard assessment is currently planned in the office of research, although it is not expected to be available in draft form until 2012.

7. What happens when/if a plant "melts down"?

Public Answer: To prevent the release of radioactive material, there are multiple barriers between the radioactive material and the environment, including the fuel cladding, the heavy steel reactor vessel itself and the containment building, usually a heavily reinforced structure of concrete and steel several feet thick. In a so-called "meltdown," some of the nuclear fuel has melted because of extremely high temperatures caused by a lack of adequate cooling. This does not necessarily mean that radiation is released to the environment. But it could be if other barriers fail.

Additional, technical, non-public information: None.

8. Why is KI administered during nuclear emergencies?

Public Answer: KI – potassium iodide – is one of the protective measures that might be taken in a radiological emergency in this country. A KI tablet will saturate the thyroid with non radioactive iodine and prevent the absorption of radioactive iodine that could be part of the radioactive material mix of radionuclides in a release.KI does not prevent exposure from these other radionuclides.

Additional, technical non-public information.
There are a range of protective measures that we use … the most effective is evacuation. Local government officials are responsible for determining the best means to protect their public. KI is another means for protection but evacuation and sheltering are the primary means that are used.

9. Was there any damage to U.S. reactors from either the earthquake or the resulting tsunami?

Public Answer: No

Additional, technical non-public information:
Diablo Canyon Units 1 and 2 declared an "unusual event" based on tsunami warning following the Japanese earthquake. They have since exited the "unusual event" declaration, based on a downgrade to a tsunami advisory.

10. Has this incident changed the NRC perception about earthquake risk?

Public Answer: There has been no change in the NRC's perception of earthquake hazard (i.e. ground shaking levels) for US nuclear plants. As is prudent, the NRC will certainly be looking closely at this incident and the effects on the Japanese nuclear power plant in the future to see if any changes are necessary to NRC regulations.

Additional, technical, non-public information.
We expect that there would be lessons learned, etc.

11. Will this incident affect new reactor licensing?

Public Answer: It is not appropriate to hypothesize on such a future scenario at this point.

12. What magnitude earthquake are US plants designed to?

Public Answer: Each plant is designed to a ground-shaking level that is appropriate for its location, given the possible earthquake sources that may affect the site and its tectonic environment. Ground shaking is a function of both the magnitude of and earthquake and the distance from the fault plane to the site. The probabilistic approaches account for a large number of different magnitudes.

Additional, technical non-public information:
In the past, "deterministic" or "scenario based" analyses were used to determine ground shaking (seismic hazard) levels. Now a probabilistic method is used that accounts for all possible earthquakes coming from all possible sources (including background seismicity) and the likelihood that each particular hypothetical earthquake occurs.

13. How many US reactors are located in active earthquake zones (and which reactors)?

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

Additional, technical non-public information: No additional.

14. How many reactors are along coastal areas that could be affected by a tsunami (and which ones)?

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

Additional, technical non-public information: None

15. How many U.S. plants have designs similar to the affected Japanese reactors (and which ones)

Public Answer: Six of the 104 US reactors are General Electric BWR 3 with Mark 1 containments similar to the design used at Fukushima Unit One.

Additional Information:
The units are: Dresden Units 2 and 3, Monticello unit 1, Pilgrim unit 1, Quad Cities Units 1 and 2.

16. What resources are the Japanese asking for?

The Japanese have formally requested equipment needed to cool the reactor fuel. This includes such things as pumps, fire hoses, portable generators, and diesel fuel. The NRC is coordinating with General Electric, which has plant design specifications, to ensure any equipment provided will be capable of meeting the needs of the Japanese.

17. What should the American public know about the incident in Japan?

The events unfolding in Japan are the result of a catastrophic series of natural disasters. These include the fifth largest earthquake in recorded history and the resulting devastating tsunami. Despite these unique circumstances, the Japanese appear to have taken reasonable actions to mitigate the event and protect the surrounding population. Since the beginning of the event, the NRC has continuously manned its Operations Center in Rockville, MD in order to gather and examine all available information as part of the effort to analyze the event and understand its implications both for Japan and the United States.

18. What could you say about the dangers to the American public from our nuclear plants?

As the events in Japan continue to unfold, the NRC is focused on supporting the Japanese government and people in bringing this crisis to closure in the safest manner possible. The NRC remains convinced that U.S. nuclear power plants are designed and operated in a manner that protects public health and safety. The time will come, after this crisis is behind us, to evaluate what, if any, changes are needed at U.S. nuclear power plants. We will assess all the available information and, as we have done with previous natural disasters, such as the 2007 earthquake in the Sea of Japan and the 2004 tsunami in the Indian Ocean, evaluate whether enhancements to U.S. nuclear power plants are warranted.

19. What happens next in Japan? How long will it take to assess the damage to the reactors?

The current focus is ensuring that adequate cooling of the reactor fuel at each of the affected Japanese reactors is established and maintained. In the days, weeks, and months that follow, there will be adequate time to assess the damage and determine next steps.

20. Compare this incident to the Three Mile Island. What are the similarities?

The events at Three Mile Island in 1979 were the result of an equipment malfunction that resulted in the loss of cooling water to the reactor fuel. Subsequent operator actions compounded the malfunction ultimately resulting in the partial core meltdown. While details are still developing, the events in Japan appear to be the result of an earthquake and subsequent tsunami that knocked out electrical power to emergency safety systems designed to cool the reactor fuel. In both events the final safety barrier, the containment building, contained the majority of the radioactivity preventing its release to the environment.

21. Why did the seawater fail to cool the reactor?

Based on information available to the NRC, it appears that the seawater has been effective at providing some cooling for the reactor. While it appears that some fuel damage has occurred, there will be plenty of time once this crisis is resolved to determine the effectiveness of the measures taken in response to this event.

22. If Chernobyl was a 7 and Three Mile Island was a 5, when does this event move from the 4 level?

The International Atomic Energy Agency (IAEA) rates nuclear events in accordance with its International Nuclear and Radiological Event Scale (INES). IAEA has assigned the events in Japan an INES rating of 4, "Accident with Local Consequences." This rating is subject to change as events unfold and additional information becomes available. INES classifies nuclear accidents based on the radiological effects on people and the environment and the status of barriers to the release of radiation. IAEA determinations regarding the INES rating of events are made independently.

Three Mile Island was assigned an INES rating of 5, "Accident with Wider Consequences," due to the severed damage to the reactor core.

23. Are any Americans in danger – armed forces, citizens in Tokyo?

The NRC, in consultation with the White House and U.S. Embassy, has advised United States citizens in Japan to follow the protective measures recommended by the Japanese government. These measures appear to be consistent with steps the United States would take. The Department of Defense has personnel trained in radiation protective measures and is responsible for providing guidance to U.S. armed forces

24. What is the worst case scenario for the plant?

In a nuclear emergency, the most important action is ensure the core is covered with water to provide cooling to remove any heat from the fuel rods. Without adequate cooling, the fuel rods will melt. Should the final containment structure fail, radiation from these melting fuel rods would be released to the atmosphere and additional protective measures may be necessary, depending on factors such as prevailing wind patterns.

25. As time goes on, does the chance for a meltdown increase?

Not necessarily. Each passing hour the fuel rods will become cooler. If adequate cooling can be established and maintained, the risk of a meltdown will be mitigated.

26. Is our battery backup power less effective than the Japanese?

Talk to NRR/EE experts.

27. Are we providing additional KI to the Japanese?

Talk to LT

Questions for EOC Meetings

1. **Do US nuclear plants have better capabilities to respond to natural disasters than the plants in Japan?**

   All U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. Even those plants that are located outside of areas with low and moderate seismic activity are designed for safety in the event of such a natural disaster. The NRC requires that safety-significant structures, systems, and components be designed to take into account even very rare and extreme seismic and tsunami events.

   As with past natural and man-made events, such as the 2007 earthquake in the Sea of Japan, the 2004 tsunami in the Indian Ocean, and the events of 9/11, the NRC routinely reassess its safety programs to ensure that U.S. nuclear power plants are designed to protect public health and safety

2. **Did the NRC share the post 9/11 enhancements to the U.S. facilities with the Japanese?**

   The NRC routinely communicates and shares information with its international counterparts to the maximum extent possible.

3. **Could there be core damage and radiation release at a US plant if a natural disaster exceeding the plant design were to occur?**

   All U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. The NRC

4. **Could explosions like those that occurred in Japan happen at a U.S facility?**
5. **How would the U.S. have responded to the events of March 11?**
6. **How are US BWRs similar and/or different from the plants experience problems in Japan?**
7. **Why are US plants safe to operate considering the events in Japan?**
8. **How big an earthquake is plant X designed to handle (for each plant)?**
9. **Is plant X designed to withstand a tsunami (for each coastal plant)?**
10. **What is the NRC doing to ensure this (Japan event) doesn't happen at US plants?**
11. **How will the U.S. learn from the failures at the Japanese reactors?**
12. **Is the NRC relooking at seismic analysis for US plants?**
13. **Is the event in Japan worse than TMI and Chernobyl?**
14. **What is the longer term prognosis for keeping the reactors cooled at the Japanese facilities?**
15. **Does the NRC participate in inspection of the Japanese facilities?**
16. **Given low probability events do occur, how does the U.S . ensure that U.S. plant designs are not significantly degraded by risk-informed changes?**
17. **How does the NRC ensure people can escape if an accident occurs from a natural disaster when the infrastructure is also affected or destroyed in an area around a plant?**

POTENTIAL ADDITIONAL QUESTIONS FOR THE CHAIRMAN

1. **Can this happen here?**

   The events that have occurred in Japan are the result of a combination of highly unlikely natural disasters. It is extremely unlikely that a similar event could occur in the United States.

2. **I live near a nuclear power plant similar to the ones having trouble in Japan. How can we now be confident that this plant won't experience a similar problem?**

   U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. 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 is confident that the robust design of these plants makes it extremely unlikely that a similar event could occur it then U.S.

3. **Has this crisis changed your opinion about the safety of US nuclear power plants?**

   No. The NRC remains confident that the design of U.S. nuclear power plants ensure the continued protection of public health and safety.

4. **With all this happening, how can the NRC continue to approve new nuclear power plants?**

   It is premature to speculate what, if any, effect the events in Japan will have on the licensing of new nuclear power plants.

5. **What is the NRC doing in response to the situation in Japan?**

   The NRC has taken a number of actions:
   a. Since the beginning of the event, the NRC has continuously manned its Operations Center in Rockville, MD in order to gather and examine all available information as part of the effort to analyze the event and understand its implications both for Japan and the United States.
   b. A team of officials from the U.S. Nuclear Regulatory Commission with expertise in boiling water nuclear reactors have deployed to Japan as part of a U.S. International Agency for International Development (USAID) team.
   c. The Nuclear Regulatory Commission has spoken with its counterpart agency in Japan, offering the assistance of U.S. technical experts.
   d. The NRC is coordinating its actions with other Federal agencies as part of the U.S. government response.

6. **What other US agencies are involved, and what are they doing?**

   The entire federal family is responding to this event. The NRC is closely coordinating its efforts with the White House, DOE, DOD, USAID, and others. The U.S. government is providing whatever support requested by the Japanese government.

7. **What else can go wrong?**

   The NRC is continuously monitoring the developments at the nuclear power plants in Japan. Circumstances are constantly evolving and it would be inappropriate to speculate on how this situation might develop over the coming days.

8. **What is the worst-case scenario?**

   In a nuclear emergency, the most important action is ensure the core is covered with water to provide cooling to remove any heat from the fuel rods. Without adequate cooling, the fuel rods will melt. Should the final containment structure fail, radiation from these melting fuel rods would be released to the atmosphere and additional protective measures may be necessary depending on factors such as prevailing wind patterns.

9. **The US has troops in Japan and has sent ships to help the relief effort – are they in danger from the radiation?**

   The NRC is not the appropriate federal agency to answer this question. DOD is better suited to provide information regarding its personnel.

10. **Is there a danger of radiation making it to the United States?**

    In response to nuclear emergencies, the NRC works with other U.S. agencies to monitor radioactive releases and predict their path. All the available information indicates weather conditions have taken the small releases from the Fukushima reactors out to sea away from the population. Given the thousands of miles between the two countries, Hawaii, Alaska, the U.S. Territories and the U.S. West Coast are not expected to experience any harmful levels of radioactivity.

11. **Is the US Government tracking the radiation released from the Japanese plants?**

    See response to Question 10.

12. **Has the government set up radiation monitoring stations to track the release?**

    All U.S. nuclear power plants have existing monitoring stations with the ability to measure and track external radiation sources. However, should the federal government decide that additional monitoring stations are needed, the NRC will support that effort.

13. The radiation "plume" seems to be going out to sea – what is the danger of it reaching Alaska? Hawaii? The west coast?

See response to Question 10.

14. I live in the Western United States – should I be taking potassium iodide (KI)?

No protective measures are necessary in the United States. We do not expect any U.S. states or territories to experience harmful levels of radioactivity.

15. Are there other protective measures I should be taking?

The NRC supports the states with making protective measure recommendations for their residents. The NRC is not recommending any protective measures to the states as a result of the events in Japan. United States citizens in Japan are encouraged to follow the protective measures recommended by the Japanese government. These measures appear to be consistent with steps the United States would take.

16. What are the risks to my children?

See response to Question 15.

17. My family has planned a vacation to Hawaii/Alaska/Seattle next week – is it safe to go, or should we cancel our plans?

The NRC does not believe that the events in Japan warrant any travel restrictions within the United States or its territories.

18. What are the short-term and long-term effects of exposure to radiation?

The NRC does not expect that residents of the United States or it territories are at any risk of exposure to harmful levels of radiation resulting from the events in Japan.

On a daily basis, people are exposed to naturally occurring sources of radiation, such as from the sun or medical X-rays. The resulting effects are dependent on the strength and type of radiation as well as the duration of exposure.

From: Harrington, Holly
To: Milligan, Patricia
Subject: help
Date: Monday, March 14, 2011 7:35:00 PM

This is a blog comment we've received but not yet put up. I'd like to put it up along with a reply. Can you draft an acceptable response?

I live in Washington DC, and on my local news tonight, there was a piece about nuclear fallout. They recommended iodine tablets for anyone at risk for exposure. I'm reading up on whether or not this is a safe preventative for myself.

LL/134

From: Harrington, Holly
To: Couret, Ivonne; McIntyre, David
Subject: ep questions from reporters
Date: Monday, March 14, 2011 2:54:47 PM

Send them here: http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/fs-emerg-plan-prep-nuc-power.html . Eliot doesn't want to give interviews on the subject.

From:	Weber, Michael
To:	Dorman, Dan; Haney, Catherine
Cc:	Kinneman, John; Leeds, Eric; Boger, Bruce; Frazier, Alan; McIntyre, David; Burnell, Scott
Subject:	FYI - MOX Alert - TVA, Energy Northwest & Exploding Japanese MOX Reactor
Date:	Monday, March 14, 2011 3:14:38 PM

From: tomclements329@cs.com <tomclements329@cs.com>
To: tomclements329@cs.com <tomclements329@cs.com>
Sent: Mon Mar 14 10:48:46 2011
Subject: MOX Alert - TVA, Energy Northwest & Exploding Japanese MOX Reactor

MOX Alert - Energy Northwest and TVA MOX Plans & Exploding Japanese MOX Reactor

Energy Northwest, TVA and DOE officials have remained virtually silent about secret plans to use experimental weapons-grade plutonium fuel (MOX) in the Columbia Generating Station. It is noted that the Fukushima Daiichi Unit 3 exploding reactor is partially loaded with a first batch of reactor-grade MOX, thus making radioactive release potentially worse. Weapons-grade MOX has never even been tested in a boiling water reactor (BWR) and DOE is planning to use it in the GE Mark I design (Browns Ferry and Fukushima Daiichi 1-3 reactors) and GE Mark II (CGS). We will continue efforts to reveal information about this program to the US public.

Tom Clements
Friends of the Earth

top of homepage - Salem, OR

http://salem-news.com/

http://salem-news.com/articles/march142011/nuke-reactor-wash.php

Mar-14-2011 03:05

Secret Plan Exposed to Use Surplus Weapons Plutonium in Washington State Nuclear Reactor

Salem-News.com

FOIA Documents Reveal Energy Northwest Plans Plutonium Fuel (MOX) Experiments While Seeking to Control Information Leaks to the Media.

See original Feb. 3, 2011 news release on Friends of the Earth website:
Secret Plan Exposed to Use Surplus Weapons Plutonium in Washington State Nuclear Reactor
http://www.foe.org/secret-plan-exposed-use-surplus-weapons-plutonium-washington-state-nuclear-reactor

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distributed nationally:

from Experts Comment on U.S. Implications of Japanese Reactor Crisis

March 14, 2011

http://www.foe.org/experts-comment-us-implications-japanese-reactor-crisis

MOX section:

As in Japan's Fukushima Unit 3, the use of plutonium fuel (MOX) in U.S. reactors poses special radiation and safety risks. One of the Japanese reactors under risk of continued fuel melting or explosion is now operating for the first time with part of the core being plutonium fuel. This plutonium mixed oxide (MOX) fuel, shipped from Europe and inserted in Fukushima Unit 3 in September 2010, poses greater risks than traditional uranium fuel. MOX, made from plutonium which is capable of being used in nuclear weapons, is harder to control during reactor operation and results in a more serious radiation release in the event of an accident. The plutonium in the MOX is a result of the reprocessing of Japanese spent fuel and that reprocessing program. MOX use has long been opposed by public interest groups due to safety, cost and non-proliferation concerns.

Tom Clements, Southeastern nuclear campaign coordinator, Friends of the Earth, said: "In the U.S., the Department of Energy is considering use of MOX fuel in the Tennessee Valley Authority's Browns Ferry reactors, of the same aging Mark I boiling water reactor design as Fukushima Unit 3. Analysis by the Tennessee Valley Authority of unsafe MOX fuel made from surplus weapons plutonium must be halted and the $850 million request related to this in President Obama's FY2012 must be rejected. The cost of the MOX plant now under construction at the Department of Energy's Savannah River Site has skyrocketed from $1.4 billion in FY 2004 to $4.9 billion in FY 2009 and has become a program driven by special interests that profit from it."

See http://www.fissilematerials.org/blog/2011/03/us_plutonium_disposition_.html and http://www.foe.org/secret-plan-exposed-use-surplus-weapons-plutonium-washington-state-nuclear-reactor.

Contact Tom Clements at 803-834-3084 (landline).

From: Akstulewicz, Brenda
To: McIntyre, David
Subject: Call
Date: Monday, March 14, 2011 3:29:45 PM

Jeff Schogol
Stars & Stripes
202-761-0581
Wants to talk w/someone about the "fake" map that's out – he's doing an article to counter the information.

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

111/137

From: Burnell, Scott
To: Harrington, Holly; Hayden, Elizabeth; Brenner, Eliot
Cc: McIntyre, David; Akstulewicz, Brenda
Subject: RE: Jeanne Meserve Questions Needing Responses
Date: Monday, March 14, 2011 3:26:49 PM

I'm working it with Eliot, thanks.

From: Harrington, Holly
Sent: Monday, March 14, 2011 3:26 PM
To: Burnell, Scott; Hayden, Elizabeth; Brenner, Eliot
Cc: McIntyre, David; Akstulewicz, Brenda
Subject: RE: Jeanne Meserve Questions Needing Responses

Eliot – Do you want Dave to respond with this information?

From: Burnell, Scott
Sent: Monday, March 14, 2011 3:19 PM
To: Hayden, Elizabeth; Brenner, Eliot
Cc: Harrington, Holly; McIntyre, David; Akstulewicz, Brenda
Subject: RE: Jeanne Meserve Questions Needing Responses

Here's a proposed response:

1) The GSI-199 study didn't reveal "vulnerabilities" but slight increases in some plants' overall hazard estimates. The plants designed for the greatest seismic hazards are those in the areas of greatest seismic activity.

2) The request came through the office of the U.S. Ambassador to Japan, so they can best describe the request and requestor.

3) TEPCO or another local source is in the best position to discuss whether MOX is used in the #3 reactor. Generally, the presence of plutonium in low-enriched MOX fuel is not expected to materially change the fuel's response to accident conditions nor the potential health effects from a release.

4) The request asks for technical assistance; the NRC is sending approximately 10 people, including additional BWR specialists. The agency hopes to have them in the air tonight.

5) We're gathering additional site-specific information and analytical modeling to look at the issue in more detail for those plants where the initial review indicated a slight increase in risk. It's an effort that will certainly be informed by whatever is learned from this event.

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

1/38

Her questions are:

1) Can we provide a list of those plants with the highest potential seismic vulnerability? i.e., those that are problematic in the GSI-199 study. I've sent that question to Annie Kemmerer but need someone to followup.

2) How did the Japanese ask for our help—oral, letter, other? Who in Japan was the requestor?

3) Is MOX fuel in the #3 reactor? If so is there a greater threat to the public from this fuel melting?

4) What is the nature of the help Japan asked for? What is the team expertise composition? How many and where will they be in Japan?

5) With regard to our Fact Sheet on seismology, what are we doing to follow up:

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

Her deadline is 5 pm and her e-mail address is Jeanne.Meserve@turner.com

Beth

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: chairman at white house
Date:	Monday, March 14, 2011 3:37:16 PM
Attachments:	QUAKE talkMARCH14.docx

These are approved by Eliot

From: Harrington, Holly
Sent: Monday, March 14, 2011 3:36 PM
To: Brenner, Eliot
Cc: Burnell, Scott
Subject: RE: chairman at white house

I married info below with the other talking points based on past press releases. Please review and if OK, I'll post on WebEOC and send to regions

---

From: Brenner, Eliot
Sent: Monday, March 14, 2011 3:17 PM
To: Harrington, Holly
Subject: chairman at white house

1: the type and design of these reactors and the way events have unfolded give us confidence in saying radiation at harmful levels will not reach the u.s.

2: we believe the protective steps the Japanese are taking are comparable to ones we would use here.

3: we advise Americans in japan to follow the guidance of Japanese officials

4: we are providing technical assistance to the Japanese government. We have dispatched two BWR experts and are assembling a team to send over in response to the request for help from the Japanese.

--

In the q-anmd-a ... he said that obviously we always look to learn information that can be applied to the U.S> reactors and we will certainly be looking at the information that comes from this incident. (He was very careful not to rule out any changes down the line domestically, as I think your OPED made a similar point. He did say we had a review of tsunami information in 2004

OPA

TALKING POINTS

JAPAN NUCLEAR SITUATION

As of 3/14/2011 3 P.M. EST

In a White House briefing this morning, Chairman Jaczko said the type and design of the Japanese reactors and the way events have unfolded give us confidence in saying radiation at harmful levels will not reach the U.S.

Jaczko also said today that we believe the protective steps the Japanese are taking are comparable to ones we would use here and that we advise Americans in Japan to follow the guidance of Japanese officials.

According to Chairman Jaczko, the NRC is always looking to learn information that can be applied to the U.S. reactors and we will certainly be looking at the information that comes from this incident.

The Japanese government has formally asked for assistance from the United States as it continues to respond to nuclear power plant cooling issues triggered by an earthquake and tsunami on March 11. The NRC is assembling a team to send over in response to the request for help.

The NRC already has two experts in boiling-water reactors (BWR) in Tokyo offering technical assistance. They are part of a USAID team.

The NRC is working with other U.S. agencies to monitor radioactive releases from Japan and to predict their path. All the available information indicates weather conditions have taken the small releases from the Fukushima reactors out to sea away from the population.

Given the results of the monitoring and distance between Japan and Hawaii, Alaska, the U.S. Territories and the U.S. West Coast, the NRC does NOT expect the U.S. to experience any harmful levels of radioactivity.

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.

The NRC is coordinating its actions with other federal agencies as part of the U.S. government response. The NRC's headquarters Operations Center is activated and monitoring the situation on a 24-hour basis.

From: Steger (Tucci), Christine
To: McIntyre, David
Subject: Takoma News Tribune
Date: Monday, March 14, 2011 3:39:49 PM

Call from: Mike Archbold
Organization: Takoma News Tribune
Number: 253-597-8692

From: Akstulewicz, Brenda
To: McIntyre, David
Subject: Call-interview
Date: Monday, March 14, 2011 12:39:11 PM

Jamie Blanco
Fed News Radio
202-274-4824 ✓

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

11/14

From: Janbergs, Holly
To: Burnell, Scott; Couret, Ivonne; McIntyre, David
Subject: Daily Beast - Background Req
Date: Monday, March 14, 2011 12:49:19 PM

Lauren Streib from the Daily Beast/Newsweek called. She'd like someone to walk through the assessment letters with her and discuss other possible ways of assessing safety at nuclear reactors. This would be providing background information only.

Lauren Streib
212-524-8847

Beth Janbergs
Public Affairs Assistant
301-415-8211

LLL/142

From: Hayden, Elizabeth
To: Burnell, Scott
Cc: McIntyre, David; Couret, Ivonne
Subject: RE: Talking Points
Date: Monday, March 14, 2011 12:55:16 PM

Thanks.

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

From: Burnell, Scott
Sent: Monday, March 14, 2011 12:05 PM
To: Hayden, Elizabeth; Taylor, Robert
Cc: Harrington, Holly
Subject: RE: Talking Points

NEI – 202-739-8023 media@nei.org

DOE – 202-586-4948

ANS – Laura Steele 708-579-8224 Craig Piercy 202-470-1928 (??) ans.org

---

From: Hayden, Elizabeth
Sent: Monday, March 14, 2011 12:02 PM
To: Burnell, Scott; Taylor, Robert
Cc: Harrington, Holly
Subject: Talking Points

Can one of you update the Talking Points on WEB EOC with the latest press release and blog information? We would like to provide an update to all of OPA.

Also, there is a list of phone numbers for ANS, DOE, NEI on a yellow sticky that I left on the desk there to the left of the computer, could you send me that information so that I can send reporters there.

Beth

143

From: Hayden, Elizabeth
To: Akstulewicz, Brenda; Harrington, Holly
Cc: Burnell, Scott; McIntyre, David; Couret, Ivonne
Subject: FW: Call from a Journalist from Chile
Date: Monday, March 14, 2011 12:07:29 PM

Anyone get this call?

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: Bubar, Patrice
Sent: Monday, March 14, 2011 11:48 AM
To: Brenner, Eliot; Hayden, Elizabeth; Akstulewicz, Brenda
Cc: Crawford, Carrie
Subject: FW: Call from a Journalist from Chile

Please note the request we had from a journalist in Chile.

We have not returned the phone call.

Patty Bubar
Chief of Staff
Office of Commissioner William D. Magwood
U.S. Nuclear Regulatory Commission
301-415-1895

From: Crawford, Carrie
Sent: Monday, March 14, 2011 11:16 AM
To: Lisann, Elizabeth
Subject: Call from a Journalist from Chile

I am passing on this message as a call for former Commissioner Lyons from Jose Duarte, a Chilean journalist, obviously inquiring into the present nuclear consequences as a result of the Japanese quake.

He can be reached at 562-339-1099. If you feel it should be passed on to Public Affairs, the number is 415-8200 for Brenda Akstulewicz, the Administrative Assistant.

Thanks,
Carrie

From: McIntyre, David
To: Hayden, Elizabeth; Akstulewicz, Brenda; Harrington, Holly
Cc: Burnell, Scott; Couret, Ivonne
Subject: RE: Call from a Journalist from Chile
Date: Monday, March 14, 2011 12:08:00 PM

Not me.

From: Hayden, Elizabeth
Sent: Monday, March 14, 2011 12:08 PM
To: Akstulewicz, Brenda; Harrington, Holly
Cc: Burnell, Scott; McIntyre, David; Couret, Ivonne
Subject: FW: Call from a Journalist from Chile

Anyone get this call?

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: Bubar, Patrice
Sent: Monday, March 14, 2011 11:48 AM
To: Brenner, Eliot; Hayden, Elizabeth; Akstulewicz, Brenda
Cc: Crawford, Carrie
Subject: FW: Call from a Journalist from Chile

Please note the request we had from a journalist in Chile.

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Chief of Staff
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He can be reached at 562-339-1099. If you feel it should be passed on to Public

Affairs, the number is 415-8200 for Brenda Akstulewicz, the Administrative Assistant.

Thanks,
Carrie

From: McIntyre, David
To: Akstulewicz, Brenda
Cc: Couret, Ivonne
Subject: RE: CALL - returned
Date: Monday, March 14, 2011 12:30:00 PM

Done. Left message. She may call back.

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

Noreen
Dow Jones
212-416-4210

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

145

From: Akstulewicz, Brenda
To: McIntyre, David
Subject: call from WSJ
Date: Monday, March 14, 2011 1:42:38 PM

Dave Holly wanted me to send this caller to you.

Guatam Nik
WSJ
212-531-4003 CL

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

LL/146

From: Akstulewicz, Brenda
To: McIntyre, David
Subject: Call Tom Olson
Date: Monday, March 14, 2011 1:52:10 PM

Tom Olson
Pittsburgh Tribune
412-320-7854
*Information

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

LL/147

From: Steger (Tucci), Christine
To: Couret, Ivonne; McIntyre, David
Subject: Calls
Date: Monday, March 14, 2011 2:16:06 PM

Call from: Sergio Hernandez
Organization: ProPublica
Number: 917-512-0257

Call from: Bob Moffitt
Organization: Fox40 TV Sacramento, California
Number: 916-454-4548

LL/148

From: Hayden, Elizabeth
To: Couret, Ivonne; McIntyre, David; Burnell, Scott
Cc: Taylor, Robert; Couret, Ivonne
Subject: 2 more questions
Date: Monday, March 14, 2011 2:23:23 PM

---

1) Inside Edition, Cheryl Mamothe, 310-642-416; wants to know about radioactive cloud/plumes behavior.

2) Brian Sullivan, Bloomberg, 617-210-4631; plume dispersion questions.

Beth

149

From: Steger (Tucci), Christine
To: McIntyre, David; Couret, Ivonne
Subject: Greenwire
Date: Monday, March 14, 2011 2:21:34 PM

Call from: Hannah Northey
Organization: Greenwire
Phone: 202-446-0468 ✓

LL/150

From: Steger (Tucci), Christine
To: McIntyre, David
Subject: Fox 29 - Philly (working on a deadline)
Date: Monday, March 14, 2011 2:37:27 PM

Call from: Claudia Gomez
Organization: Fox 29 Philly
Number: 215-510-1847 ✓

LL/151

From: Steger (Tucci), Christine
To: McIntyre, David
Subject: Hawaii News Now
Date: Monday, March 14, 2011 2:33:08 PM

Call from: Terri Inefuku
Organization: Hawaii News Now
Number: 808-372-6159 ✓
T.Inefuku@hawaiinewsnow.com

LL/152

From: McIntyre, David
To: Steger (Tucci), Christine; Couret, Ivonne
Subject: RE: Greenwire
Date: Monday, March 14, 2011 2:29:00 PM

I'll do this.

From: Steger (Tucci), Christine
Sent: Monday, March 14, 2011 2:22 PM
To: McIntyre, David; Couret, Ivonne
Subject: Greenwire

Call from: Hannah Northey
Organization: Greenwire
Phone: 202-446-0468

From: Janbergs, Holly
To: McIntyre, David
Subject: LA County Dept. of Pub Health
Date: Monday, March 14, 2011 4:44:13 PM

Sarah Kissell from the LA County Department of Public Health says they are trying to organize a piece to push back against all the media attention they have been getting. She apparently needs clarification about some of the language in one of our recent press releases.

213-989-7183
skissell@ph.lacounty.gov

Beth Janbergs
Public Affairs Assistant
301-415-8211

LL1154

From: OPA Resource
To: McIntyre, David
Subject: FW: Poor Quality information in a website
Date: Monday, March 14, 2011 4:47:56 PM

From: ibike [mailto:ibike@charter.net]
Sent: Sunday, March 13, 2011 7:17 AM
To: NRC Allegation
Subject: Poor Quality information in a website

Is this really your map?
http://www.japan.org/wp-content/uploads/2011/03/falloutmap2.jpg

because this was on youtube and nobody can validate what is going on when NRC has nothing on their website.

http://www.youtube.com/watch?v=HtnKEG3kELI&feature=related

this one looks interesting, but no source...totally not helpful.

http://www.youtube.com/watch?v=Rx8f1_2R6cs

44/155

From: Doug Guarino
To: McIntyre, David
Subject: white house transcript?
Date: Monday, March 14, 2011 4:49:28 PM

Dave -- Do you have a link to a transcript or audio/video of the briefing with the chairman? All I can seem to find on the White House website is stuff from several days ago.

Thanks.

--
Douglas P. Guarino
Associate Editor
Inside Washington Publishers
(Inside EPA's Superfund Report)
1919 South Eads Street, Suite 201
Arlington, VA 22202
703-416-8518
fax:703-416-8543
mailto:dguarino@iwpnews.com

LLL 156

From: Steger (Tucci), Christine
To: McIntyre, David
Subject: MarketWatch
Date: Monday, March 14, 2011 2:43:47 PM

Call from: Russ Britt
Organization: MarketWatch, Los Angeles
Number: 323-658-3881

LL/157

From: Steger (Tucci), Christine
To: McIntyre, David
Subject: Request for Approval - Response Statement - CA
Date: Monday, March 14, 2011 3:14:57 PM
Importance: High

Call from: Sarah Kissell
Organization: LA County Public Health
Number: 213-989-7183

Question – they are sending out a statement in response to several media/public calls re: NRC press release "small releases out at sea" – they would like to reword the phrase and want to make sure information is still accurate.

Will be sending out statement today.

LL/158

From: Couret, Ivonne
To: McIntyre, David
Subject: Media Request - on the record request
Date: Monday, March 14, 2011 3:23:54 PM

ProPublica
Call from: Sergio Hernandez
Number: 917-512-0257 ✓
Sasha Charkin
917-512-0232
Both reporter two different stories looking for interview - told them none available

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

(301) 415-8205
ivonne.couret@nrc.gov

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

2010-2011 Information Digest - Where you can find NRC Facts at a Glance
http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/

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

111/159

From: Steger (Tucci), Christine
To: McIntyre, David
Subject: USA Today, News in Advance (Lynchburg, VA), and Mainichi Newspapers
Date: Monday, March 14, 2011 3:28:09 PM

Call from: Donna Leinwand
Organization: USA Today
Number: 202-906-8153
*Information on Nuclear Reactors in US - Seismic

Call from: Brian Gentry
Organization: News in Advance, Lynchburg, VA
Number: 434-385-5537

Call from: Aaron Weltz for Takeshi Yamashina
Organization: Mainichi Newspapers
Number: 212-765-1240

LL/160

From: McIntyre, David
To: Slobin, Sarah
Subject: RE: sarah from the wsj
Date: Monday, March 14, 2011 3:35:00 PM

Glad to help. Just try not to panic people.

From: Slobin, Sarah [mailto:Sarah.Slobin@wsj.com]
Sent: Monday, March 14, 2011 3:30 PM
To: McIntyre, David
Subject: RE: sarah from the wsj

thanks much,
very helpful. i owe you a latte.
:)
-s

-----Original Message-----
From: McIntyre, David [mailto:David.McIntyre@nrc.gov]
Sent: Monday, March 14, 2011 2:47 PM
To: Slobin, Sarah
Subject: RE: sarah from the wsj

Some suggestions from one of our health physicists:

http://lowdose.energy.gov/imagegallery.aspx

And in the attachment, Table 1 on p 1039.

From: Slobin, Sarah [mailto:Sarah.Slobin@wsj.com]
Sent: Monday, March 14, 2011 2:02 PM
To: McIntyre, David
Subject: sarah from the wsj

212-416-2797

From: Steger (Tucci), Christine
To: McIntyre, David
Subject: NRC Quoted in Article - FOX News Broadcast at 5pm
Date: Monday, March 14, 2011 3:50:54 PM

Call from: Virginia Hayes
Organization: Fox News
Number: 212-301-5786

Interested in NRC comments re: article from Dr. Joseph Oman – NRC was quoted. Virginia is sending the article to OPA e-mail.

111162

From: Akstulewicz, Brenda
To: McIntyre, David
Subject: call
Date: Monday, March 14, 2011 12:12:41 PM

Nancy Gaarder
Omaha World Herald
402-444-1102 ✓

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

LL/163

From: Akstulewicz, Brenda
To: McIntyre, David
Subject: CALL
Date: Monday, March 14, 2011 12:10:05 PM

Noreen
Dow Jones
212-416-4210 ✓

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

LLL/164

From: Akstulewicz, Brenda
To: McIntyre, David
Subject: Call Fox News - National
Date: Monday, March 14, 2011 3:33:30 PM

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

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

LLL/165

From: Akstulewicz, Brenda
To: McIntyre, David
Subject: Call
Date: Monday, March 14, 2011 3:46:48 PM

Yochi Breazen
National Journal
202-266-7755
Private security forces (i.e. Wackenhut) at plants, loosely related to current events

Julie Schmidt
USA Today
925-284-4680

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

LL/166

From: McIntyre, David
To: Akstulewicz, Brenda
Subject: RE: Call - NHK, Japan Broadcast
Date: Monday, March 14, 2011 3:57:00 PM

Geez, I only told 2 NHK folks yesterday they were already there.

From: Akstulewicz, Brenda
Sent: Monday, March 14, 2011 3:56 PM
To: McIntyre, David
Subject: Call - NHK, Japan Broadcast

Mayumi
NHK Japan Broadcast
310-367-8909
Deadline end of today
When will US reps leave for Japan?

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

uu 167

From: McIntyre, David
To: Mitlyng, Viktoria; Chandrathil, Prema
Subject: RE: NBC Affiliate Illinois - reporter deadline in 30 minutes
Date: Monday, March 14, 2011 3:57:00 PM

Thanks. A kiss from Tippecanoe …

From: Mitlyng, Viktoria
Sent: Monday, March 14, 2011 3:57 PM
To: McIntyre, David; Chandrathil, Prema
Subject: RE: NBC Affiliate Illinois - reporter deadline in 30 minutes

No problem.

From: McIntyre, David
Sent: Monday, March 14, 2011 2:56 PM
To: Mitlyng, Viktoria; Chandrathil, Prema
Subject: FW: NBC Affiliate Illinois - reporter deadline in 30 minutes

Could one of you please handle this? Appears not to be Japan related! ☺

Thanks,
Dave

From: Steger (Tucci), Christine
Sent: Monday, March 14, 2011 3:55 PM
To: McIntyre, David
Subject: NBC Affiliate Illinois - reporter deadline in 30 minutes

Call from Sheena Elzie
Organization: NBC Affiliate Illinois
Number: 217-425-6397 Ext. 1123

Question/Clarification on inspection results in recent report quoting: "severity level 4" – would like to know what this means.

Deadline: 30 minutes

From: Burnell, Scott
To: Couret, Ivonne; McIntyre, David
Subject: RE: Media request - RE: Daily Beast - Background Req
Date: Monday, March 14, 2011 4:01:30 PM

I haven't yet... Still slogging through backlog.

From: Couret, Ivonne
Sent: Monday, March 14, 2011 4:01 PM
To: Burnell, Scott; McIntyre, David
Subject: Media request - RE: Daily Beast - Background Req

Did someone chat with these folks?

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

(301) 415-8205
ivonne.couret@nrc.gov

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

2010-2011 Information Digest - Where you can find NRC Facts at a Glance
http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/

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

From: Janbergs, Holly
Sent: Monday, March 14, 2011 12:49 PM
To: Burnell, Scott; Couret, Ivonne; McIntyre, David
Subject: Daily Beast - Background Req

Lauren Streib from the Daily Beast/Newsweek called. She'd like someone to walk through the assessment letters with her and discuss other possible ways of assessing safety at nuclear reactors. This would be providing background information only.

Lauren Streib
212-524-8847

Beth Janbergs
Public Affairs Assistant
301-415-8211

1109

From: Hayden, Elizabeth
To: Brenner, Eliot; Harrington, Holly; McIntyre, David; Couret, Ivonne; Burnell, Scott; Janbergs, Holly
Subject: 3/13 11:30 pm TA Call
Date: Monday, March 14, 2011 12:06:47 AM

Hydrogen explosion at Unit #3 at approximately 11 pm; primary containment intact. Confirmed by Tony and John (our 2 guys in Japan). We know there is fuel damage.

#2 unit is stable.

Still no offsite power. Batteries being used 9and recharged) and DGs brought in to pump water.

Both #1 and #3 had uncovered fuel for several hours.

Following explosion, telling those who hadn't evacuated to shelter

Neil is here through the night.

LL 1170

From:	Jones, Cynthia
To:	Hayden, Elizabeth; McIntyre, David; Harrington, Holly; HOO Hoc
Cc:	Evans, Michele
Subject:	ANS Talking Points on Implications of Fukushima Accident to U.S. Nuclear Plants
Date:	Monday, March 14, 2011 9:00:18 AM
Attachments:	ANS Talking Points - 2011-03-13 R1_2.pdf

Attached please find talking point developed by ANS (American Nuclear Society) for your information/use.

Cyndi
-----Original Message-----
From: Joe Colvin [mailto:president@ans.org]
Sent: Monday, March 14, 2011 12:55 AM
To: Jones, Cynthia
Subject: Talking Points on Implications of Fukushima Accident to U.S. Nuclear Plants

Dear ANS Members:

Over the last two days, the ANS Crisis Communications team has been very proactive and has handled a multitude of media and press calls. ANS spokespersons have participated in national television, radio and press interviews providing the views of the nuclear science and technology experts within the Society. We are particularly grateful to Dr. Dale Klein who has given tremendous support to the Society and the public in response to the events at Fukushima.

We have begun fielding media inquiries about the implications of the problems at Fukushima on the US program. We have prepared the attached talking points to assist responders to this line of questions. The talking points are consistent with the talking points prepared by the Nuclear Energy Institute (NEI) on the same subject.

Thank you all for your strong support!

Joe

LLL/171

The predominance of ANS members reside in the U.S. As we interact with our family, neighbors and citizens in our communities many questions will come based on news coverage of the nuclear power plant situation in Japan. These talking points key on the theme 'could it happen in the U.S.?' *

ANS Member Talking Points
Implications to U.S. nuclear energy program from the Japanese earthquake

It is premature for the technical community to draw conclusions from the earthquake and tsunami tragedy in Japan with regard to the U.S. nuclear energy program. Many opposed to nuclear power will try to use this event to call for changes in the U.S. Japan is facing beyond a "worst case" disaster since we, the technical community, did not hypotheses an event of this magnitude. Thus far, even the most seriously damaged of Japan's 54 reactors have not released radiation at levels that would harm the public. That is testament to the way professionals in our profession operate: our philosophy of defense in-depth, excellent designs, high standards of construction, conduct of operations, and most important the effectiveness of employees in following emergency preparedness planning.

The Nuclear Science and Technology (NS&T) community takes very seriously our commitment to safe operation of any nuclear facility and will incorporate lessons learned based on this experience into our safety and operating procedures. The ANS will facilitate the sharing of technical information so that these lessons receive wide distribution and be archived for future stewards of this technology. Some points to remember from this week:

- Nuclear power plants have proven their value to society in Japan, the United States and elsewhere. They provide large amounts of base load electricity on an around-the-clock basis, and they do so cost-effectively with the lowest electricity production costs of any large energy source. Both Japan and the United States have benefited greatly from nuclear energy; it has been instrumental in the nations' economic success over the past half century and their high standard of living.

- Our hallmark as a NS&T organization is to incorporate operating experience and lessons learned. When we fully understand the facts surrounding the event in Japan, we will share, document and use those insights to make NS&T even safer.

- Nuclear energy has been and will continue to be a key element in meeting America's energy needs. The nuclear industry sets the highest standards for safety and, through our focus on continuous learning; we will incorporate lessons learned from the events in Japan. The dominant factors determining technology used for new generation will be demand for new generation, the competitiveness of nuclear energy in comparison with other sources of electricity generation, and the continued safe operation of U.S. nuclear power plants.

- There has not been a rush to judgment on the part of U.S. policymakers during the first few days of this situation. We believe that is due in part to the recognition on their part that nuclear energy must continue to play a key role in a diversified energy portfolio that strengthens U.S. energy security and fuels economic growth.

* The genesis of this document is the NEI "Talking Points - Implications to U.S. nuclear energy program of the Japanese earthquake" dated March 13, 2011

From:	Walker, Dwight
To:	Haney, Catherine; Dorman, Dan; Kinneman, John; Ordaz, Vonna; Kokajko, Lawrence; Pulliam, Timothy; Smith, Shawn; Doolittle, Elizabeth; Bailey, Marissa; Mohseni, Aby; Frazier, Alan; Gonzalez, Felix; Weil, Jenny; McIntyre, David; Safford, Carrie; Sapountzis, Alexander
Subject:	NMSS Staff Meeting - Cancelled

When: Monday, March 14, 2011 8:30 AM-9:30 AM (GMT-05:00) Eastern Time (US & Canada).
Where: HQ-EBB-01B11-15p

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

Good morning All,
Due to the ongoing emergency surrounding the events in Japan the NMSS Staff meeting is cancelled for today. Please send any notes you may have to Cathy Haney via email.

Thanks,
Dwight

LL/12

From: Burnell, Scott
To: McIntyre, David
Cc: Taylor, Robert
Subject: "additional Q&A"
Date: Monday, March 14, 2011 11:15:27 AM
Importance: High

Dave;

Where did you save the list of additional Q&A from that emergency planning document from early yesterday morning? Thanks.

Scott

1173

From: Hayden, Elizabeth
To: Brenner, Eliot
Cc: Harrington, Holly; Burnell, Scott; McIntyre, David
Subject: Calls on press release
Date: Monday, March 14, 2011 11:36:34 AM

I've fielded a number of calls (I believe we've had some e-mails also) asking about the basis for our statement in the last press release re no harm to U.S. from radiation and questions on plume dispersal. Other than what we say in the press release about hundreds of miles out over the ocean diluting the radiation, is there anything else we can say? Source of information? We should probably add this to our Qs and As.

Beth

ud174

From: McIntyre, David
To: Slobin, Sarah
Subject: RE: sarah from the wsj
Date: Monday, March 14, 2011 2:46:00 PM
Attachments: Med Mgt ARS clinical guidelines.pdf

Some suggestions from one of our health physicists:

http://lowdose.energy.gov/imagegallery.aspx

And in the attachment, Table 1 on p 1039.

From: Slobin, Sarah [mailto:Sarah.Slobin@wsj.com]
Sent: Monday, March 14, 2011 2:02 PM
To: McIntyre, David
Subject: sarah from the wsj

212-416-2797 ✓

1/175

Medical Management of the Acute Radiation Syndrome: Recommendations of the Strategic National Stockpile Radiation Working Group

Jamie K. Waselenko, MD; Thomas J. MacVittie, PhD; William F. Blakely, PhD; Nicki Pesik, MD; Albert L. Wiley, MD, PhD; William E. Dickerson, MD; Horace Tsu, MD; Dennis L. Confer, MD; C. Norman Coleman, MD; Thomas Seed, PhD; Patrick Lowry, MD; James O. Armitage, MD; and Nicholas Dainiak, MD

Physicians, hospitals, and other health care facilities will assume the responsibility for aiding individuals injured by a terrorist act involving radioactive material. Scenarios have been developed for such acts that include a range of exposures resulting in few to many casualties. This consensus document was developed by the Strategic National Stockpile Radiation Working Group to provide a framework for physicians in internal medicine and the medical subspecialties to evaluate and manage large-scale radiation injuries.

Individual radiation dose is assessed by determining the time to onset and severity of nausea and vomiting, decline in absolute lymphocyte count over several hours or days after exposure, and appearance of chromosome aberrations (including dicentrics and ring forms) in peripheral blood lymphocytes. Documentation of clinical signs and symptoms (affecting the hematopoietic, gastrointestinal, cerebrovascular, and cutaneous systems) over time is essential for triage of victims, selection of therapy, and assignment of prognosis.

Recommendations based on radiation dose and physiologic response are made for treatment of the hematopoietic syndrome. Therapy includes treatment with hematopoietic cytokines; blood transfusion; and, in selected cases, stem-cell transplantation. Additional medical management based on the evolution of clinical signs and symptoms includes the use of antimicrobial agents (quinolones, antiviral therapy, and antifungal agents), antiemetic agents, and analgesic agents. Because of the strong psychological impact of a possible radiation exposure, psychosocial support will be required for those exposed, regardless of the dose, as well as for family and friends. Treatment of pregnant women must account for risk to the fetus. For terrorist or accidental events involving exposure to radioiodines, prophylaxis against malignant disease of the thyroid is also recommended, particularly for children and adolescents.

Ann Intern Med. 2004;140:1037-1051. www.annals.org

For author affiliations, see end of text.

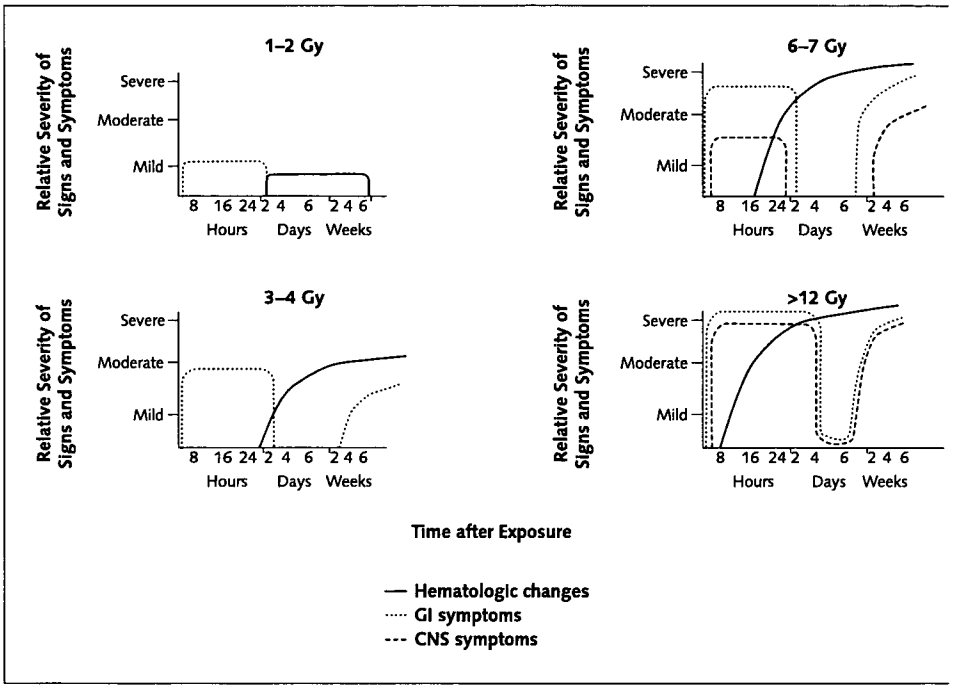
The events of September 11, 2001, confirmed the vulnerability of the United States and other nations to acts of terrorism. While our ability to react to and treat victims of biological terrorism has significantly improved, a terrorist event involving radioactive material remains a threat for which improved preparation is requisite. Several international conferences on treatment of acute radiation injury have been held in the past 2 decades (1–8). The conclusions of these conferences, together with mounting preclinical data showing the benefit of early cytokine use in combination with aggressive clinical support in irradiated animals (9–13), provide valuable information to clinicians faced with treating the acute radiation syndrome.

Scenarios for terrorist acts involving radioactive material have been developed, some of which indicate that mass casualties can occur. However, little information is currently available in the medical literature concerning guidelines for the medical management of large-scale, complex radiation injuries, such as those that might occur in an urban area (14–17). Therefore, this consensus document was created to help physicians who may be involved in evaluation, triage, or medical management of victims with acute radiation injury.

METHODS

The Strategic National Stockpile (SNS) convened the SNS Radiation Working Group (Appendix, available at www.annals.org) to address issues of medical management and stockpiling of pharmaceutical agents in case of a significant radiologic event. Participants were selected on the basis of their established expertise in the field. The deliberations of the SNS Radiation Working Group during a series of 4 consensus meetings beginning in August 2002 and 4 additional conference calls were used as a basis to create this document. The group reviewed the available information for cases recorded in the radiation accident registries maintained by the Radiation Emergency Assistance Center/Training Site (REAC/TS), Oak Ridge, Tennessee, and the University of Ulm, Germany (6). This information was supplemented by outcomes of clinical management and therapy for cases reported in the scientific literature. Since no prospective, controlled clinical trials have been conducted in patients with acute radiation injury, the SNS Radiation Working Group reviewed management strategies used in accidental exposures of humans and evaluated results of prospective, controlled studies of acutely irradiated animals. In some cases, recommendations for therapy are based on results of animal studies. For radiologic terrorism events, definitive studies are required in animals to demonstrate impact on mortality and other clinical end points, according to requirements for licensure under the U.S. Food and Drug Administration's Animal Rule. In cases where the members of the SNS Radiation Working Group failed to achieve consensus, the alternatives are presented with relevant reference to the published

Figure 1. **Approximate time course of clinical manifestations.**



Shown are approximate times for hematopoietic, gastrointestinal (*GI*), and central nervous system (*CNS*) symptoms at different ranges of dose of whole-body radiation for exposed, living persons. Hematopoietic changes include development of lymphopenia, granulocytopenia, or thrombocytopenia. Gastrointestinal symptoms include headache, nausea, vomiting, or diarrhea. Cerebrovascular signs and symptoms include headache, impaired cognition, disorientation, ataxia, seizures, prostration, and hypotension. Note that the signs and symptoms of different organ systems significantly overlap at each radiation dose and that cerebrovascular symptoms do not appear until exposure to a high whole-body dose. The relative severity of signs and symptoms is measured on an arbitrary scale. Prepared from data in reference 16.

literature. The Centers for Disease Control and Prevention provided funding to some of the participants for attendance at meetings. This support played no role in the composition, deliberations, or report of the SNS Radiation Working Group. Because new approaches to individual biodosimetry and therapy that will apply to treatment of acutely irradiated persons are likely to emerge, the SNS Radiation Working Group will review scientifically based guidance annually.

Defining the Threat and Public Health Response

The lethality of a nuclear device was demonstrated when a 15-kiloton improvised nuclear device was detonated over Hiroshima, Japan, in 1945, resulting in approximately 150 000 casualties and 75 000 fatalities (18). Virtually all survivors of Hiroshima had estimated exposure of less than 3 Gy (19). Recent review of data suggests that the mean lethal dose of radiation required to kill 50% of humans at 60 days ($LD_{50/60}$) of whole-body radiation is between 3.25 Gy and 4 Gy in persons managed without supportive care and 6 to 7 Gy when antibiotics and transfusion support are provided (20).

Although most radiation injuries in the past 50 years have been due to accidents, society must be prepared for the intentional detonation of nuclear or radiologic devices. Modern nuclear threats can be divided into 5 general categories: 1) an attack on nuclear power plants, 2) a malevolent act using simple radiologic devices, 3) terrorist use of a radiologic dispersal device or "dirty bomb," 4) detonation of an improvised nuclear device, and 5) detonation of a sophisticated nuclear weapon (21). Whereas incidents involving simple devices and radiologic dispersal devices would probably cause a limited number of casualties, those involving improvised nuclear devices and small nuclear weapons would result in mass casualties.

The Joint Commission on Accreditation of Healthcare Organizations and government leaders have mandated that the health care system develop plans to prepare for response to a radiologic terrorist event. The Hospital Emergency Incident Command System (22) provides a command and coordination approach that is useful for radiation response planning. Emergency plans should clarify authority, command, and control; define organizational responsibilities; develop procedures that integrate efforts of all response agencies; identify logistic support, supplies, and equipment; and assess incident conditions and consequences (23). Given the devastation that would accompany a nuclear detonation, plans should incorporate contingency planning for significant loss of infrastructure and health care personnel in the radiation field and its environs. Contingency planning should include relocation of victims to nearby operational hospitals and medical centers and acti-

vation of regional and state disaster plans that are coordinated with federal agencies. Approaches to radiologic monitoring, triage, and therapy for exposed populations will vary, depending on the number of casualties and resources available on the scene and in emergency treatment centers and hospitals. Although disaster planning is beyond the scope of this document, it is hoped that this clinical guideline defines a need for formalization and coordinated testing of such plans by hospitals and government agencies (see www.ncrp.com).

Barriers to the provision of optimal medical care include limitation of resources, loss of infrastructure, a high volume of victims, and presence of combined injury. Allocation of potentially limited resources should be determined by the number of victims and their long-term prognosis. Estimation of individual radiation dose is recommended for determining survivability of patients in a range of doses that indicate predisposition to the acute radiation syndrome. Treatment recommendations are based on this dose range, which becomes increasingly narrower as the number of casualties increases and with the occurrence of combined injuries.

Essentials of Radiation Exposure and Injury

Radiation injury can occur from external irradiation; external contamination with radioactive materials; and internal contamination by inhalation, ingestion, or transdermal absorption with incorporation of radiologic materials into the body's cells and tissues. These 3 types of exposure can occur in combination and can be associated with thermal burns and traumatic injuries.

Injury from a nuclear detonation varies, depending on the location of the victim relative to the hypocenter and the consequent exposure to different types of energy. Three forms of energy are released from a nuclear detonation: heat, accounting for approximately 35% of total energy; shock or bomb blast, accounting for approximately 50% of total energy; and radiation, accounting for the remaining 15% of total energy. Heat and light cause thermal injury, including flash burns, flame burns, flash blindness (due to temporary depletion of photopigment from retinal receptors), and retinal burns. The blast wave results in fractures, lacerations, rupture of viscera, and pulmonary hemorrhage and edema. Radiation causes the acute radiation syndrome; cutaneous injury and scarring; chorioretinal damage from exposure to infrared energy; and, depending on radiation dose and dose rate, increased long-term risk for cancer, cataract formation (particularly with neutron irradiation), infertility, and fetal abnormalities (that is, growth retardation, fetal malformations, increased teratogenesis, and fetal death). We refer the reader to several excellent in-depth reviews of radiation effects (21, 23–25).

The Acute Radiation Syndrome

Studies in animals and humans exposed to radiation have allowed researchers to describe the acute radiation syndrome, also known as radiation sickness. The acute radiation syndrome occurs after whole-body or significant partial-body irradiation of greater than 1 Gy delivered at a relatively high-dose rate. The most replicative cells are the most sensitive to the acute effects of radiation, particularly spermatocytes, lymphohematopoietic elements, and intestinal crypt cells. The inherent sensitivity of these cells results in a constellation of clinical syndromes that predominates within a predictable range of doses of whole-body or significant partial-body exposure. Clinical components of the acute radiation syndrome include the hematopoietic, gastrointestinal, and cerebrovascular syndromes. The time course and severity of clinical signs and symptoms for the component syndromes at different dose ranges are reviewed in **Figure 1**. Each syndrome can be divided into 4 phases: prodromal, latent, manifest illness, and recovery or death.

Depending on the absorbed dose, symptoms appear within hours to weeks, following a predictable clinical course. The *prodromal phase* of the acute radiation syndrome usually occurs in the first 48 hours but may develop up to 6 days after exposure. The *latent phase* is a short period characterized by improvement of symptoms, as the person appears to have recovered. Unfortunately, this effect is transient, lasting for several days to a month. Symptoms of *manifest illness* then appear and may last for weeks. This stage is characterized by intense immunosuppression and is the most difficult to manage. If the person survives this stage, recovery is likely. Individuals exposed to a supralethal dose of radiation may experience all of these phases

Table 1. **Phases of Radiation Injury***

Dose Range, *Gy*	Prodrome	Manifestation of Illness	Prognosis (without Therapy)
0.5–1.0	Mild	Slight decrease in blood cell counts	Almost certain survival
1.0–2.0	Mild to moderate	Early signs of bone marrow damage	Highly probable survival (>90% of victims)
2.0–3.5	Moderate	Moderate to severe bone marrow damage	Probable survival
3.5–5.5	Severe	Severe bone marrow damage; slight GI damage	Death within 3.5–6 wk (50% of victims)
5.5–7.5	Severe	Pancytopenia and moderate GI damage	Death probable within 2–3 wk
7.5–10.0	Severe	Marked GI and bone marrow damage, hypotension	Death probable within 1–2.5 wk
10.0–20.0	Severe	Severe GI damage, pneumonitis, altered mental status, cognitive dysfunction	Death certain within 5–12 d
20.0–30.0	Severe	Cerebrovascular collapse, fever, shock	Death certain within 2–5 d

* Modified from Walker RI, Cerveny RJ, eds. (21). GI = gastrointestinal.

over a period of hours, resulting in early death. **Table 1** summarizes these responses as a function of dose delivered at a high exposure rate.

The Hematopoietic Syndrome

Irradiation of bone marrow stem and progenitor cells at increasing doses results in exponential cellular death (21). The hematopoietic syndrome is seen with significant partial-body or whole-body radiation exposures exceeding 1 Gy and is rarely clinically significant below this level (21). Mitotically active hematopoietic progenitors have a limited capacity to divide after a whole-body radiation dose greater than 2 to 3 Gy (26). In the ensuing weeks after exposure, a hematologic crisis occurs, characterized by hypoplasia or aplasia of the bone marrow. These changes result in pancytopenia predisposition to infection, bleeding, and poor wound healing, all of which contribute to death.

While most bone marrow progenitors are susceptible to cell death after sufficiently intense radiation doses, subpopulations of stem cells or accessory cells are selectively more radioresistant, presumably because of their largely noncycling (Go) state (27, 28). These radioresistant cells may play an important role in recovery of hematopoiesis after exposure to doses as high as 6 Gy, albeit with a reduced capacity for self-renewal (29). Another critical determinant for reconstitution is inhomogeneity of the dose with sparing of marrow sites that become foci of hematopoietic activity (Appendix, available at www.annals.org).

Lymphopenia is common and occurs before the onset of other cytopenias. A predictable decline in lymphocytes occurs after irradiation. In fact, a 50% decline in absolute lymphocyte count within the first 24 hours after exposure, followed by a further, more severe decline within 48 hours, characterizes a potentially lethal exposure. The predictability of the rate of lymphocytic depletion count has led to the development of a model using lymphocyte depletion kinetics as an element of biodosimetry (30, 31). Patients with burns (32–34) and trauma (35) may develop lymphopenia as a result of these injuries alone. Although currently available predictive models based on absolute lymphocyte count have been validated (and include patients with these injuries), it is important to examine more than one element of biodosimetry whenever possible.

The onset of other cytopenias varies, depending on both dose and dose rate (36). Granulocyte counts may transiently increase before decreasing in patients with exposure to less than 5 Gy (36) (**Appendix Figure 2**, available at www.annals.org). This transient increase before decline, termed an *abortive rise*, may indicate a survivable exposure.

Additional injuries, such as mechanical trauma or burns (the combined injury syndrome), are expected to occur in 60% to 70% of patients after detonation of an improvised nuclear device (19, 21). These injuries significantly complicate the management of patients with the hematopoietic syndrome and significantly lower the $LD_{50/60}$. Prognosis is grave in patients with the combined injury syndrome and radiation exposure (31).

The Gastrointestinal Syndrome

Radiation induces loss of intestinal crypts and breakdown of the mucosal barrier. These changes result in abdominal pain, diarrhea, and nausea and vomiting and predispose patients to infection. At doses exceeding 12 Gy, the mortality rate of the gastrointestinal syndrome exceeds that of the hematopoietic syndrome. Severe nausea, vomiting, watery diarrhea, and cramps occur within hours after high-dose (>10 Gy) irradiation. This is followed by a latent period lasting 5 to 7 days, during which symptoms abate. Vomiting and severe diarrhea associated with high fever make up the manifest illness. Systemic effects may include malnutrition from malabsorption; bowel obstruction from ileus; dehydration, cardiovascular collapse, and electrolyte derangements from fluid shifts; anemia from damage to the intestinal mucosa and microcirculation and subsequent gastrointestinal bleeding; and sepsis and acute renal failure (21).

The Cerebrovascular Syndrome

The cerebrovascular syndrome is less well defined than other syndromes, and its stages are compressed. Individuals presenting with fever, hypotension, and major impairment of cognitive function will most likely have had a supralethal exposure (26). These symptoms may be observed in those receiving more than 20 to 30 Gy of radiation (21). The prodromal phase is characterized by disorientation, confusion, and prostration and may be accompanied by loss of balance and seizures. The physical examination may show papilledema, ataxia, and reduced or absent deep tendon and corneal reflexes. During the latent period, apparent improvement occurs for a few hours and is followed by severe manifest illness. Within 5 to 6 hours, watery diarrhea, respiratory distress, hyperpyrexia, and cardiovascular shock can occur. This rapid decline mimics the clinical course of acute sepsis and septic shock, both of which must be considered. The ensuing circulatory complications of hypotension, cerebral edema, increased intracranial pressure, and cerebral anoxia can bring death within 2 days.

The Cutaneous Syndrome

Cutaneous injury from thermal or radiation burns is characterized by loss of epidermis and, at times, dermis. Injuries to the skin may cover small areas but extend deeply into the soft tissue, even reaching underlying muscle and bone (37). They may be accompanied by profound local edema and place the patient at risk for a compartment syndrome. Patients presenting with burns immediately after exposure have thermal rather than radiation burns. Significant injuries to the integument decrease the $LD_{50/60}$ and amplify the risk for death at any radiation exposure dose. Patients with the hematopoietic syndrome have a more complicated course of the cutaneous syndrome as a result of bleeding, infection, and poor wound healing (37). For a more thorough discussion, readers are directed to

Table 2. **Grading System for Response of Neurovascular, Gastrointestinal, and Cutaneous Systems***

Symptom	Degree 1	Degree 2	Degree 3	Degree 4
Neurovascular system				
Nausea	Mild	Moderate	Intense	Excruciating
Vomiting	Occasional (once per day)	Intermittent (2–5 times per day)	Persistent (6–10 times per day)	Refractory (>10 times per day)
Anorexia	Able to eat	Intake decreased	Intake minimal	Parenteral nutrition
Fatigue syndrome	Able to work	Impaired work ability	Needs assistance for ADLs	Cannot perform ADLs
Temperature, °C	<38	38–40	>40 for <24 h	>40 for >24 h
Headache	Minimal	Moderate	Intense	Excruciating
Hypotension	Heart rate >100 beats/min; blood pressure >100/170 mm Hg	Blood pressure <100/70 mm Hg	Blood pressure <90/60 mm Hg; transient	Blood pressure <80/? mm Hg; persistent
Neurologic deficits†	Barely detectable	Easily detectable	Prominent	Life-threatening, loss of consciousness
Cognitive deficits†	Minor loss	Moderate loss	Major impairment	Complete impairment
Gastrointestinal system				
Diarrhea				
Frequency, stools/d	2–3	4–6	7–9	≥10
Consistency	Bulky	Loose	Loose	Watery
Bleeding	Occult	Intermittent	Persistent	Persistent with large amount
Abdominal cramps or pain	Minimal	Moderate	Intense	Excruciating
Cutaneous system				
Erythema§	Minimal, transient	Moderate (<10% body surface area)	Marked (10%–40% body surface area)	Severe (>40% body surface area)
Sensation or itching	Pruritus	Slight and intermittent pain	Moderate and persistent pain	Severe and persistent pain
Swelling or edema	Present, asymptomatic	Symptomatic, tension	Secondary dysfunction	Total dysfunction
Blistering	Rare, sterile fluid	Rare, hemorrhage	Bullae, sterile fluid	Bullae, hemorrhage
Desquamation	Absent	Patchy dry	Patchy moist	Confluent moist
Ulcer or necrosis	Epidermal only	Dermal	Subcutaneous	Muscle or bone involvement
Hair loss	Thinning, not striking	Patchy, visible	Complete, reversible	Complete, irreversible
Onycholysis	Absent	Partial	Partial	Complete

* Modified from Fliedner TM, Friesecke I, Beyrer K (39). ADL = activity of daily living.
† Reflex status (including corneal reflexes), papilledema, seizures, ataxia, and other motor signs or sensory signs.
‡ Impaired memory, reasoning, or judgment.
§ The extent of involvement is decisive and should be documented for all skin changes.

excellent reviews on the acute radiation syndrome with the cutaneous syndrome (37, 38).

Management

Table 2 summarizes the clinical responses for all of these syndromes, and **Table 3** presents a grading system based on severity of hematologic change. The presence of nausea, vomiting, fatigue, and anorexia may indicate exposure to a significant radiation dose, particularly if onset is within hours of exposure. The physical examination should focus on documentation of vital signs (presence of fever, hypotension, and orthostasis), skin examination (erythema, blistering, onycholysis, edema, desquamation, and petechiae), neurologic examination (presence of motor or sensory deficits, papilledema, ataxia, and assessment of mental status and cognition), and abdominal examination (presence of pain or tenderness).

Psychological Impact of Radiation Exposure

Psychosocial issues must be addressed in the potentially exposed population (40). Since a primary objective of terrorism is to elicit psychological shock, many persons requiring medical treatment will develop psychosocial symptoms even in the setting of no radiation exposure or

Table 3. **Levels of Hematopoietic Toxicity***

Symptom or Sign	Degree 1	Degree 2	Degree 3	Degree 4
Lymphocyte changes†	≥1.5 × 10^9 cells/L	1–1.5 × 10^9 cells/L	0.5–1 × 10^9 cells/L	<0.5 × 10^9 cells/L
Granulocyte changes‡	≥2 × 10^9 cells/L	1–2 × 10^9 cells/L	0.5–1 × 10^9 cells/L	<0.5 × 10^9 cells/L
Thrombocyte changes§	≥100 × 10^9 cells/L	50–100 × 10^9 cells/L	20–50 × 10^9 cells/L	<20 × 10^9 cells/L
Blood loss	Petechiae, easy bruising, normal hemoglobin level	Mild blood loss with <10% decrease in hemoglobin level	Gross blood loss with 10%–20% decrease in hemoglobin level	Spontaneous bleeding or blood loss with >20% decrease in hemoglobin level

* Modified from Dainiak N (24).
† Reference value, 1.4–3.5 × 10^9 cells/L.
‡ Reference value, 4–9 × 10^9 cells/L.
§ Reference value, 140–400 × 10^9 cells/L.

Table 4. **Mass Casualty Scenario for a Nuclear Detonation***

Patient Category	Radiation Dose, *Gy*	Patients, *n*	
		1-kiloton Detonation	10-kiloton Detonation
Combined injuries (minimal to intensive care)	All doses	1000–3000	15 000–24 000
Immediate fatalities	All doses	>7000	>13 000
Radiation fallout			
Expectant care	≥10	18 000	45 000
Intensive care	5–10	19 500	79 400
Critical care	3–5	33 000	108 900
Normal care	1–3	66 000	70 000
Ambulatory monitoring	0.5–1	82 500	139 000
Epidemiologic monitoring	0.25–0.5	106 000	147 000
Monitoring for psychosocial well-being without other injury	<0.25	>150 000	>270 000

* The table depicts projected casualty estimates based on a 1- or 10-kiloton detonation. Assumptions include a city with a population of 2 million people and casualties estimated on the basis of the Hazard Prediction Assessment Capability Program (HPAC), version 3.21 (Defense Threat Reduction Agency, Fort Belvoir, Virginia). Combined injuries consist of radiation injuries in addition to burns or blunt trauma.

very-low-dose exposure. Accordingly, terrorists will exploit an inherent, widespread fear of radiation by the general public to achieve a psychological effect.

Approximately 75% of individuals exposed to nuclear weapon detonations exhibit some form of psychological symptoms, ranging from inability to sleep to difficulty concentrating and social withdrawal (21). Among those at highest risk for significant psychological effects are children, pregnant women, mothers of young children, participants in radiation cleanup, and people with a medical history of a psychiatric disorder (41–43). In addition, exposed individuals and their families and friends have a high rate of post-traumatic stress disorder (44). Symptoms associated with post-traumatic stress disorder include anxiety disorders, depression, and a recurrent sense of re-experiencing the traumatic event. Individuals may exhibit outbursts of anger, an exaggerated startle response, and increased irritability. Post-traumatic stress disorder can be diagnosed when these symptoms persist for more than 1 month (45).

To assess the potential impact on the response system of persons with little or no radiation exposure, we generated a scenario for 1-kiloton and 10-kiloton nuclear detonations (**Table 4**). The number of individuals without exposure (that is, <0.25 Gy) who require psychosocial support is far greater than the number of patients who would be physically injured (**Table 4**). Expeditious triage of the former victims is essential and provision of appropriate treatment in the ambulatory setting is required so that those with survivable injuries can receive supportive care.

Biological Dosimetry

Individual biodosimetry is essential for predicting the clinical severity, treatment, and survivability of exposed individuals and triaging those with minimal or no exposure. The 3 most useful elements for calculating the exposure dose are time to onset of vomiting, lymphocyte depletion kinetics, and the presence of chromosome dicentrics. A radiation casualty management software program, the Biological Assessment Tool, is available at the Armed Forces Radiobiology Research Institute's Web site (www.afrri.usuhs.mil). This tool was developed in collaboration with REAC/TS and others to facilitate medical recording and estimation of individual dose (46). In addition, the International Atomic Energy Agency has developed generic guidelines for recording clinical signs and symptoms for victims of a radiation incident (see www.iaea.org). Using a grading system for the severity of clinical signs and symptoms, the Medical Treatment Protocols team has also developed a quantitative system to assess individual biological response to radiation exposure when results of chromosomal analysis are not yet available (39).

Prodromal signs and symptoms must be recorded throughout the course of medical management after a radiation exposure. Body location of radioactivity and thermal and traumatic injuries, and the degree of erythema, must be recorded on medical cards or flow charts that document signs and symptoms as a function of time after exposure. Dose estimates derived from the use of personnel dosimeters (if available) or other radiation monitoring devices must be recorded as well. These data may then be entered into the Biological Assessment Tool (or similar recording devices) at set triage stations so that an exposure dose can be estimated and the patient can be triaged accordingly.

The rate of decline and nadir of the absolute lymphocyte count over the initial 12 hours to 7 days after exposure is a function of cumulative dose (47). Lymphocyte depletion kinetics predict dose assessment for a photon-equivalent dose range between 1 and 10 Gy with an exposure resolution of approximately 2 Gy. Ideally, a complete blood cell count with leukocyte differential should be obtained immediately after exposure, 3 times per day for the next 2 to 3 days, and then twice per day for the following 3 to 6 days. However, this will require that deployable hematology laboratory capabilities be established and exercised for potential mass-casualty scenarios. It is recommended that 6 (and a minimum of 3) complete blood

Table 5. **Biodosimetry Based on Acute Photon-Equivalent Exposures***

Dose Estimate	Victims with Vomiting	Time to Onset of Vomiting	Absolute Lymphocyte Count†						Rate Constant for Lymphocyte Depletion‡	Dicentrics in Human Peripheral Blood Lymphocytes§	
			Day 0.5	Day 1	Day 2	Day 4	Day 6	Day 8		Per 50 Cells	Per 1000 Cells
Gy	%	*h*	←			$\times 10^9$ *cells/L*		→	*k*‡	*n*	
0	–	–	**2.45**	**2.45**	**2.45**	**2.45**	**2.45**	**2.45**	–	0.05–0.1	1–2
1	19		**2.30**	**2.16**	**1.90**	**1.48**	1.15	0.89	0.126	4	88
2	35	4.63	**2.16**	**1.90**	**1.48**	0.89	0.54	0.33	0.252	12	234
3	54	2.62	**2.03**	**1.68**	1.15	0.54	0.25	0.12	0.378	22	439
4	72	1.74	**1.90**	**1.48**	0.89	0.33	0.12	0.044	0.504	35	703
5	86	1.27	**1.79**	1.31	0.69	0.20	0.06	0.020	0.63	51	1024
6	94	0.99	**1.68**	1.15	0.54	0.12	0.03	0.006	0.756		
7	98	0.79	**1.58**	1.01	0.42	0.072	0.012	0.002	0.881		
8	99	0.66	**1.48**	0.89	0.33	0.044	0.006	<0.001	1.01		
9	100	0.56	1.39	0.79	0.25	0.030	0.003	<0.001	1.13		
10	100	0.48	1.31	0.70	0.20	0.020	0.001	<0.001	1.26		

* Depicted above are the 3 most useful elements of biodosimetry. Dose range is based on acute photon-equivalent exposures. The second column indicates the percentage of people who vomit, based on dose received and time to onset. The middle section depicts the time frame for development of lymphopenia. Blood lymphocyte counts are determined twice to predict a rate constant that is used to estimate exposure dose. The final column represents the current gold standard, which requires several days before results are known. Colony-stimulating factor therapy should be initiated when onset of vomiting or lymphocyte depletion kinetics suggests an exposure dose for which treatment is recommended (see Table 7). Therapy may be discontinued if results from chromosome dicentrics analysis indicate a lower estimate of whole-body dose.
† Normal range, 1.4–3.5 $\times$ 10^9 cells/L. Numbers in boldface fall within this range.
‡ The lymphocyte depletion rate is based on the model Lt = 2.45 $\times$ 10^9 cells/L $\times$ e $-$ k(D)t, where *Lt* equals the lymphocyte count ($\times 10^9$ cells/L), 2.45 $\times$ 10^9 cells/L equals a constant representing the consensus mean lymphocyte count in the general population, *k* equals the lymphocyte depletion rate constant for a specific acute photon dose, and *t* equals the time after exposure (days).
§ Number of dicentric chromosomes in human peripheral blood lymphocytes.

counts with differential be obtained within the initial 4 days after exposure to calculate a slope for lymphocyte decline that can be used to estimate exposure dose. Complete blood counts with differential should then be obtained weekly or twice weekly until a nadir in neutrophil count is defined.

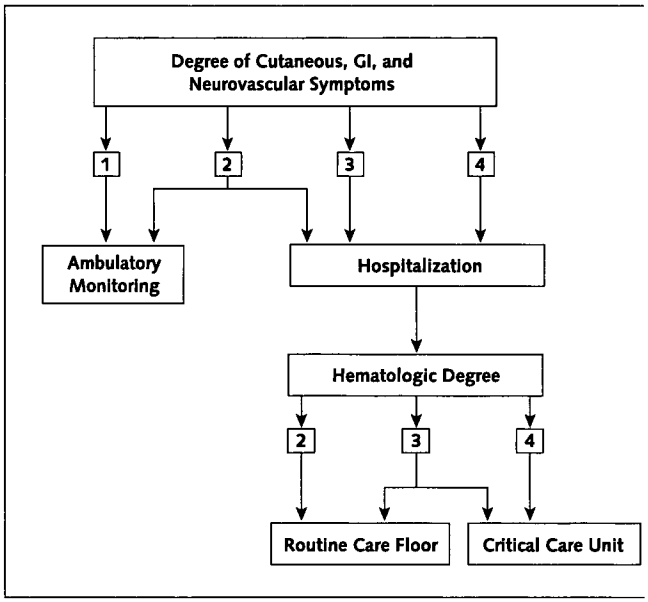
The chromosome-aberration cytogenetic bioassay, primarily the lymphocyte dicentrics assay introduced by Bender and Gooch (48), remains the gold standard for biodosimetry. The International Organization for Standardization recently proposed a standard to certify laboratories for performance of this bioassay (49). Rapid response is required from specialized cytogenetic biodosimetry laboratories in the case of a mass-casualty scenario (50, 51). A peripheral blood sample should be obtained at 24 hours after exposure (or later) in accordance with the policies of a qualified radiation cytogenetic biodosimetry laboratory. Because of incubation times, results will not be available for 48 to 72 hours after the sample has been submitted for analysis. Several cytogenetic biodosimetry laboratories use variations of interphase methods, such as the premature chromosome condensation bioassay, which permits dose assessment at higher doses (>5 Gy photon-equivalent and acute high-dose rate exposures) (52, 53). Although variations of the premature chromosome condensation assay (54) may provide dose estimates in less than 24 hours, this

Table 6. **Priorities in Triage of Patients with and without Combined Injury, Based on Dose of Radiation***

Conventional Triage Categories for Injuries without Exposure to Radiation	Changes in Expected Triage Categories after Whole-Body Radiation		
	<1.5 Gy	1.5–4.5 Gy	>4.5 but ≤10 Gy
Delayed	Delayed	Variable†	Expectant
Immediate	Immediate	Immediate	Expectant
Minimal	Minimal	Minimal‡	Minimal‡
Expectant	Expectant	Expectant	Expectant
Absent	Ambulatory monitoring	Ambulatory monitoring with routine care and hospitalization as needed	

* The military triage system was modified to develop priorities for therapy of individuals with radiation exposure and combined injury (i.e., significant mechanical trauma or burns). Priorities change as a function of radiation dose (range based on acute photon-equivalent exposures). At a whole-body dose <1.5 Gy, triage categories remain the same: 1) delayed treatment for those who are medically stable with significant injury but who may survive until definitive treatment is available; 2) immediate therapy for those with high survivability and significant injury, provided that immediate therapy is available; 3) minimal therapy for medically stable patients with minor injury; and 4) expectant therapy for patients who are seriously injured and in whom survivability is poor. All patients with the combined injury syndrome and an exposure dose >4.5 Gy should be treated expectantly, except for those with minimal or no injury. Patients with radiation injury alone (i.e., without combined injury) should be triaged to the ambulatory setting if dose <1.5 Gy. For those with a higher exposure dose, routine care should include therapy with cytokines, antimicrobial agents, blood transfusion, and frequent outpatient follow-up with laboratory monitoring. Hospitalization may be required, as indicated in Figure 2 and Table 7.
†Triage category depends on the nature and extent of physical injury.
‡ Although other injuries may be minimal, treatment guidelines in Figure 2 and Table 7 should be followed for patients receiving a whole-body radiation dose greater than 3 Gy.

Figure 2. **Approach to triage and therapy for persons exposed to radiation in a limited-casualty scenario.**



A numeric degree of severity is assigned for the cutaneous, gastrointestinal (*GI*), neurovascular, and hematopoietic systems, as defined in Tables 2 and 3. The highest degree of toxicity to an organ system indicates the physiologic "response category" (that is, 1, 2, 3, or 4). Modified with permission from reference 24.

method still requires validation. Other methods, such as messenger RNA biomarker assessment using gene profiling technology, are under development (55–58). Table 5 compares dose estimates based on time to onset of vomiting, reduction in absolute lymphocyte count, and frequency of dicentric chromosomes.

Triage and Emergency Care

The goal of triage is to evaluate and sort individuals by immediacy of treatment needed to do the greatest good for the most people. Triage should include a radiologic survey to assess dose rate, documentation of prodromal symptoms, and collection of tissue samples for biodosimetry. Management of life-threatening injuries takes precedence over radiologic surveys and decontamination.

We present two triage systems. The first system is a modification of the military triage system used in mass-casualty scenarios (Table 6). Patients are categorized on the basis of the estimated range of exposure dose and the presence or absence of significant mechanical trauma or burns (that is, combined injury). Individuals requiring surgical intervention should undergo surgery within 36 hours (and not later than 48 hours) after the exposure (21). Additional surgery should not be performed until 6 weeks or later. Depending on the time elapsed after the exposure and availability of resources, patients may be re-triaged to another category. Additional information regarding this triage system is available elsewhere (21).

Alternatively, an individual physiologic "response category" based on grading of clinical signs and symptoms may be used in triage (24, 39) even before individual dose estimates are available to care providers. An initial response category is assigned by determining the degree of toxicity to the cutaneous, gastrointestinal, and neurovascular systems (Figure 2). Further categorization of patients based on hematologic degree of toxicity permits triage to an ambulatory setting, admission to a routine-care hospital floor, or admission to a critical care unit. While this system is very useful to the clinician in management of a small-volume radiologic event, it is time-consuming and may be impractical in a large-volume scenario.

Once patients have been triaged by biodosimetry assessment and presence of other injuries, they may be categorized into treatment groups according to general treatment guidelines on the basis of radiation exposure dose (Table 7). These guidelines are intended to complement clinical judgment on the basis of signs and symptoms of the exposed individual. Treatment of the acute radiation syndrome is not indicated when exposure dose is very low (<1 Gy) or very high (>10 Gy). Supportive and comfort care is indicated for people with an exposure dose greater than 10 Gy because their prognosis is grave.

Medical Management of the Hematopoietic Syndrome

Treatment of radiologic victims with the hematopoietic syndrome varies with dose estimates, exposure scenarios, and presenting symptoms. Short-term therapy with cytokines is appropriate when the exposure dose is relatively low (<3 Gy). Prolonged therapy with cytokines, blood component transfusion, and even stem-cell transplantation may be appropriate when exposure dose is high (>7 Gy) or when traumatic injury or burns are also present. If there are many casualties, treatment must be prioritized (Table 7).

Cytokine Therapy

Today, the only hematopoietic colony-stimulating factors (CSFs) that have marketing approval for the management of treatment-associated neutropenia are the recombinant forms of granulocyte macrophage colony-stimulating factor (GM-CSF), granulocyte colony-stimulating factor (G-CSF), and the pegylated form of G-CSF (pegylated G-CSF or pegfilgrastim). Currently, none of these cytokines have been approved by the U.S. Food and Drug Administration for the management of radiation-induced aplasia. The rationale for the use of CSFs in the radiation setting is derived from 3 sources: enhancement of neutrophil recovery in patients with cancer who are treated with CSFs, an apparently diminished period of neutropenia in a small number of radiation accident victims receiving CSFs, and improved survival in irradiated canines and nonhuman primates treated with CSFs.

The value of CSFs in the treatment of radiation-induced myelosuppression of the bone marrow lies in their ability to increase the survival, amplification, and differen-

tiation of granulocyte progenitors. Both GM-CSF and G-CSF activate or prime neutrophils to enhance their function, such as microbicidal activity (60–65). Both have been shown to hasten neutrophil recovery by approximately 3 to 6 days in humans after intensely myelotoxic therapies (66), including bone marrow and stem-cell transplantation (67, 68). In fact, neutrophil recovery times are similar for both early and delayed treatment with G-CSF after transplantation (69–71). In the REAC/TS registry, 25 of 28 patients treated with G-CSF and GM-CSF after radiation accidents appeared to have faster neutrophil recovery. In most instances, these persons received both G-CSF and GM-CSF concurrently for significant periods. However, there was considerable variation in when CSFs were used (often weeks after the incident) and how they were used. Some of these patients also received interleukin-3. A significant survival advantage has been demonstrated in irradiated animals treated with CSFs in the first 24 hours. Laboratory evidence for the efficacy of CSFs after irradiation is summarized in the Appendix (available at www.annals.org).

Table 8 summarizes recommendations for therapy based on radiation exposure dose. In any adult with a whole-body or significant partial-body exposure greater than 3 Gy, treatment with CSFs should be initiated as soon as biodosimetry results suggest that such an exposure has occurred or when clinical signs and symptoms indicate a level 3 or 4 degree of hematotoxicity. Doses of CSFs can be readjusted on the basis of other evidence, such as analysis for chromosome dicentrics. While there may be initial granulocytosis followed by significant neutropenia, CSF treatment should be continued throughout this entire period. The CSF may be withdrawn when the absolute neutrophil count reaches a level greater than 1.0×10^9 cells/L after recovery from the nadir. Reinstitution of CSF treatment may be required if the patient has a significant neutrophil decline ($<0.500 \times 10^9$ cells/L) after discontinuation. Although the benefit of epoetin and darbepoetin has not been established in radiologic events, these agents should be considered for patients with anemia. Response time is prolonged (that is, 3 to 6 weeks), and iron supplementation may be required.

People at the extremes of age (children < 12 years and adults > 60 years) may be more susceptible to irradiation and have a lower $LD_{50/60}$ (26). Therefore, a lower threshold exposure dose (2 Gy) for initiation of CSF therapy is appropriate in such persons and in those who have major trauma injuries or burns (**Table 7**). Individuals receiving an external radiation dose of at least 6 to 7 Gy from an incident involving more than 100 casualties due to detonation of an improvised nuclear device or small nuclear weapon will have a poor prognosis, particularly when additional injury is also present. Depending on the state of the health care infrastructure and availability of resources, it may be prudent to withhold CSF treatment from persons with significant burns or major trauma in a mass-casualty scenario (**Table 6**). Since CSFs are a critical resource that must be given for long durations, particularly in people with multiple injuries such as trauma and burns, difficult triage decisions may mean that CSFs may be preferentially used for people without additional injury because they may have a higher chance of survival (exposure dose of 3 to 7 Gy in adults < 60 years of age and 2 to 7 Gy in children and in adults ≥ 60 years of age). The doses of

Table 7. **Guidelines for Treatment of Radiologic Victims***

Variable	Proposed Radiation Dose Range for Treatment with Cytokines	Proposed Radiation Dose Range for Treatment with Antibiotics†	Proposed Radiation Dose Range for Referral for SCT Consideration
	← Gy →		
Small-volume scenario (≤100 casualties)			
Healthy person, no other injuries	3–10‡	2–10§	7–10 for allogeneic SCT; 4–10 if previous autograft stored or syngeneic donor available
Multiple injuries or burns	2–6‡	2–6§	NA
Mass casualty scenario (>100 casualties)			
Healthy person, no other injuries	3–7‡	2–7§	7–10 for allogeneic SCT‖; 4–10 if previous autograft stored or syngeneic donor available‖
Multiple injuries or burns	2–6‖	2–6§‖	NA

* Consensus guidance for treatment is based on threshold whole-body or significant partial-body exposure doses. Events due to a detonation of a radiologic dispersal device resulting in ≤100 casualties and those due to detonation of an improvised nuclear device resulting in >100 casualties have been considered. These guidelines are intended to supplement (and not substitute for) clinical findings based on examination of the patient. NA = not applicable; SCT = stem-cell transplantation.

† Prophylactic antibiotics include a fluoroquinolone, acyclovir (if patient is seropositive for herpes simplex virus or has a medical history of this virus), and fluconazole when absolute neutrophil count is $<0.500 \times 10^9$ cells/L.

‡ Consider initiating therapy at lower exposure dose in nonadolescent children and elderly persons. Initiate treatment with granulocyte colony-stimulating factor or granulocyte-macrophage colony-stimulating factor in victims who develop an absolute neutrophil count $<0.500 \times 10^9$ cells/L and are not already receiving colony-stimulating factor.

§ Absolute neutrophil count $<0.500 \times 10^9$ cells/L. Antibiotic therapy should be continued until neutrophil recovery has occurred. Follow Infectious Diseases Society of America guidelines (59) for febrile neutropenia if fever develops while the patient is taking prophylactic medication.

‖ If resources are available.

Table 8. **Recommended Doses of Cytokines***

Cytokine	Adults	Children	Pregnant Women†	Precautions
G-CSF or filgrastim	Subcutaneous administration of 5 μg/kg of body weight per day, continued until ANC >1.0 × 10^9 cells/L	Subcutaneous administration of 5 μg/kg per day, continued until ANC >1.0 × 10^9 cells/L	Class C (same as adults)	Sickle-cell hemoglobinopathies, significant coronary artery disease, ARDS; consider discontinuation if pulmonary infiltrates develop at neutrophil recovery
Pegylated G-CSF or pegfilgrastim	1 subcutaneous dose, 6 mg	For adolescents >45 kg: 1 subcutaneous dose, 6 mg	Class C (same as adults)	Sickle-cell hemoglobinopathies, significant coronary artery disease, ARDS
GM-CSF or sargramostim	Subcutaneous administration of 250 μg/m^2 per day, continued until ANC >1.0 × 10^9 cells/L	Subcutaneous administration of 250 μg/m^2 per day, continued until ANC >1.0 × 10^9 cells/L	Class C (same as adults)	Sickle-cell hemoglobinopathies, significant coronary artery disease, ARDS; consider discontinuation if pulmonary infiltrates develop at neutrophil recovery

* ANC = absolute neutrophil count; ARDS = acute respiratory distress syndrome; G-CSF = granulocyte colony-stimulating factor; GM-CSF = granulocyte-macrophage colony-stimulating factor.

† Experts in biodosimetry must be consulted. Any pregnant patient with exposure to radiation should be evaluated by a health physicist and maternal–fetal specialist for an assessment of risk to the fetus. Class C refers to U.S. Food and Drug Administration Pregnancy Category C, which indicates that studies have shown animal, teratogenic, or embryocidal effects, but there are no adequate controlled studies in women; or no studies are available in animals or pregnant women.

CSFs recommended for use in radiologic incidents are based on the standard doses used in patients who have treatment-related neutropenia (**Table 7**).

Transfusion

Transfusion of cellular components, such as packed red blood cells and platelets, is required for patients with severe bone marrow damage. Fortunately, this complication does not typically occur for 2 to 4 weeks after the exposure, thereby permitting time for rapid mobilization of blood donors. Blood component replacement therapy is also required for trauma resuscitation. All cellular products must be leukoreduced and irradiated to 25 Gy to prevent transfusion-associated graft-versus-host disease in the irradiated (and therefore immunosuppressed) patient. It may be difficult to distinguish transfusion-associated graft-versus-host disease from radiation-induced organ toxicity, which may include fever, pancytopenia, skin rash, desquamation, severe diarrhea, and abnormalities on liver function tests (in particular, hyperbilirubinemia).

Leukoreduction is known to lessen febrile nonhemolytic reactions and the immunosuppressive effects of blood transfusion (72, 73). Moreover, leukoreduction helps protect against platelet alloimmunization and against acquiring cytomegalovirus infections (74, 75). Ideally, life-saving blood products should be leukoreduced and irradiated.

Stem-Cell Transplantation

Matched related and unrelated allogeneic stem-cell transplantations are life-saving and potentially curative treatments in patients with certain predominantly hematologic malignant conditions. A small number of radiation accident victims have undergone allogeneic transplantation from a variety of donors in an attempt to overcome radiation-induced aplasia. The initial experience with this method in an irradiated patient dates back to 1958 (76, 77). Many reports demonstrate transient engraftment with partial chimerism, with nearly all patients experiencing autologous reconstitution of hematopoiesis. However, despite the transient engraftment, outcomes have been poor, largely because of the impact of burns, trauma, or other radiation-related organ toxicity (78–80). In fact, in a recent review of the allogeneic transplant experience in 29 patients who developed bone marrow failure from previous radiation accidents (79), all patients with burns died and only 3 of the 29 lived beyond 1 year. It is unclear whether the transplants affected survival.

Similar results were observed in the 1999 radiation accident in Tokaimura, Japan (78), where 2 of the 3 victims were referred for allogeneic transplantation. Both patients demonstrated transient evidence of donor-cell engraftment followed by complete autologous hematopoietic recovery before eventually dying of radiation injuries to another organ system or infection. Survival may have been longer than expected in these patients.

If resources allow, transplantation should be considered in people with an exposure dose of 7 to 10 Gy who do not have significant burns or other major organ toxicity and who have an appropriate donor. Individuals with a granulocyte count exceeding 0.500 × 10^9 cells/L and a platelet count of more than 100 × 10^9 cells/L at 6 days after exposure appear to have evidence of residual hematopoiesis and may not be candidates for transplantation (81). In the unusual circumstance that a syngeneic donor may be available or previously harvested autologous marrow is available, a stem-cell infusion may be considered in patients with exposures exceeding 4 Gy (**Table 7**).

Medical Management of Other Complications and Special Considerations

The following treatment recommendations are defined by clinical and laboratory-based triage and observation of the clinical signs and symptoms associated with the acute radiation syndrome.

Supportive Care

Supportive care includes the administration of antimicrobial agents, antiemetic agents, antidiarrheal agents, fluids, electrolytes, analgesic agents, and topical burn creams. Experimental work performed more than 2 decades ago demonstrated the efficacy of supportive care, including the use of systemic antibiotics directed at gram-negative bacteria and transfusion with fresh, irradiated platelets (82–86).

Careful attention must be given to early fluid resuscitation of patients with significant burns, hypovolemia, hypotension, and multiorgan failure. Expectant care (treatment for comfort with psychosocial support) is recommended for patients who develop multiorgan failure within hours after exposure, as their radiation dose will have been high (>10 Gy). Resources permitting, routine critical care therapy should be provided to patients who develop multiorgan failure several days to weeks after exposure because their dose will have been in the moderate range. Therapy includes endotracheal intubation; administration of anticonvulsant agents; and the judicious use of parenteral analgesic agents, anxiolytic agents, and sedatives, as needed.

Infections

Susceptibility to infection results from a breech in the integument or mucosal barriers, as well as immune suppression consequent to a decline in lymphohematopoietic elements. Several studies have indicated that administration of antibiotics reduces mortality rates in irradiated dogs in the $LD_{50/30}$ range (84–87). Controlling infection during the critical neutropenic phase is a major limiting factor for successful outcome (85). In non-neutropenic patients, antibiotic therapy should be directed toward foci of infection and the most likely pathogens. Fluoroquinolones have been used extensively for prophylaxis in neutropenic patients (88–91). In patients who experience significant neutropenia (absolute neutrophil count $< 0.500 \times 10^9$ cells/L), broad-spectrum prophylactic antimicrobial agents should be given during the potentially prolonged neutropenia period. Prophylaxis should include a fluoroquinolone with streptococcal coverage or a fluoroquinolone without streptococcal coverage plus penicillin (or a congener of penicillin), antiviral drugs (acyclovir or one of its congeners), and antifungal agents (fluconazole). The efficacy of quinolones in irradiated animal models and guidelines for the use of acyclovir and fluconazole are reviewed in the Appendix (available at www.annals.org).

Antimicrobial agents should be continued until they are clearly not effective (for example, the patient develops neutropenic fever) or until the neutrophil count has recovered (absolute neutrophil count $\geq 0.500 \times 10^9$ cells/L). Focal infections developing during the neutropenic period require a full course of antimicrobial therapy. In patients who experience fever while receiving a fluoroquinolone, the fluoroquinolone should be withdrawn and therapy should be directed at gram-negative bacteria (in particular, *Pseudomonas aeruginosa*), since infections of this type may become rapidly fatal. Therapy for patients with neutropenia and fever should be guided by the recommendations of the Infectious Diseases Society of America (92–94). Use of additional antibiotics is based on treatment of concerning foci (that is, anaerobic cocci and bacilli that may occur in patients with abdominal trauma or infection with gram-positive bacteria such as *Staphylococcus* and *Streptococcus* species in addition to significant burns). Altering the anaerobic gut flora of irradiated animals may worsen outcomes (95). Therefore, we recommend that gut prophylaxis not be administered empirically unless clinically indicated (for example, in patients with an abdominal wound or *Clostridium difficile* enterocolitis).

Gastrointestinal Symptoms

Nausea and vomiting are common in patients exposed to radiation. The time to onset of vomiting has merit as a means of clinical dosimetry (96) but should be interpreted together with other forms of biodosimetric assessment. Given the importance of vomiting onset in determining individual radiation dose, prophylaxis against vomiting is not initially desired and would be impractical given the short time to onset with clinically significant exposures (96). At low exposure doses, vomiting usually abates after 48 to 72 hours; therefore, prolonged antiemetic therapy is not warranted in this situation. Serotonin receptor antagonists are very effective prophylaxis in patients who have received radiation therapy (97–100).

Supportive measures include fluid replacement, antibiotic therapy, and prophylaxis against ulceration of the gastrointestinal tract. Instrumentation of the gastrointestinal tract should be performed judiciously or not at all, since the intestinal mucosa is friable and prone to sloughing and bleeding after mechanical manipulation.

Comfort Measures

People with a high exposure dose whose outcome is grim must be identified for appropriate management. Since there is no chance for survival after irradiation with a dose of more than 10 to 12 Gy (**Table 1**), it is appropriate for definitive care to be withheld from such individuals. Rather than being treated aggressively, these patients should be provided with comfort measures. This includes attention to pain management and general comfort as well as administration of antiemetic and antidiarrheal agents. In this devastating situation, psychological support and pastoral care are essential not only for the patient but also for family and friends, who may experience traumatic grief.

Special Considerations

In pregnant women, the risk to the fetus must be assessed. Persons who have been exposed to radioiodines should receive prophylaxis with potassium iodide. Children and adolescents are particularly prone to developing malignant thyroid disease. Recommendations for treatment of victims who are pregnant and for prevention of thyroid cancer are provided in the Appendix (available at

Table 9. **Sources for Additional Information on Assessment, Triage, and Clinical Management of Radiologic Victims**

Source	Web Site
American Academy of Pediatrics	www.aap.org
American College of Radiology Disaster Planning Task Force, in collaboration with the American Society for Therapeutic Radiology and Oncology and the American Association of Physicists in Medicine	www.acr.org www.astro.org www.aapm.org
American Medical Association	www.ama-assn.org
Armed Forces Radiobiology Research Institute	www.afrri.usuhs.mil
Centers for Disease Control and Prevention	www.bt.cdc.gov
Health Physics Society	http://hps.org
Radiation Emergency Assistance Center/Training Site	www.orau.gov/reacts
Uniformed Services University of the Health Sciences Center for Disaster and Humanitarian Assistance Medicine	http://usuhs.mil
U.S. Army	www.nbc-med.org
U.S. Department of Homeland Security Working Group on Radiological Dispersal Device Preparedness	www1.va.gov
U.S. Food and Drug Administration	www.fda.gov
U.S. Nuclear Regulatory Commission	www.nrc.gov

www.annals.org). Table 9 lists Web sites providing more detailed information on radiation response.

PRECAUTIONS FOR HEALTH CARE WORKERS

Guidelines have been established for the use of personal protective equipment by health care providers, as described elsewhere (23) and on the Oak Ridge Associated Universities Web site (www.orau.gov/reacts). Providers should use strict isolation precautions, including donning of gown, mask, cap, double gloves, and shoe covers, when evaluating and treating contaminated patients. Outer gloves should be changed frequently to avoid cross-contamination. No health care workers who have adhered to these guidelines have become contaminated from handling a contaminated patient. Radiation detection devices can readily locate contaminants in the hospital facility to allow decontamination to take place. Protective gear should be removed after use and placed in a clearly labeled, sealed plastic container.

CONCLUSION

Medical management of patients exposed to intentional or accidental radiation is complex and demands many resources. The primary responsibility for optimizing outcome resides with hospital staff and physicians and other health care facilities. Careful documentation of clinical signs and symptoms and estimation of individual radiation dose are required for medical triage. While loss of life in a nuclear detonation may be enormous, the survival benefit afforded those who receive modern supportive care is significant. Effective care requires implementation of well-organized disaster plans. Disaster planning should include contingency planning for a scenario that involves loss of infrastructure. Organizing as a nation will be instrumental in order to successfully combat a radiologic threat in the United States and across the globe.

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APPENDIX

Institutional and Committee Participants

Armed Forces Radiobiology Research Institute, Bethesda, Maryland (William F. Blakely, PhD; Itzak Brook, MD; William E. Dickerson, MD; John Jacocks, MD; Thomas Seed, PhD; Horace Tsu, MD); Centers for Disease Control and Prevention, Atlanta, Georgia (Susan Gorman, PharmD; Nicki Pesik, MD; James Smith, PhD); U.S. Food and Drug Administration, Washington, DC (David Green, PhD; Patricia Keegan, PhD; Amy Rosenberg, PhD); Fort Dietrich, Frederick, Maryland (Marc Caouette, MD; Ellen Kavanaugh, MD); National Institutes of Health, Bethesda, Maryland (C. Norman Coleman, Helen Smith); National Marrow Donor Program, Minneapolis, Minnesota (Dennis L. Confer, MD); Radiation Emergency Assistance Center/Training Site, Oak Ridge, Tennessee (Patrick Lowry, MD; Robert Ricks, PhD; Albert Wiley, MD, PhD); University of Maryland Greenebaum Cancer Center (Thomas J. MacVittie, PhD); University of Nebraska, Omaha, Nebraska (James Armitage, MD); Walter Reed Army Medical Center, Washington, DC (Jamie K. Waselenko, MD); Yale-New Haven Health System (Bridgeport Hospital) and Yale University School of Medicine, New Haven, Connecticut (Nicholas Dainiak, MD).

Hematopoietic Reconstitution

Hematopoietic reconstitution has been shown to be possible with partial-body radiation exposure of up to 10 to 12 Gy. Recovery may result from proliferation and differentiation of radioresistant stem cells or stem cells that are spared from radiation because the person's physical environment and proximity to the source may afford partial shielding. **Appendix Figure 1** summarizes the medical record of a radiation accident victim. Note that the lowest dose of 1.5 Gy is received in the right posterior pelvis. Hematopoietically active bone marrow predominates in the dorsal areas of the spine, ribs, and pelvis (21). Accordingly, the patient may have areas of viable marrow, and his injury is potentially survivable (26). Indeed, this individual survived the acute injuries and died 17 years later of radiation hepatitis (36).

Persons exposed to a radiation dose of less than 5 Gy may have a transient increase in granulocyte count. This abortive increase is followed by a nadir that occurs between 1 and 4 weeks (**Appendix Figure 2**) (26, 36). A longer time to nadir is seen with an exposure to a low dose or dose rate of radiation, but the duration of the nadir may be prolonged, requiring long-term therapy.

Experimental Evidence of Efficacy of CSFs

Several studies examining the role of G-CSF, GM-CSF, pegylated G-CSF, and a chimeric molecule in an irradiated rhesus macaque model (10, 101–106) demonstrated significant neutrophil enhancement when these agents were administered 1 day after exposure and were continued for 14 to 21 consecutive days. Studies performed in irradiated rhesus macaques also suggested that there is a survival benefit to initiation of G-CSF or GM-CSF therapy within 24 hours of exposure. However, another report suggested that there is no diminished efficacy when cytokine therapy is delayed (101). Therefore, there is no conclusive proof that early (that is, within 24 hours) administration is necessary and sufficient for optimal outcome in mammals. Nevertheless, CSF therapy should be initiated as early as possible for persons who have been exposed to a survivable whole-body dose of radiation and are at risk for the hematopoietic syndrome (>3 Gy but <10 Gy in adults <60 years of age; >2 Gy but <10 Gy in nonadolescent children and in adults ≥60 years of age). Those who become significantly neutropenic (absolute neutrophil count $<0.500 \times 10^9$ cells/L) should also receive CSFs.

Pegfilgrastim has recently received marketing approval in the United States and has efficacy similar to that of G-CSF in chemotherapy-induced myelosuppression (107, 108). Preclinical studies in irradiated rhesus macaques demonstrated that neutrophil recovery occurs after a single injection of pegfilgrastim and that the effect is equivalent to that observed with conventional, daily dosing with filgrastim (109).

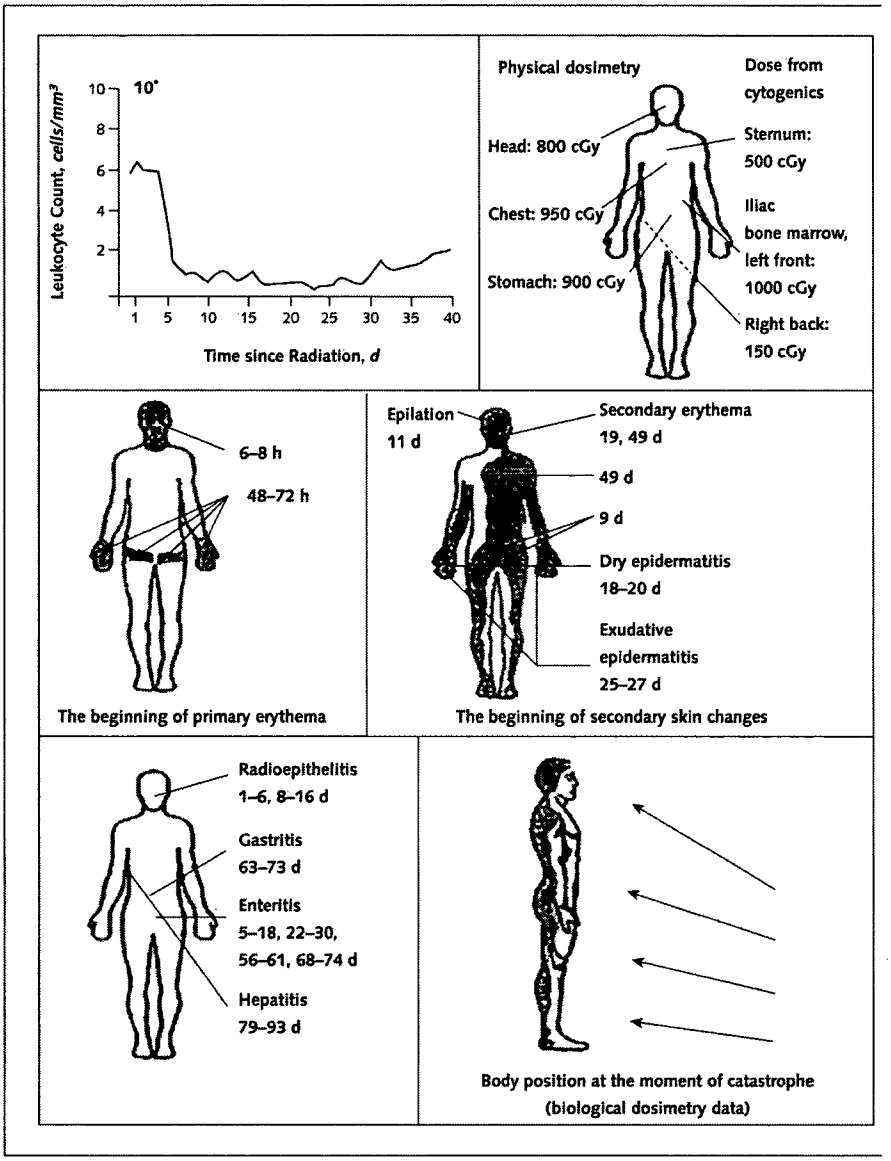
Rationale for Use of Antibiotics

Studies in irradiated mice demonstrated that the gut flora is dramatically altered soon after acute, high-dose exposure. The total mass of aerobes and anaerobes is reduced by several orders of magnitude, while Enterobacteriaceae increase at the expense of vital anaerobic species (95). In addition to breaks in the integrity of the gut wall, a dose-dependent reduction in number of stem cells in intestinal crypts occurs in the first 4 days after radiation (95, 110). Fatal bacteremia may result from bacterial outgrowth and translocation across damaged walls and interstitium of these organisms to the bloodstream. The use of quinolones was effective in controlling systemic endogenous gram-negative infections after radiation (110, 111). Supplementation with penicillin prevented treatment failures due to *Streptococci* infection and in patients with cancer who experienced treatment-related neutropenia (112). Quinolones were also effective in preventing endogenous infections with *Klebsiella* and *Pseudomonas* species (95, 111, 113).

If serologic tests for herpes simplex viruses (HSV-1 and HSV-2) are known to be positive, acyclovir or one of its congeners should be administered. Patients with positive serologic results are at high risk for reactivation of HSV infection during intense immunosuppression and may present with a clinical scenario that mimics radiation stomatitis. While patients undergoing local radiation therapy for head and neck cancer do not show a significant risk for HSV reactivation (114), patients who receive immunosuppressive therapies such as bone marrow transplantation have a high incidence of reactivation (115), which may add to the severity of mucosal injury. If serologic results are not known, it is reasonable to offer HSV prophylaxis on the basis of a medical history of oral or genital herpes infection. Individuals who experience severe mucositis should be assessed for possible reactivation of HSV.

Oral fluconazole, 400 mg/d, lessens the severity of invasive fungal infections and mortality rates in patients undergoing allogeneic bone marrow transplantation (116, 117). Data in patients receiving conventional forms of severely myelotoxic chemotherapy have also demonstrated benefit (59), although conflicting results exist (118, 119). Fluconazole prophylaxis is ineffective

Appendix Figure 1. **Summary of a medical record of a patient injured in a radiation accident.**



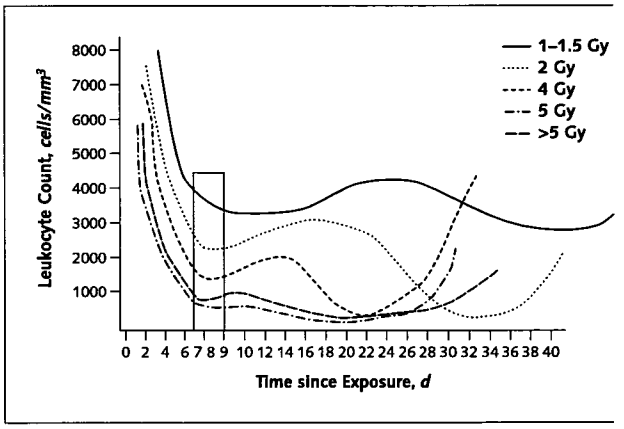
Shown are the absolute leukocyte count (*top left panel*), estimated organ dose (*top right panel*), areas of skin injury (*middle panels*), injury to oral cavity and gastrointestinal system (*bottom left panel*), and body position relative to the radioactive source (*bottom right panel*) as a function of time after the exposure. To convert cells/mm^3 to $\times 10^9$ cells/L, multiply by 0.001. Redrawn with permission from reference 29.

against aspergillus, molds, *Candida krusei*, and resistant *Candida* species.

Prolonged immune suppression from radiation may lead to reactivation of CMV and development of *Pneumocystis carinii* pneumonia. While the incidence of reactivation of CMV in patients with serologic evidence of previous infection after exposure to ionizing radiation is unknown, extrapolation from the marrow transplant literature indicates that the period of greatest risk is within the first 100 days of exposure. If resources allow, the serologic status of CMV should be determined and a sensitive test should be used to assay for reactivation of CMV (that is, antigen assessment or a polymerase chain reaction test) every 2 weeks for 30 days postexposure, up to day 100 in patients with documented previous CMV exposure. Subsequent examination may be necessary based on the clinical scenario because CMV infection may occur later.

An assessment of the absolute CD4 cell count should be considered at 30 days postexposure for patients who have had or currently have radiation-associated lymphopenia. Patients who are highly susceptible to *Pneumocystis carinii* pneumonia have an absolute CD4 cell count less than 0.200×10^9 cells/L. Trimethoprim–sulfamethoxazole should be avoided until the leukocyte count exceeds 3.0×10^9 cells/L or the absolute neutrophil count exceeds 1.5×10^9 cells/L. Alternative therapy includes atovaquone, dapsone, and aerosolized pentamidine. Prophylaxis should continue until the absolute CD4 cell count increases to a level of 0.200×10^9 cells/L or greater. This increase in CD4 cell count may not occur for several months.

Appendix Figure 2. **Leukocyte count based on exposure dose in patients exposed to radiation in Chernobyl.**



Note the abortive rise (transient increase before the fall) in counts of leukocytes, which are primarily composed of granulocytes, in doses less than 5 Gy. Neutropenia may not occur for weeks, especially with lower exposures, and its duration may be prolonged. To convert cells/mm^3 to $\times 10^9$ cells/L, multiply by 0.001. Redrawn with permission from reference 36.

Guidelines for Management of Pregnancy and Prevention of Thyroid Cancer

All hematopoietic cytokines and many antibiotics are class C drugs (Table 7). However, any pregnant woman who has been exposed to more than 0.25 Gy of radiation should have an estimate of fetal dose determined. The fetus's dose is often lower than that of the mother, except in the settings of radioiodine exposure (because the fetal thyroid gland is more iodine-avid than the adult thyroid gland) and internal contamination of the maternal urinary bladder (where increased exposure may occur because of proximity of the fetus to radioactivity). Consultation with a health physicist and a maternal–fetal medicine specialist is advised to assess risk to the fetus. The most important factor for ensuring fetal survival is survival of the mother. Pregnant women should receive the same supportive care as that provided to nonpregnant adults. Antibiotic use in pregnant women will require a review of safety in pregnancy. Risks and benefits to the mother and fetus must be explained before therapy is administered.

In the fetus, child, and adolescent, the thyroid gland is a radiosensitive organ that is at risk for malignant transformation. Because the thyroid gland concentrates iodine with great efficiency, exposure to radioiodines (^{131}I, ^{125}I) results in localization of radioactivity in the thyroid gland. This concentration of radioactivity can result in thyroid cancer, a delayed consequence that may be more aggressive than de novo forms of thyroid cancer (120). The main route of radioiodine exposure is inhalation by those in the near field and ingestion of contaminated food and drink (particularly milk) for those farther away (in the far field). Thyroid blocking with potassium iodide offers some protection (reduction of radioiodine uptake by 50% when administered within 4 hours of the exposure) by saturating the thyroid gland with nonradioactive iodine.

However, potassium iodide is not a generic antiradiation drug. If radioiodines are not part of the exposure, potassium iodide is not recommended. For example, because of their short half-life of 8.5 days, it is extremely unlikely that radioiodines will be incorporated into a radiologic dispersal device or "dirty bomb." In this scenario, potassium iodide will be of no clinical benefit but its potential toxicity (including life-threatening anaphylaxis) will be risked. Therefore, it is recommended that treatment with potassium iodide be avoided in victims of a "dirty bomb" explosion.

Dosing guidance for exposures involving radioiodines is reviewed in the **Appendix Table** and is also available online at www.bt.cdc.gov/radiation/ki.asp. Potassium iodide should be administered by mouth (tablets or Lugol solution) as soon as possible after the accident (≤6 hours). Caution should be taken in victims who have a personal history of allergy to iodine because severe allergic reactions have been reported. Thyroid protection for pregnant women exposed to radioiodine is critical for the mother and fetus. In the first trimester with a near-field exposure, stable iodine will protect the mother. Pregnant women with far-field exposure may be able to avoid contaminated foods and milk. The fetal thyroid gland normally does not begin to function until approximately the 12th week of gestation. Thus, pregnant women in the second and third trimesters should receive potassium iodide in both near- and far-field exposures to protect the maternal and fetal thyroid glands.

Appendix Table. **Threshold Dose and Recommended Doses of Potassium Iodide for Different Risk Groups***

Patients	Predicted Thyroid Dose	Daily Dose of Potassium Iodide	130-mg Tablets	65-mg Tablets
	Gy	*mg*	*n*	
Adults >40 y of age	≥5	130	1	2
Adults >18 through 40 y of age	≥0.1	130	1	2
Pregnant or lactating women	≥0.05	130	1	2
Adolescents >12 through 18 y of age†	≥5	65	1/2	2
Children >3 through 12 y of age	≥5	65	1/2	1
Children >1 mo through 3 y of age	≥5	32	1/4	1/2
Birth through 1 mo	≥5	16	1/8	1/4

* Based on reference 121. Potassium iodide tables or Lugol solution must be used within 4 to 6 hours of exposure to block uptake of radioiodines by the thyroid gland. If radioiodines are not part of the exposure, potassium iodide treatment is not indicated. Therapy should be continued for 7 to 10 days or as long as the exposure continues.
† Adolescents approaching adult size (≥70 kg) should receive the full adult dose (130 mg).

Current Author Addresses: Dr. Waselenko: Walter Reed Army Medical Center, 6900 Georgia Avenue, WD78, Washington, DC 20307.
Dr. MacVittie: Greenebaum Cancer Center, University of Maryland, 22 South Greene Street, Baltimore, MD 21201.
Dr. Blakely: Armed Forces Radiobiology Research Institute, 8901 Wisconsin Avenue, Bethesda, MD 20889-5603.
Dr. Pesik: Strategic National Stockpile Program, Centers for Disease Control and Prevention, 1600 Clifton Road, Atlanta, GA 30333.
Drs. Wiley and Lowry: Radiation Emergency Assistance Center/Training Site, Oak Ridge Associated Universities, 150 Vance Road, Oak Ridge, TN 37830.
Drs. Dickerson and Tsu: Armed Forces Radiobiology Research Institute, 8901 Wisconsin Avenue, Bethesda, MD 20889-5603.
Dr. Confer: National Marrow Donor Program, 3001 Broadway Street, NE 500, Minneapolis, MN 55413.
Dr. Coleman: National Cancer Institute, National Institutes of Health, Building 10, B3869, Bethesda, MD 20892-1002.
Dr. Seed: Catholic University of America, 620 Michigan Avenue NE, Washington, DC 20064.
Dr. Armitage: University of Nebraska, 987680 Nebraska Medical Center, Omaha, NE 68198.
Dr. Dainiak: Department of Medicine, Bridgeport Hospital, 267 Grant Street, Bridgeport, CT 06610.

From: Couret, Ivonne
To: McIntyre, David
Subject: Media Request - Bloomberg
Date: Monday, March 14, 2011 5:10:20 PM

Might be a repeat...

-----Original Message-----
From: KATARZYNA KLIMASINSKA, BLOOMBERG/ NEWSROOM: [mailto:kklimasinska@bloomberg.net]
Sent: Monday, March 14, 2011 11:27 AM
To: OPA Resource
Subject: URGENT: attention Ivonne

Hi Ivonne,

I appreciate you taking my call a moment ago. I would like to get a hold of an NRC member (preferably: over the phone) to the story we're writing following the German announcement today.

Germany will suspend a planned extension of the lifespan of the country's nuclear-power plants pending the outcome of an inquiry into their safety in the light of the disaster in Japan, Chancellor Angela Merkel said today.

Is the US considering taking a similar step? Is it being discussed? Is NRC holding any meetings on this matter today?

I would appreciate NRC comment as soon as possible,

Regards,

Kasia Klimasinska

From: McIntyre, David
To: Burnell, Scott
Subject: FW: epa press contacts
Date: Monday, March 14, 2011 10:43:00 PM

Scott – here's a link to EPA's press contacts. There is one person listed for air quality, another for Radiation. We are expecting to get inundated with phone calls and emails today asking who will be monitoring for radiation reaching the US. EPA should be the lead agency. Can you call over there and get a firm contact on who to refer people to? And any info they can give us on monitoring stations, temporary response efforts, etc., would be helpful. If they are uncooperative, tell them we will refer all callers to their press office.

Dave

From: McIntyre, David
Sent: Monday, March 14, 2011 10:33 PM
To: McIntyre, David
Subject: epa press contacts

http://www.epa.gov/newsroom/contact-us.htm

From: McIntyre, David
To: Harrington, Holly; Brenner, Eliot
Cc: Sheehan, Neil
Subject: RE: voice mail
Date: Monday, March 14, 2011 9:52:00 PM

Probably a good idea to mention the date when you do the voice mail.

From: Harrington, Holly
Sent: Monday, March 14, 2011 9:51 PM
To: McIntyre, David; Brenner, Eliot
Cc: Sheehan, Neil
Subject: RE: voice mail

I don't plan to leave here for a while, but I can do that before I leave.

I just took 15 voice messages off the machine from throughout the day. Do not know what happened. Will be getting some to you shortly

---

From: McIntyre, David
Sent: Monday, March 14, 2011 9:36 PM
To: Harrington, Holly
Cc: Sheehan, Neil
Subject: voice mail

He may have mentioned this to you, but Eliot was thinking it would be a good idea to change the voicemail message, to avoid having the HOOs get swamped with overnight calls. Perhaps you could tell people we are monitoring the voice mail throughout the night. Neil can check it periodically from here.

From: McIntyre, David
To: OPA Resource; Sheehan, Neil; dcarroll@usatoday.com
Subject: RE: Japan nuclear graphic for publication Tuesday
Date: Monday, March 14, 2011 6:39:00 PM

Yes

From: OPA Resource
Sent: Monday, March 14, 2011 6:13 PM
To: McIntyre, David; Sheehan, Neil
Subject: FW: Japan nuclear graphic for publication Tuesday

From: Carroll, Doug [mailto:dcarroll@usatoday.com]
Sent: Monday, March 14, 2011 6:08 PM
To: OPA Resource
Subject: Japan nuclear graphic for publication Tuesday

- 2 -

D:\Program Files\Microsoft Office\Templates\Normal.dot
Question re: definition of Mwe for capacity

I see this explained as Megawatt electric -- Can I call that megawatts of electricity?

LWL 179

From: Bohan, Suzanne
To: McIntyre, David
Subject: RE: U.S. agency monitoring radiation from Japan?
Date: Monday, March 14, 2011 6:23:37 PM

Thanks.

Suzanne Bohan
Regional Science Reporter
Bay Area News Group
510.262.2789
sbohan@bayareanewsgroup.com

On Twitter at twitter.com/SuzBohan, for updates on health and science news.

Bay Area News Group is a 528,000-circulation newspaper chain, including the Contra Costa Times, San Jose Mercury News, the Oakland Tribune and 11 affiliated papers.

www.contracostatimes.com - www.mercurynews.com - www.insidebayarea.com

---

From: McIntyre, David [mailto:David.McIntyre@nrc.gov]
Sent: Mon 3/14/2011 3:16 PM
To: OPA Resource; Bohan, Suzanne
Subject: RE: U.S. agency monitoring radiation from Japan?

This would primarily be the state and federal environmental agencies (EPA), likely with some assistance from Department of Energy.

David McIntyre
NRC Public Affairs

From: OPA Resource
Sent: Monday, March 14, 2011 5:58 PM
To: McIntyre, David
Subject: FW: U.S. agency monitoring radiation from Japan?

From: Bohan, Suzanne [mailto:sbohan@bayareanewsgroup.com]
Sent: Monday, March 14, 2011 5:17 PM
To: OPA Resource
Subject: U.S. agency monitoring radiation from Japan?

Good afternoon,

Which U.S. agency, or agencies, will be monitoring radiation drifting toward the U.S. from Japan's damaged nuclear reactors? I understand there may be releases for months to come as the reactor cores cool down.

Thanks for the information.

Best,

LLL/180

From: Burnell, Scott
To: McIntyre, David
Subject: RE: Quake dbas
Date: Monday, March 14, 2011 6:21:57 PM
Attachments: image001.png

Nope. Short answer is the California plants have to deal with the strongest possible quakes, after that the credible earthquake strength falls off pretty rapidly.

From: McIntyre, David
Sent: Monday, March 14, 2011 1:44 PM
To: Burnell, Scott
Subject: Quake dbas

We don't have anything remotely like this, do we?

From: Andrew Schneider [mailto:andrewschneider@me.com]
Sent: Monday, March 14, 2011 1:43 PM
To: McIntyre, David
Subject: Follow up

David,

You said earlier that design limits for withstanding earthquakes are site specific.

I'm on deadline now so if you could just send me the range - low to high - that will get me of your back for the moment.
What I will need later today is breakdown by plant on what each earthquake design limit is.

Thanks

Andrew Schneider

Aol News.

Senior Public Health Correspondent
P - 202-422-2313
F - 866-298-8618
E - andrew.schneider@aolnews.com
W - www.aolnews.com

111181

From:	Harrington, Holly
To:	Hayden, Elizabeth; Couret, Ivonne; McIntyre, David
Subject:	RE: Per eliot
Date:	Monday, March 14, 2011 6:15:19 PM

Will update

From: Hayden, Elizabeth
Sent: Monday, March 14, 2011 6:15 PM
To: Harrington, Holly; Couret, Ivonne; McIntyre, David
Subject: Re: Per eliot

These need to be updated so #w reflects we have sent help and others will go over shortly.

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
Sent: Mon Mar 14 16:40:03 2011
Subject: Per eliot

You can talk from these Q&As (prepared for the Chairman), but do not disseminate them.

LLL/182

From: Hayden, Elizabeth
To: Harrington, Holly; Couret, Ivonne; McIntyre, David
Subject: Re: Per eliot
Date: Monday, March 14, 2011 6:14:14 PM

These need to be updated so #w reflects we have sent help and others will go over shortly.

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
Sent: Mon Mar 14 16:40:03 2011
Subject: Per eliot

You can talk from these Q&As (prepared for the Chairman), but do not disseminate them.

From:	OPA Resource
To:	McIntyre, David; Sheehan, Neil
Subject:	FW: Japan nuclear graphic for publication Tuesday
Date:	Monday, March 14, 2011 6:12:55 PM

From: Carroll, Doug [mailto:dcarroll@usatoday.com]
Sent: Monday, March 14, 2011 6:08 PM
To: OPA Resource
Subject: Japan nuclear graphic for publication Tuesday

- 2 -

D:\Program Files\Microsoft Office\Templates\Normal.dot
Question re: definition of Mwe for capacity

I see this explained as Megawatt electric -- Can I call that megawatts of electricity?

1184

From:	Brenner, Eliot
To:	McIntyre, David; NRCExecSec Resource; Hayden, Elizabeth; Harrington, Holly; Burnell, Scott; Couret, Ivonne
Cc:	Champ, Billie; Mike, Linda; Vietti-Cook, Annette
Subject:	RE: Media Inquiry
Date:	Monday, March 14, 2011 5:08:50 PM

I responded that we didn't have anyone right now.

From: McIntyre, David
Sent: Monday, March 14, 2011 4:45 PM
To: NRCExecSec Resource; Hayden, Elizabeth; Brenner, Eliot; Harrington, Holly; Burnell, Scott; Couret, Ivonne
Cc: Champ, Billie; Mike, Linda; Vietti-Cook, Annette
Subject: RE: Media Inquiry

Well, she asked the secretary! ☺

I forwarded to Diane to see if she wants it.

From: McKelvin, Sheila **On Behalf Of** NRCExecSec Resource
Sent: Monday, March 14, 2011 4:43 PM
To: Hayden, Elizabeth; Brenner, Eliot; Harrington, Holly; McIntyre, David; Burnell, Scott; Couret, Ivonne
Cc: Champ, Billie; Mike, Linda; Vietti-Cook, Annette
Subject: FW: Media Inquiry

The attached is being forwarded for your appropriate action.

Sheila, SECY

From: McIntyre, David
To: Doug Guarino
Subject: RE: white house transcript?
Date: Monday, March 14, 2011 4:52:00 PM

You noticed that, eh? I'd like to read it myself! :-)

-----Original Message-----
From: Doug Guarino [mailto:doug.guarino@iwpnews.com]
Sent: Monday, March 14, 2011 4:49 PM
To: McIntyre, David
Subject: white house transcript?

Dave -- Do you have a link to a transcript or audio/video of the briefing with the chairman? All I can seem to find on the White House website is stuff from several days ago.

Thanks.

--
Douglas P. Guarino
Associate Editor
Inside Washington Publishers
(Inside EPA's Superfund Report)
1919 South Eads Street, Suite 201
Arlington, VA 22202
703-416-8518
fax:703-416-8543
mailto:dguarino@iwpnews.com

LLL 186

From: McCrea, Molly
To: McIntyre, David
Subject: KI near US plants
Date: Monday, March 14, 2011 11:26:01 AM

Is it true that the law that Markey authored,that would distribute KI to those living within a certain distance of nuclear plants in U.S., is not yet being followed? That the pills have not yet been distributed? I'm told the NRC is discouraging this. If this is not true, what is the status of the KI distribution? Have these pills been distributed? Will they? If so, when?

Thanks – hope you are well.
Molly

LL/181

From: McIntyre, David
To: McCrea, Molly
Subject: RE: KI near US plants
Date: Monday, March 14, 2011 12:25:00 PM

Quick answers for **background**:

From: McCrea, Molly [mailto:McCrea@kpix.cbs.com]
Sent: Monday, March 14, 2011 11:26 AM
To: McIntyre, David
Subject: KI near US plants

Is it true that the law that Markey authored,that would distribute KI to those living within a certain distance of nuclear plants in U.S., is not yet being followed? YES.

That the pills have not yet been distributed? NRC has provided KI to several states that have asked for it; under current regulations this is for residents in the 10-mile EPZ (Emergency Protection Zone)

I'm told the NRC is discouraging this. If this is not true, what is the status of the KI distribution? Have these pills been distributed? Will they? If so, when?

This is a US Govt decision – it's not just NRC but HHS and others.

Thanks – hope you are well.
Molly

3/14/11

From:	Akstulewicz, Brenda
To:	Akstulewicz, Brenda; Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Harrington, Holly; Hayden, Elizabeth; Janbergs, Holly; McIntyre, David; Shannon, Valerie
Subject:	Phone Calls
Date:	Monday, March 14, 2011 12:27:58 PM

Hey Guys,

I'm sure we are all approaching the point where we feel we've grown a new appendage called the phone!

For incoming media calls, Val, Bethany and I are taking the caller's name, organization, and number putting it in an email and distributing them to (until OPA PA officers change) Scott, Ivonne and Dave. Obviously the recipients will change with the shift.

Thanks,
B

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

uu/189

From:	Couret, Ivonne
To:	Burnell, Scott; Screnci, Diane; Sheehan, Neil; Mitlyng, Viktoria; Chandrathil, Prema; Uselding, Lara; Dricks, Victor; Hannah, Roger; Ledford, Joey; Harrington, Holly; McIntyre, David
Cc:	Shannon, Valerie; Akstulewicz, Brenda; Brenner, Eliot; Hayden, Elizabeth; Janbergs, Holly
Subject:	FYI - House Energy and Commerce Committee - LINKs to information
Date:	Monday, March 14, 2011 12:41:43 PM

Here is a link to the Committee's hearing notice: http://energycommerce.house.gov/hearings/hearingdetail.aspx?NewsID=8329 . The hearing will be before two House Energy and Commerce Committee Subcommittees: Subcommittee on Energy and Power, and Subcommittee on Environment and the Economy. It was originally planned as an FY12 budget hearing with Sec Chu (panel 1) and Chairman Jaczko (panel 2) but given the events in Japan, the focus will be largely Japan. Here is a link to Mr. Upton's (Committee chair's statement) about Japan: http://energycommerce.house.gov/news/PRArticle.aspx?NewsID=8337

11/190

From: Hayden, Elizabeth
To: Hardy, Sally; WebWork Resource; WebContractor Resource
Cc: Couret, Ivonne; McIntyre, David
Subject: FW: KI as key topic?
Date: Monday, March 14, 2011 1:03:36 PM

Please reactivate the Previous Key Topic "Potassium Iodide..." and put the Source Tracking KT in the archive. Also, on the this page: http://www.nrc.gov/about-nrc/emerg-preparedness/about-emerg-preparedness/potassium-iodide.html there should be a link added at the bottom under "Related Information" that goes to the Fact Sheet at http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/fs-emerg-plan-prep-nuc-power.html .

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: Couret, Ivonne
Sent: Monday, March 14, 2011 12:43 PM
To: McIntyre, David; Hayden, Elizabeth
Subject: RE: KI as key topic?

Beth do you want me to work on this with OIS or someone else...please advise. Ivonne

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment
(301) 415-8205
ivonne.couret@nrc.gov

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

2010-2011 Information Digest - Where you can find NRC Facts at a Glance
http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/

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

From: McIntyre, David
Sent: Monday, March 14, 2011 12:40 PM
To: Hayden, Elizabeth
Cc: Couret, Ivonne; Burnell, Scott; Uselding, Lara; Dricks, Victor; Screnci, Diane; Sheehan, Neil; Ledford, Joey; Hannah, Roger; Mitlyng, Viktoria; Chandrathil, Prema

LL 191

From: OPA Resource
To: McIntyre, David
Subject: FW: Events in Japan
Date: Monday, March 14, 2011 1:02:19 PM

-----Original Message-----
From: John Timmer [mailto:jtimmer@arstechnica.com]
Sent: Monday, March 14, 2011 12:29 PM
To: OPA Resource
Subject: Events in Japan

Greetings -

I've been asked to cover some of the events associated with the reactor problems in Japan, and I was wondering if you had anyone who is willing and available to discuss what would be involved in the cleanup process once the reactors are stabilized. I can be reached via email or the phone number below.

Thanks,

John

John R. Timmer, Ph.D.
Science Editor, Ars Technica
(347) 307-2577
http://arstechnica.com/

1192

From: McIntyre, David
To: OPA Resource
Subject: RE: Events in Japan
Date: Monday, March 14, 2011 1:05:00 PM

Dr. Timmer - At this time, we are unable to grant any interviews. Cleanup issues may actually be best addressed to the US Environmental Protection Agency.

David McIntyre
Office of Public Affairs
U.S. Nuclear Regulatory Commission
(301) 415-8200

-----Original Message-----
From: OPA Resource
Sent: Monday, March 14, 2011 1:02 PM
To: McIntyre, David
Subject: FW: Events in Japan

-----Original Message-----
From: John Timmer [mailto:jtimmer@arstechnica.com]
Sent: Monday, March 14, 2011 12:29 PM
To: OPA Resource
Subject: Events in Japan

Greetings -

I've been asked to cover some of the events associated with the reactor problems in Japan, and I was wondering if you had anyone who is willing and available to discuss what would be involved in the cleanup process once the reactors are stabilized. I can be reached via email or the phone number below.

Thanks,

John

John R. Timmer, Ph.D.
Science Editor, Ars Technica
(347) 307-2577
http://arstechnica.com/

LLL193

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:	Our process for now
Date:	Monday, March 14, 2011 1:42:18 PM

Reporter calls into 8200 will be captured by Brenda and e-mailed to Ivonne and Dave, who will log and handle or distribute as they see fit. Calls that Brenda gets that need an immediate person to talk to will go to Dave.

LWL 194

From:	McIntyre, David
To:	Harrington, Holly; Brenner, Eliot; Sheehan, Neil
Subject:	RE: Media requests -- first ones are recent, as far as I can tell. There were 15 messages on the voice mail, some apparently from this morning
Date:	Monday, March 14, 2011 10:00:00 PM

I think we can safely ignore Bill O'Reilly!

Neil's calling Reuters; I'll ask Eliot about GMA. BBC is probably a wash for now.

From: Harrington, Holly
Sent: Monday, March 14, 2011 9:58 PM
To: Brenner, Eliot; Sheehan, Neil; McIntyre, David
Subject: Media requests -- first ones are recent, as far as I can tell. There were 15 messages on the voice mail, some apparently from this morning

Good Morning America with George Stephanolopous (sp) at 7 a.m. Tuesday or so with the Chairman from a Washington studio
Emily – 202-407-5135

Reuters – 202-898-8322 Joanne Allen. Seeking update

BBC Radio – Interview on World Today. Could not make out callers name. Something like "Border"
Number: 011442075573588

Bill O'Reilly CNBC (I am not making this up) 201-735-3043 Wants interview

From: Steger (Tucci), Christine
To: McIntyre, David
Subject: Rakio from NHK Japanese Broadcasting Corp.
Date: Monday, March 14, 2011 6:17:14 PM

Call from: Rakio
Organization: NHK Japanese Broadcasting Corp.
Number: 202-821-2588

She said you gave her your e-mail yesterday, and will be sending you a few questions.
Quick turnaround – deadline 10 minutes.....

LL196

From: McIntyre, David
To: Burnell, Scott
Subject: Quake dbas
Date: Monday, March 14, 2011 1:44:00 PM
Attachments: image001.png

We don't have anything remotely like this, do we?

From: Andrew Schneider [mailto:andrewschneider@me.com]
Sent: Monday, March 14, 2011 1:43 PM
To: McIntyre, David
Subject: Follow up

David,

You said earlier that design limits for withstanding earthquakes are site specific.

I'm on deadline now so if you could just send me the range - low to high - that will get me of your back for the moment.
What I will need later today is breakdown by plant on what each earthquake design limit is.

Thanks

Andrew Schneider

Aol News.

Senior Public Health Correspondent
P - 202-422-2313
F - 866-298-8618
E - andrew.schneider@aolnews.com
W - www.aolnews.com

LLL/197

From: OPA Resource
To: McIntyre, David
Subject: FW: nuclear fall out from japan
Date: Monday, March 14, 2011 1:23:43 PM

From: richardlisc@aol.com [mailto:richardlisc@aol.com]
Sent: Monday, March 14, 2011 11:02 AM
To: OPA Resource
Subject: nuclear fall out from japan

my question is as follows:

what effect willl the radiation fall out in japan have of the east coast of the unted states.

thank you.

richard liscio

11/1/98

From:	Burnell, Scott
To:	Hayden, Elizabeth; Brenner, Eliot
Cc:	Harrington, Holly; McIntyre, David; Akstulewicz, Brenda
Subject:	RE: Jeanne Meserve Questions Needing Responses
Date:	Monday, March 14, 2011 2:21:23 PM

Working on it here in Ops Ctr

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

Her questions are:

1) Can we provide a list of those plants with the highest potential seismic vulnerability? i.e., those that are problematic in the GSI-199 study. I've sent that question to Annie Kemmerer but need someone to followup.

2) How did the Japanese ask for our help—oral, letter, other? Who in Japan was the requestor?

3) Is MOX fuel in the #3 reactor? If so is there a greater threat to the public from this fuel melting?

4) What is the nature of the help Japan asked for? What is the team expertise composition? How many and where will they be in Japan?

5) With regard to our Fact Sheet on seismology, what are we doing to follow up:

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

Her deadline is 5 pm and her e-mail address is Jeanne.Meserve@turner.com

Beth

GSI 199

From: McIntyre, David
To: Akstulewicz, Brenda; Couret, Ivonne
Subject: RE: Call
Date: Monday, March 14, 2011 2:28:00 PM

I'll do this.

From: Akstulewicz, Brenda
Sent: Monday, March 14, 2011 2:25 PM
To: Couret, Ivonne; McIntyre, David
Subject: Call

Kate
Fox 40 Sacramento
916-206-4143

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

LLL/200

From: Sheehan, Neil
To: Harrington, Holly
Cc: Brenner, Eliot
Subject: Some additional possible Qs
Date: Monday, March 14, 2011 7:11:17 AM

Here are some additional possible Qs:

How long can U.S. nuclear power plants operate on batteries? How long on emergency diesel generators?

Has there been any experience in the U.S. with injecting boron into a reactor to shut it down? What about borated sea water?

At the plants where secondary containment buildings were damaged by hydrogen blasts, are the spent fuel pools now exposed to the environment? If so, what are the implications of that? Has there been any melting of fuel in the spent fuel pools?

What is the biggest earthquake that the nuclear plant in my area can withstand?

Some legislators are calling for a halt, or least a go-slow approach, on new reactor applications. How will the NRC respond to these requests?

LLL/201

From: Decker, David
To: Harrington, Holly
Subject: FW: OPA Requests - chairman video recording and upload to Webcast
Date: Tuesday, March 15, 2011 3:15:22 PM

Holly,

I just got off the phone with the press side of the Energy and Commerce committee and they want to help, but are limited in the number of video positions they have. Apparently they have only 4 spots to set up video, and they don't know how many credentialed media/news stations will be there until the end of the day. As a Plan B, they wonder if getting high quality dvd copy of the hearing within about 24 hours work for us?

David

111202

From:	Harrington, Holly
To:	Akstulewicz, Brenda; Couret, Ivonne; Janbergs, Holly; Steger (Tucci), Christine; Landau, Mindy; Shannon, Valerie
Subject:	RE: FYI - Resource to How do I protect myself against radiation
Date:	Tuesday, March 15, 2011 3:29:00 PM

Yes, refer them to these links

From: Akstulewicz, Brenda
Sent: Tuesday, March 15, 2011 3:29 PM
To: Couret, Ivonne; Janbergs, Holly; Steger (Tucci), Christine; Landau, Mindy; Shannon, Valerie; Harrington, Holly
Subject: RE: FYI - Resource to How do I protect myself against radiation

When I am going through the emails in the OPA mailbox, can I respond with this information or do you still want/need to see them?

From: Couret, Ivonne
Sent: Tuesday, March 15, 2011 3:26 PM
To: Akstulewicz, Brenda; Janbergs, Holly; Steger (Tucci), Christine; Landau, Mindy; Shannon, Valerie; Harrington, Holly
Subject: FYI - Resource to How do I protect myself against radiation

How do I protect myself against radiation? Plain English answer with specific agencies –
Be Informed citizen guide at ready.gov
http://www.ready.gov/america/beinformed/index.html
http://www.ready.gov/america/beinformed/shelter.html

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs

U.S.NRC
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Protecting People and the Environment

(301) 415-8205
ivonne.couret@nrc.gov

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

2010-2011 Information Digest - Where you can find NRC Facts at a Glance
http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/

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

111/203

From: Harrington, Holly
To: Brenner, Eliot
Subject: this went up on blog after release went public
Date: Tuesday, March 15, 2011 3:30:00 PM

NRC Analysis Says Japanese Evacuation Actions Consistent with What U.S. Would Do

Overnight, NRC analysts continued their review of radiation data related to the damaged Japanese nuclear reactors. The analysts continue to conclude the steps recommend by Japanese authorities parallel those the United States would suggest in a similar situation.

The Japanese authorities Monday recommended evacuation to 20 kilometers around the affected reactors and said that persons out to 30 kilometers should shelter in place.

Those recommendations parallel the protective actions the United States would suggest should dose limits reach 1 rem to the entire body and 5 rem for the thyroid, an organ particularly susceptible to radiation uptake.

A rem is a measure of radiation dose. The average American is exposed to approximately 620 millirems, or 0.62 rem, of radiation each year from natural and manmade sources.

Eliot Brenner
Public Affairs Director

11/204

From:	Kundrat, Christine
To:	Harrington, Holly; AV-PHOTO Resource
Subject:	RE: No videographer for tommorrows hearing
Date:	Tuesday, March 15, 2011 3:47:34 PM

Acknowledged. Thank you for the update!

From: Harrington, Holly
Sent: Tuesday, March 15, 2011 3:25 PM
To: AV-PHOTO Resource; Kundrat, Christine
Subject: No videographer for tommorrows hearing

OCA now tells us that the videographer positions in the hearing room are extremely limited and we cannot send a videographer. Please STILL DO send a photographer tomorrow.

Thank you for all your help!

Holly

LLL/205

From: Harrington, Holly
To: kelly.huston@oes.ca.gov; jay.alan@ohs.ca.gov
Subject: Talking Points About California nuclear power plants
Date: Tuesday, March 15, 2011 3:56:00 PM

Alan, Kelly:

Feel free to use this information related to California nuclear power plants:

- Nuclear power plants are built to withstand environmental hazards, including earthquakes. Even those plants 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.

- Plants that might face a threat from tsunami are required to withstand large waves and the maximum wave height at the intake structure (which varies by plant.)

- The NRC will also be studying the events in Japan to learn any information that is applicable to U.S. nuclear power plant safety.

Hope this helps,

Holly Harrington
NRC
Office of Public Affairs

LL/2010

From: Harrington, Holly
To: Veal.Lee@epamail.epa.gov
Subject: NRC Office of Public Affairs contacts
Date: Tuesday, March 15, 2011 4:28:00 PM

To make sure it gets attention, please send it to:

Ivonne.couret@nrc.gov

And cc

Holly.harrington@nrc.go

And

Eliot.brenner@nrc.gov

Feel free to call at 301-415-8200 anytime

11/207

From: Steger (Tucci), Christine
To: Couret, Ivonne; Harrington, Holly
Subject: FYI
Date: Tuesday, March 15, 2011 4:46:46 PM

Call from Malion Bartley – OIG (x. 5962)

Malion called to confirm that the Ops Center had directed OIG to forward e-mail requests for information to OPA e-mail resource.

11/208

From:	Burnell, Scott
To:	Hannah, Roger; Ledford, Joey; Screnci, Diane; Sheehan, Neil; Chandrathil, Prema; Mitlyng, Viktoria; Uselding, Lara; Harrington, Holly; McIntyre, David; Couret, Ivonne
Cc:	Brenner, Eliot; Hayden, Elizabeth
Subject:	FW: Estimated Fatalities for US Nuclear Plant Spent Fuel Fires: 77,000
Date:	Tuesday, March 15, 2011 4:53:53 PM

The gentleman has submitted a petition; the NRC will review it to determine if it has ***any*** scientific validity. The NRC believes spent fuel pools are safe, even in cases of extended blackouts, given the very low heat levels involved and the ease with which the pools can be refilled. In some cases analysis has shown the spent fuel can be safely air-cooled.

[[deflect any questions about scary numbers with the "we'll review for scientific validity"]]

From: Thomas Popik [mailto:thomasp@resilientsocieties.org]
Sent: Tuesday, March 15, 2011 4:35 PM
To: thomasp@resilientsocieties.org
Subject: Estimated Fatalities for US Nuclear Plant Spent Fuel Fires: 77,000

FOR IMMEDIATE RELEASE

March 15, 2011

FIRE BREAKS OUT AT SPENT FUEL POOL FOR FUKUSHIMA DAIICHI UNIT 4

ESTIMATED FATALITIES FOR US NUCLEAR PLANT SPENT FUEL FIRES WOULD BE 77,000

NASHUA NH (March 15)--The recently reported spent fuel pool fire at Fukushima Daiichi Unit 4 demonstrated the vulnerability of nuclear power plants to loss of outside power. The Unit 4 spent fuel pool has been without outside power for cooling circulation pumps since the earthquake on March 11.

The Foundation for Resilient Societies has projected there would be widespread United States fatalities from spent fuel pool fires should there be a similar loss of outside power from natural disaster. Using data supplied by Oak Ridge National Laboratories, the Nuclear Regulatory Commission, and the US Census Bureau, the Foundation estimates fatalities of 77,000. United States population within 10 miles of nuclear power plants exceeds 3.5 million. Detailed information about data sources is provided in a Petition for Rulemaking submitted to the Nuclear Regulatory Commission on March 14 and available for download at www.resilientsocieties.org. The Petition contains fatality estimates for all 104 operating nuclear power plants in the United States.

Spent fuel pools are present at all operating nuclear power plants. Fuel rods continue to generate substantial heat after removal from the reactor core, necessitating active cooling in water pools. There are 104 nuclear power reactors operating in the United States at 65

LL4209

sites in 31 states. Each site has one or more spent fuel pools. Spent fuel contains a number of radioactive elements resulting from fission within the reactor core, the most significant being Ruthenium-106 with a half-life of one year and Cesium-137 with a half-life of 30 years. Should spent fuel rods become uncovered by water as a result of boiling, the zirconium cladding of the rods would likely catch fire.

While there are multiple scenarios that could cause uncovering of spent fuel rods and result in zirconium fire, the most significant scenario is long-term loss of outside power supplied by the commercial electric grid. Current design criteria for nuclear power plants and associated spent fuel pools assume reliable and quickly restored commercial grid power. In the event of a long-term loss of commercial grid power, it is likely that water in spent fuel pools would heat up and boil-off, fuel rods would become uncovered by water, zirconium cladding would catch fire, and large quantities of radioactive elements would be released into the atmosphere.

The Petition of the Foundation for Resilient Societies, submitted to the NRC on February 14, proposes requirements for unattended spent fuel pool cooling at nuclear power plants. For more information contact Thomas Popik, Foundation for Resilient Societies, email thomasp@resilientsocieties.org, phone 603-321-1090.

###

From: Harrington, Holly
To: Couret, Ivonne; McIntyre, David; Burnell, Scott; Janbergs, Holly; Brenner, Eliot
Subject: RE: Mark I containment documents
Date: Tuesday, March 15, 2011 2:36:00 PM

We realize that the PDR is getting these requests. They have been told per Eliot to proceed as they normally would – no faster, no slower. And they've been asked to let us know what media outlets have done the requesting so Ivonne can keep tabs

---

From: Couret, Ivonne
Sent: Tuesday, March 15, 2011 2:23 PM
To: McIntyre, David; Burnell, Scott; Harrington, Holly; Janbergs, Holly; Brenner, Eliot
Subject: FW: Mark I containment documents

FYI

From: PDR Resource
Sent: Tuesday, March 15, 2011 1:01 PM
To: Couret, Ivonne
Subject: Mark I containment documents

Hi Ivonne,

Here are the documents I'm sending to the Washington Post requester. It's the Reactor Safety Study and its appendices from 1975 and it is available online in public Web-based ADAMS. I included the links to the documents below.

****

http://adamswebsearch2.nrc.gov/IDMWS/ViewDocByAccession.asp?AccessionNumber=ML083570090
Accession Number: ML083570090
Document Title: NUREG-75/014, "Reactor Safety Study, An Assessment of Accident Risks in U.S. Commercial Nuclear Power Plants."
Document Date: 10/31/75 12:00 AM
Estimated Page Count: 228
Document Type: NUREG
Document/Report Number: NUREG-75/014
Author Affiliation: NRC/RES
File Size: 12320000
****

http://adamswebsearch2.nrc.gov/IDMWS/ViewDocByAccession.asp?AccessionNumber=ML070610293
Accession Number: ML070610293
Document Title: NUREG-75/014, "Reactor Safety Study - An Assessment of Accident Risks in U.S. Commercial Nuclear Power Plants," Appendices III and IV.
Document Date: 10/31/75 12:00 AM
Estimated Page Count: 170
Document Type: NUREG

LLL/210

Document/Report Number: NUREG-75/014
Author Affiliation: NRC/RES
File Size: 8883833
****
http://adamswebsearch2.nrc.gov/IDMWS/ViewDocByAccession.asp?AccessionNumber=ML070600376
Accession Number: ML070600376
Document Title: NUREG-75/014, "Reactor Safety Study, An Assessment of Accident Risks in U.S. Commercial Nuclear Power Plants, Appendices VII, VIII, IX and X."
Document Date: 10/31/75 12:00 AM
Estimated Page Count: 682
Document Type: NUREG
Document/Report Number: NUREG-75/014
Author Affiliation: Battelle Columbus Labs
File Size: 34504363
****
http://adamswebsearch2.nrc.gov/IDMWS/ViewDocByAccession.asp?AccessionNumber=ML070600389
Accession Number: ML070600389
Document Title: NUREG-75/014, "Reactor Safety Study, An Assessment of Accident Risks in U.S. Commercial Nuclear Power Plants, Appendix VI."
Document Date: 10/31/75 12:00 AM
Estimated Page Count: 500
Document Type: NUREG
Document/Report Number: NUREG-75/014
Author Affiliation: NRC/RES
File Size: 24891303
****
http://adamswebsearch2.nrc.gov/IDMWS/ViewDocByAccession.asp?AccessionNumber=ML070530533
Accession Number: ML070530533
Document Title: NUREG-75/014, App V, "Reactor Safety Study - An Assessment of Accident Risks in U.S. Commercial Nuclear Power Plants."
Document Date: 10/31/75 12:00 AM
Estimated Page Count: 142
Document Type: NUREG
Document/Report Number: NUREG-75/014
Author Affiliation: NRC/RES
File Size: 6414249
****

Thanks,

Mary Mendiola
Technical Librarian

U.S. NRC Public Document Room O-1 F21
http://www.nrc.gov/reading-rm/pdr.html
301-415-2821
Mailstop O-1F13
Mary.Mendiola@nrc.gov

From: Burnell, Scott
To: Couret, Ivonne; Brenner, Eliot
Cc: Harrington, Holly
Subject: RE: AV PHoto
Date: Tuesday, March 15, 2011 8:23:46 AM

Chairman's already gone, but we'll get what we can.

From: Couret, Ivonne
Sent: Tuesday, March 15, 2011 8:23 AM
To: Burnell, Scott; Brenner, Eliot
Cc: Harrington, Holly
Subject: AV PHoto

FYI - Photographer has been instructed to walk over take some refresh pictures, Chairman and the Protective Measures Team....I told him to stop by OPA to identify any other images...I'm here Ivonne

---

From: Harrington, Holly
Sent: Monday, March 14, 2011 11:33 PM
To: Couret, Ivonne
Subject: when you get in

Have AV take some fresh photos. Particularly see if they can get chairman or Protective Measures Team.

w/21

From: Landau, Mindy
To: Brenner, Eliot; Harrington, Holly
Cc: Ellmers, Glenn; Muessle, Mary
Subject: RE: EDO Update and FAQs
Date: Tuesday, March 15, 2011 8:29:31 AM

OK – depending on the timing we could link the Qs and As to the EDO Update or send out a separate announcement.

Mindy

From: Brenner, Eliot
Sent: Tuesday, March 15, 2011 8:11 AM
To: Landau, Mindy; Harrington, Holly
Cc: Ellmers, Glenn; Muessle, Mary
Subject: RE: EDO Update and FAQs

Mindy: We are clear to set up the site. I will check the status of the q-and-a. problem is q-and-a's have begun devolving around here. We will let you know when they are ready. In any message that goes out it is important to emphasize that these are being provided on an FYI basis and that the only public spokespeople for the agency are the chairman and the OPA staff.

Eliot

From: Landau, Mindy
Sent: Tuesday, March 15, 2011 7:30 AM
To: Brenner, Eliot; Hayden, Elizabeth
Cc: Ellmers, Glenn; Muessle, Mary
Subject: EDO Update and FAQs

Eliot/Beth,

The Chairman will hopefully send a network announcement out to the staff today conveying appreciation for their hard work, etc., and communicate at a high level. Bill will follow with an EDO update that contains more detailed information. Are the FAQs that you prepared for the Chairman in final form? We thought it would be good to link to them (on a SharePoint site, if possible) to prepare the staff to answer questions they might be getting from friends and family. Also, NRR has a number of public meetings coming up and this might support them as well.

Can you send me the FAQs or let me know the status?

Thanks,
Mindy

Mindy S. Landau
Deputy Assistant for Operations
Communication and Performance Improvement
Office of the Executive Director for Operations

LL/2/18

From: Couret, Ivonne
To: Steger (Tucci), Christine; Akstulewicz, Brenda; Shannon, Valerie; Janbergs, Holly
Cc: Harrington, Holly
Subject: Calls coming in.....
Date: Tuesday, March 15, 2011 9:06:12 AM

Radiation Monitoring and similar questions

- Calls from **state officials, fire officials, police departments**, etc., take the message and forward to: email them to Liao4.hoc@nrc.gov - They will handle them.

- Public calls continue to try and get them to their own state or local environmental/radiological/health offices. http://nrc-stp.ornl.gov/asdirectory.html (I'm print it out)

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

(301) 415-8205
ivonne.couret@nrc.gov

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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/

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

11/213

From: Powell, Amy
To: Harrington, Holly
Cc: Hayden, Elizabeth
Subject: AV at tomorrow"s hearing
Date: Tuesday, March 15, 2011 9:08:39 AM

Hi Holly –

Yesterday, I spoke with Christine, at your request, in multimedia services about where and when the hearing would be, time, talked with the Committee about access, etc. This morning, Danita left a VM asking me how many people we will need for the recording. Would you or someone else in OPA be able to step her through that? I don't have any idea about that level of detail. Her number is 415-5166 I'm cc'ing Beth in case you are getting well-deserved rest and this needs to be redirected.

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

LL/214

From: Decker, David
To: Brenner, Eliot; Harrington, Holly; Burnell, Scott
Subject: Radiation Detection/Monitoring
Date: Tuesday, March 15, 2011 11:44:39 AM

Eliot, Holly and Scott,

This bullet in the latest version of the "Talking Points" aspect has been one we've had a bunch of questions on from congressional staffers. Are the other agencies mentioned below DOD/DOE/EPA? The staffers real focus, however, seems to be on which US agency is responsible for monitoring domestic radiation danger. All we've said so far on the domestic monitoring is that DOE/EPA are involved in that (and mentioned the EPA RadNet program). Have you had any questions like this that we can tag on to? Thanks.

- The NRC is working with other U.S. agencies to monitor radioactive releases from Japan and to predict their path.

LW/215

From: Ousley, Elizabeth
To: Harrington, Holly
Subject: Can you tell me if you setup any NRC accounts on Twitter?
Date: Tuesday, March 15, 2011 11:36:33 AM

Hi Holly,

Were there any NRC accounts setup for sending tweets during the emergency or are you just using it for monitoring for now? Darren asked about this.

Thanks,

Liz

Liz Ousley
Branch Chief, Enterprise Architecture & Standards Branch (EASB)
Business Process Improvement and Applications Division (BPIAD)
301-415-8378

LL 12/14

From: Shoop, Undine
To: Couret, Ivonne; Burnell, Scott; Virgilio, Rosetta; Harrington, Holly
Subject: RE: Million dollar question
Date: Tuesday, March 15, 2011 11:48:58 AM

In the US it is the licensee's responsibility to report public dose information. The NRC publishes the licensee's reports on our public web site. For this incident, the Japanese are responsible although I am relatively sure that if the fence monitors at Diablo or San Onofre start to pick up radiation in the air, they will report it.

From: Couret, Ivonne
Sent: Tuesday, March 15, 2011 11:43 AM
To: Shoop, Undine; Burnell, Scott; Virgilio, Rosetta; Harrington, Holly
Subject: Million dollar question

Who is the official agency to report radiation numbers and what is the public contact. Undine add this to the script the answer. Ivonne

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

☎ **(301) 415-8205**
✉ **ivonne.couret@nrc.gov**

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

2010-2011 Information Digest - Where you can find NRC Facts at a Glance
http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/

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

11/27

From: Ellmers, Glenn
To: Harrington, Holly
Subject: RE: EDO Update and FAQs
Date: Tuesday, March 15, 2011 12:27:56 PM

Ah, right. I had seen that, but forgot about it.

From: Harrington, Holly
Sent: Tuesday, March 15, 2011 12:27 PM
To: Ellmers, Glenn; Landau, Mindy; Brenner, Eliot
Cc: Muessle, Mary
Subject: RE: EDO Update and FAQs

We have language on the blog about what USAID is telling poeple

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From: Ellmers, Glenn
Sent: Tuesday, March 15, 2011 12:23 PM
To: Landau, Mindy; Brenner, Eliot; Harrington, Holly
Cc: Muessle, Mary
Subject: RE: EDO Update and FAQs

Could we add something for people wishing to assist the victims in Japan? (This question came up in a Region). Maybe:

"The CFC is the only charitable solicitation permitted on federal property, and the campaign has concluded for the season. The NRC, like all federal agencies, is prohibited from soliciting or encouraging any other charitable donations, or recommending specific organizations. If you do wish to make a contribution to a worthy cause of your choice, you are encouraged to beware of scams and fake charities."

(This tracks the answer OGC provided to a similar question about needy employees during a possible furlough.)

From: Landau, Mindy
Sent: Tuesday, March 15, 2011 8:29 AM
To: Brenner, Eliot; Harrington, Holly
Cc: Ellmers, Glenn; Muessle, Mary
Subject: RE: EDO Update and FAQs

OK – depending on the timing we could link the Qs and As to the EDO Update or send out a separate announcement.

Mindy

From: Brenner, Eliot
Sent: Tuesday, March 15, 2011 8:11 AM
To: Landau, Mindy; Harrington, Holly
Cc: Ellmers, Glenn; Muessle, Mary
Subject: RE: EDO Update and FAQs

Mindy: We are clear to set up the site. I will check the status of the q-and-a. problem is q-and-a's have begun devolving around here. We will let you know when they are ready. In

11/2018

any message that goes out it is important to emphasize that these are being provided on an FYI basis and that the only public spokespeople for the agency are the chairman and the OPA staff.

Eliot

From: Landau, Mindy
Sent: Tuesday, March 15, 2011 7:30 AM
To: Brenner, Eliot; Hayden, Elizabeth
Cc: Ellmers, Glenn; Muessle, Mary
Subject: EDO Update and FAQs

Eliot/Beth,

The Chairman will hopefully send a network announcement out to the staff today conveying appreciation for their hard work, etc., and communicate at a high level. Bill will follow with an EDO update that contains more detailed information. Are the FAQs that you prepared for the Chairman in final form? We thought it would be good to link to them (on a SharePoint site, if possible) to prepare the staff to answer questions they might be getting from friends and family. Also, NRR has a number of public meetings coming up and this might support them as well.

Can you send me the FAQs or let me know the status?

Thanks,
Mindy

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

From: Harrington, Holly
To: Ousley, Elizabeth
Subject: RE: Can you tell me if you setup any NRC accounts on Twitter?
Date: Tuesday, March 15, 2011 12:30:00 PM

Just monitoring

From: Ousley, Elizabeth
Sent: Tuesday, March 15, 2011 11:37 AM
To: Harrington, Holly
Subject: Can you tell me if you setup any NRC accounts on Twitter?

Hi Holly,

Were there any NRC accounts setup for sending tweets during the emergency or are you just using it for monitoring for now? Darren asked about this.

Thanks,

Liz

Liz Ousley
Branch Chief, Enterprise Architecture & Standards Branch (EASB)
Business Process Improvement and Applications Division (BPIAD)
301-415-8378

LLL/219

From:	Harrington, Holly
To:	Taylor, Robert
Subject:	FW: drafty draft of Q&A for the public.
Date:	Tuesday, March 15, 2011 1:27:00 PM
Attachments:	FAQ for public on the events in Japan.docx
Importance:	High

This is what undine did for our response to the public. Can you marry with the ones you just send me and return to me?

From: Shoop, Undine
Sent: Tuesday, March 15, 2011 1:04 PM
To: Couret, Ivonne; Harrington, Holly; Akstulewicz, Brenda; Steger (Tucci), Christine
Subject: drafty draft of Q&A for the public.
Importance: High

Undine Shoop
Chief, Health Physics and Human Performance Branch
Division of Inspection and Regional Support
Office of Nuclear Reactor Regulation
301-415-2063

uu/220

Q&As on Radiation Protection in light of recent events in Japan

What is Radiation?

Radiation is

Who is the official agency to report radiation numbers and what is the public contact?

Answer: In the US it is the licensee's responsibility to report public dose information. The NRC publishes the licensee's reports on our public web site. For this incident, the Japanese are responsible for reporting the public dose. NRC regulations require reporting any radiation doses that are detected at the plant that would be harmful to the public irrespective of whether they are generated by the plant or by an external source. Therefore, if the Diablo Canyon or San Onofre offsite monitoring systems were to detect radiation they would report it.

How many plants are located in seismic areas?

Where would I get IOSAT Potassium Iodide if my city should experience fallout from the Japanese nuclear disaster? Walmart is saying they don't carry it. King Supers says they can't get it. Where would I find such a thing? Is this the right precaution or is there anything else that can be done to protect myself?

Since Potassium Iodide is classified as a drug the best source of information is on the Food and Drug Administration's web site. The FAQ on KI is at:
http://www.fda.gov/Drugs/EmergencyPreparedness/BioterrorismandDrugPreparedness/ucm072265.htm#Who really needs

A public information brochure is at:
http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM080542.pdf

What is the definition of a transient?

Transients are usually referred too as the response of the reactor to postulated equipment failures or malfunctions. As part of the application for operating a nuclear power plant, licensees must analyze for these postulated events to demonstrate that the reactor can be safely operated and public health and safety is protected.

Is it safe to fly?

Yes. If events were to evolve into a situation that would result in travel being unsafe, a no fly zone would be established.

talk about security and safety; events in Japan

From: Harrington, Holly
To: Harrington, Holly
Date: Tuesday, March 15, 2011 7:15:00 PM

Check the EPA Web Site

The U.S. Environmental Protection Agency has just posted a statement tonight about RadNet, which continuously monitors the nation's air and regularly monitors drinking water, milk and precipitation for environmental radiation. This data is available through an online searchable database. RadNet air monitoring data can be found at www.epa.gov/cdx.

For the full statement, go here:

Eliot Brenner
Public Affairs Director

3/21

From: Harrington, Holly
To: Brenner, Eliot
Subject: FW: Potential OPA Questions.docx
Date: Tuesday, March 15, 2011 8:20:00 PM
Attachments: Potential OPA Questions.docx

After considerable work but a number of people, including Rob Taylor and Amy Bonocorrso, these have been developed and blessed by the Liaison Team, Protective Measures Team and Reactor Safety Team. In most cases, they mirror the Chairman's Q&A, with some additions. Tomorrow, I'd like to disseminate to the regions and give to folks designated to answer voice mails and e-mails from the public.

All OK with you?

From: Taylor, Robert
Sent: Tuesday, March 15, 2011 8:10 PM
To: Harrington, Holly
Subject: Potential OPA Questions.docx

Holly,

I have incorporated your comments. I think this is ready to go.

Rob

111/222

Questions and Answers for OPA:

1. **Can this happen here?**

   The events that have occurred in Japan are the result of a combination of highly unlikely natural disasters. These include the fifth largest earthquake in recorded history and the resulting devastating tsunami. It is highly unlikely that a similar event could occur in the United States.

2. **I live near a nuclear power plant similar to the ones having trouble in Japan. How can we now be confident that this plant won't experience a similar problem?**

   U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. 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 is confident that the robust design of these plants makes it highly unlikely that a similar event could occur in the United States.

3. **Has this crisis changed your opinion about the safety of U.S. nuclear power plants?**

   No. The NRC remains confident that the design of U.S. nuclear power plants ensures the continued protection of public health and safety and the environment.

4. **With all this happening, how can the NRC continue to approve new nuclear power plants?**

   It is premature to speculate what, if any, effect the events in Japan will have on the licensing of new nuclear power plants.

5. **What is the NRC doing in response to the situation in Japan?**

   The NRC has taken a number of actions:
   a. Since the beginning of the event, the NRC has continuously manned its Operations Center in Rockville, MD in order to gather and examine all available information as part of the effort to analyze the event and understand its implications both for Japan and the United States.
   b. A team of 11 officials from the NRC with expertise in boiling water nuclear reactors have deployed to Japan as part of a U.S. International Agency for International Development (USAID) team.
   c. The NRC has spoken with its counterpart agency in Japan, offering the assistance of U.S. technical experts.

d. The NRC is coordinating its actions with other Federal agencies as part of the U.S. government response.

6. What other U.S. agencies are involved, and what are they doing?

The entire federal family is responding to this event. The NRC is closely coordinating its efforts with the White House, DOE, DOD, USAID, and others. The U.S. government is providing whatever support requested by the Japanese government.

7. What else can go wrong?

The NRC is continuously monitoring the developments at the nuclear power plants in Japan. Circumstances are constantly evolving and it would be inappropriate to speculate on how this situation might develop over the coming days.

8. What is the worst-case scenario?

In a nuclear emergency, the most important action is to ensure the core is covered with water to provide cooling to remove any heat from the fuel rods. Without adequate cooling, the fuel rods will melt. Should the final containment structure fail, radiation from these melting fuel rods would be released to the atmosphere and additional protective measures may be necessary depending on factors such as prevailing wind patterns.

9. The United States has troops in Japan and has sent ships to help the relief effort – are they in danger from the radiation?

The NRC is not the appropriate federal agency to answer this question. DOD is better suited to provide information regarding its personnel.

10. Is there a danger of radiation making it to the United States?

In response to nuclear emergencies, the NRC works with other U.S. agencies to monitor radioactive releases and predict their path. The NRC continues to monitor information regarding wind patterns near the Japanese nuclear power plants. Nevertheless, given the thousands of miles between the two countries, Hawaii, Alaska, the U.S. Territories and the U.S. West Coast are not expected to experience any harmful levels of radioactivity.

11. Is the U.S. government tracking the radiation released from the Japanese plants?

Yes, a number of U.S. agencies are involved in monitoring and assessing radiation including EPA, DOE, and NRC. The best source of additional information is the Environmental Protection Agency.

12. 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.

13. The radiation "plume" seems to be going out to sea – what is the danger of it reaching Alaska? Hawaii? The west coast?

See response to Question 10.

14. I live in the Western United States – should I be taking potassium iodide (KI)?

At this time, the NRC does not believe that protective measures are necessary in the United States. We do not expect any U.S. states or territories to experience harmful levels of radioactivity. In the unlikely event that circumstances change, U.S. residents should listen to the protective action decisions of their states and counties. These protective action decisions could include actions such as sheltering, evacuation, or taking potassium iodide. The NRC will provide technical assistance to the states should they request it.

15. Are there other protective measures I should be taking?

At this time, the NRC does not believe that protective measures are necessary in the United States. We do not expect any U.S. states or territories to experience harmful levels of radioactivity. In the unlikely event that circumstances change, U.S. residents should listen to the protective action decisions of their states and counties. These protective action decisions could include actions such as sheltering, evacuation, or taking potassium iodide. The NRC will provide technical assistance to the states should they request it. United States citizens in Japan are encouraged to follow the protective measures recommended by the Japanese government. These measures appear to be consistent with steps the United States would take.

16. What are the risks to my children?

See response to Question 15.

17. My family has planned a vacation to Hawaii/Alaska/Seattle next week – is it safe to go, or should we cancel our plans?

The NRC does not expect that residents of the United States or its territories are at any risk of exposure to harmful levels of radiation resulting from the events in Japan. Any changes to travel are a personal decision. The NRC is unaware of any travel restrictions within the United States or its territories.

18. What are the short-term and long-term effects of exposure to radiation?

The NRC does not expect that residents of the United States or it territories are at any risk of exposure to harmful levels of radiation resulting from the events in Japan.

On a daily basis, people are exposed to naturally occurring sources of radiation, such as from the sun or medical X-rays. The resulting effects are dependent on the strength and type of radiation as well as the duration of exposure.

19. I am traveling to Asia (not Japan). Should I adjust my travel plans to avoid flying through plume or being contaminated once on the ground?

The NRC is not the responsible federal agency to advise U.S. citizens on foreign travel restrictions. That responsibility belongs to the Department of State.

20. **What is the official agency to report radiation numbers and what is the public contact?**

NRC regulations require nuclear power plants to report any radiation doses detected at the plant that could be harmful to the public. This would include doses that are generated by the plant or by an external source. During an event in the U.S., it is the state's responsibility to provide protective action decisions for public health and safety. For this incident, the Japanese are responsible for reporting the public dose; nevertheless, should radiation doses be detected within the U.S., it would still be the state's responsibility to provide protective action decisions for public health and safety.

21. How many plants are located in seismic areas?

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

22. Where would I get IOSAT Potassium Iodide if my city should experience fallout from the Japanese nuclear disaster? Is this the right precaution or is there anything else that can be done to protect myself?

We do not expect any U.S. states or territories to experience harmful levels of radioactivity. As such, we do not believe that there is any need for residents of the United States to take potassium iodide. U.S. residents should listen to the protective action decisions by their states and counties. If necessary, protective action decisions could include actions such as sheltering, evacuating, or taking potassium iodide.

Additional information regarding the use of potassium iodide can be found on NRC's webpage at the following link:
http://www.nrc.gov/about-nrc/emerg-preparedness/about-emerg-preparedness/potassium-iodide-use.html

Since Potassium Iodide is classified as a drug. Additional information is on the Food and Drug Administration's web site. www.fda.gov

23. My loved one is overseas, how do I find out if they are ok?

We are directing public inquiries with regard to concern for loved ones overseas to the State Department, Consular Services at 202-647-7004.

From: Taylor, Robert
To: Harrington, Holly
Subject: Chairman JaczkoQA8_031511.docx
Date: Tuesday, March 15, 2011 8:20:23 PM
Attachments: Chairman JaczkoQA8_031511.docx

As promised.

LLL/223

Questions and Answers for Chairman Jaczko

March 11, 2011 Japan Earthquake/Tsunami Aftermath
As of XXXX x.m. 3/15/2011

Current Status of Events in Japan

1. **What damage was caused by the earthquake and/or tsunami at each of the Japanese plants?**

On March 31st at approximately 2:46pm local time, a magnitude 8.9 earthquake occurred off the coast of Honshu, Japan. The earthquake knocked out offsite power to the three operating Fukushima Daiichi nuclear power plants (Units 1, 2 and 3). As designed, the nuclear reactors shutdown and on-site emergency diesel generators started up to power emergency safety systems that cool the reactor fuel. Subsequently, at approximately 3:41pm, a tsunami, resulting from the underwater earthquake, struck the site knocking out the emergency diesel generators. After depleting its battery power, the nuclear power plants lost the ability to provide cooling water to the reactor fuel. The best information currently available indicates that fuel damage has occurred Units 1, 2, and 3 but that the primary containment structures have remained intact and only limited releases of radiation have occurred.

2. **What's going to happen following the hydrogen explosions everyone's seen from the video footage?**

The NRC is monitoring the Japanese efforts to stabilize conditions at the affected reactors, and those actions are in line with what would be done in the United States. The NRC continues to monitor information on the status of the reactor core, the reactor vessel and the containment structure – all three areas are important to controlling the situation and protecting the public.

Additional technical information:

The explosions affected the secondary containment buildings for Units 1 and 3 of the reactor plant. The primary containment was unaffected by the explosion. This does expose the spent fuel pools to atmosphere but should not affect the integrity of the spent fuel pool. With the integrity of the Secondary Containment breached it is more essential to maintain Primary Containment intact.

To provide additional protection to Primary Containment, US reactors of the containment type similar to Fukushima Unit 1 installed a hardened vent line from primary containment directly to the vent stack. A hardened vent provides a release path which would prevent an overpressurization of containment as experienced at Fukushima Unit One. Venting from the hardened vent is typically a manual operation that is controlled by the Emergency Operating Procedures as a last resort to protect the containment from failure. This vent path can be directly from the upper containment or from the torus (the preferred vent path due to scrubbing effect of the torus water).

3. **What happens when/if a plant "melts down"?**

In short, nuclear power plants are designed to be safe. To prevent the release of radioactive material, there are multiple barriers between the radioactive material and the environment, including the fuel cladding, the heavy steel reactor vessel itself and the containment building, usually a heavily reinforced structure of concrete and steel several feet thick.

Additional technical information:

The melted core may melt through the bottom of the vessel and flow onto the concrete containment floor. The core may melt through the containment liner and release radioactive material to the environment.

4. What should the American public know about the incident in Japan?

The events unfolding in Japan are the result of a catastrophic series of natural disasters. These include the fifth largest earthquake in recorded history and the resulting devastating tsunami. Despite these unique circumstances, the Japanese appear to have taken reasonable actions to mitigate the event and protect the surrounding population. Since the beginning of the event, the NRC has continuously manned its Operations Center in Rockville, MD in order to gather and examine all available information as part of the effort to analyze the event and understand its implications both for Japan and the United States.

5. What happens next in Japan? How long will it take to assess the damage to the reactors?

The current focus is ensuring that adequate cooling of the reactor fuel at each of the affected Japanese reactors is established and maintained. In the days, weeks, and months that follow, there will be adequate time to assess the damage and determine next steps.

6. Why did the seawater fail to cool the reactor?

Based on information available to the NRC, it appears that the seawater has been effective at providing some cooling for the reactor. While it appears that some fuel damage has occurred, there will be plenty of time once this crisis is resolved to determine the effectiveness of the measures taken in response to this event.

7. If Chernobyl was a 7 and Three Mile Island was a 5, when does this event move from the 4 level?

The International Atomic Energy Agency (IAEA) rates nuclear events in accordance with its International Nuclear and Radiological Event Scale (INES). IAEA has assigned the events in Japan an INES rating of 4, "Accident with Local Consequences." This rating is subject to change as events unfold and additional information becomes available. INES classifies nuclear accidents based on the radiological effects on people and the environment and the status of barriers to the release of radiation. IAEA determinations regarding the INES rating of events are made independently.

Three Mile Island was assigned an INES rating of 5, "Accident with Wider Consequences," due to the severe damage to the reactor core.

8. What is the worst case scenario for the plant?

In a nuclear emergency, the most important action is to ensure the core is covered with water to provide cooling to remove any heat from the fuel rods. Without adequate cooling, the fuel rods will melt. Should the final containment structure fail, radiation from these melting fuel rods would be released to the atmosphere and additional protective measures may be necessary, depending on factors such as prevailing wind patterns.

9. As time goes on, does the chance for a meltdown increase?

Not necessarily. Each passing hour the fuel rods will become cooler. If adequate cooling can be established and maintained, the risk of a meltdown will be mitigated.

NRC Support/Response to the Events in Japan

10. What is the NRC doing about the emergencies at the nuclear power plants in Japan? Are you sending staff over there?

We are closely following events in Japan, working with other agencies of the federal government, and have been in direct contact with our counterparts in that country. We have sent a total of 11 staff to Tokyo

in response to the Japanese government's request for assistance. Two of those NRC staff members, knowledgeable about boiling water reactors, are already in Japan participating in the USAID team.

Additional technical information:

We are taking the knowledge that the staff has about the design of the US nuclear plants and we are applying this knowledge to the Japan situation. For example, this includes calculations of severe accident mitigation that have been performed. Tony Ulses and Jim Trapp are in-country. Team led by Chuck Casto enroute from various locations.

11. What resources are the Japanese asking for?

The Japanese have formally requested equipment needed to cool the reactor fuel. This includes such things as pumps, fire hoses, portable generators, and diesel fuel. The NRC is coordinating with General Electric, which has plant design specifications, to ensure any equipment provided will be capable of meeting the needs of the Japanese.

12. Are we providing additional KI to the Japanese?

The Japanese government has requested KI from the United States. The NRC is working with our federal partners to support any requests of assistance.

Similarities/Impact on U.S. Nuclear Power Plants

13. Can this happen here, i.e. an earthquake that significantly damages a nuclear power plant? Are the Japanese plants similar to U.S. plants?

All U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. Even those plants that are located in areas with low and moderate seismic activity are designed for safety in the event of such a natural disaster. The NRC requires that safety-significant structures, systems, and components be designed to take into account even very rare and extreme seismic and tsunami events.

The Japanese facilities are similar in design to several US facilities.

Additional technical information:

Currently, operating reactors were designed using a "deterministic" or "maximum credible earthquake" approach. Seismic hazard for the new plants is determined using a much more robust probabilistic seismic hazard assessment approach that explicitly addresses uncertainty and very rare events, as described in RG1.208. The NRC requires that adequate margin beyond the design basis ground shaking levels is assured. The NRC further enhances seismic safety for beyond-design-basis events through the use of a defense-in-depth approach.

In addition, the NRC periodically reviews the seismic risk at operating reactors when information may have changed. Over the last few years the NRC has undertaken a program called Generic Issue 199, which is focused on assessing hazard for plants in the central and eastern US using the latest techniques (developed in part during reviews of Western U.S. plants) and determining the possible risk implications of any increase in the anticipated ground shaking levels. This program will help us assure that the plants are safe under exceptionally rare and extreme ground motions that represent beyond-design-basis events.

14. What would U.S. plants do in this situation?

The NRC requires plant designs to include multiple and diverse safety systems, and plants must test their emergency preparedness capabilities on a regular basis. Plant operators are very capable of responding to significant events. In addition, NRC regulations require plants to have plans in place that would allow them to mitigate even "worst case scenarios".

Since 9/11, we have implemented requirements for licensees to have additional response capabilities for extreme situations.

Additional technical information:

U.S. nuclear plants have procedures in place to address a variety of accident scenarios, including abnormal operating procedures, emergency operating procedures, severe accident management guidelines and emergency plans. Additionally, the NRC activates Incident Response centers in Headquarters and individual Regions as necessary for the event to provide technical monitoring and support.

The NRC is capable of providing access to many external agencies (i.e., FEMA, Homeland Security, Military, etc.) to provide any additional help that individual plant sites may need. Additionally, the NRC has access to real-time plant information through the ERDS System for each site in the US and can monitor the status anytime.

15. Are U.S. power plants designed to withstand tsunamis?

Yes. Plants are built to withstand a variety of environmental hazards. Those plants that might face a threat from tsunami are required to withstand large waves and the maximum and minimum wave heights at the intake structure (which varies by plant.)

Additional technical information:

Tsunami have been considered in the design of US nuclear plants since the publication of Regulatory Guide 1.59 in 1977, although the approaches that were used for design of the existing plants varied significantly. Nuclear plants are designed to withstand flooding from not only tsunami, but also hurricane and storm surge; therefore there is often significant margin against tsunami flooding. However, it should be noted that Japanese experience has shown that drawdown can be a significant problem. Drawdown was not generally analyzed in the past.

Currently the US NRC has a tsunami research program that is focused on developing modern hazard assessment techniques and additional guidance through cooperation with the National Oceanic and Atmospheric Administration and the United States Geological Survey. This has already lead to several technical reports and an update to NUREG 0-800. The NOAA and USGS contractors are also assisting with NRO reviews of tsunami hazard. A new regulatory guide on tsunami hazard assessment is currently planned in the office of research, although it is not expected to be available in draft form until 2012.

16. Was there any damage to U.S. reactors from either the earthquake or the resulting tsunami?

No.

Additional technical information:

Diablo Canyon Units 1 and 2 were the only US plants to declare any type of an emergency classification. The site entered an "unusual event" based on a tsunami warning from the State, NOAA, NWS, Coast Guard or System Dispatcher following the Japanese earthquake. They have since exited the "unusual event" declaration, based on a downgrade to a tsunami advisory.

17. What magnitude earthquake are US plants designed to?

Each plant is designed to a ground-shaking level that is appropriate for its location, given the possible earthquake sources that may affect the site and its tectonic environment. Ground shaking is a function of both the magnitude of the earthquake and the distance from the fault plane to the site. The probabilistic approaches currently used by the NRC account for a large number of different magnitudes.

Additional technical information:

In the past, "deterministic" or "scenario based" analyses were used to determine ground shaking (seismic hazard) levels. Now a probabilistic method is used that accounts for all possible earthquakes coming from all possible sources (including background seismicity) and the likelihood that each particular hypothetical earthquake occurs.

18. How many US reactors are located in active earthquake zones (and which reactors)?

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

19. How many reactors are along coastal areas that could be affected by a tsunami (and which ones)?

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

20. How many U.S. plants have designs similar to the affected Japanese reactors (and which ones)?

Thirty-five of the 104 operating nuclear power plants in the U.S. are boiling water reactors (BWRs), as are the reactors at Fukushima. Twenty-three of the U.S. BWRs have the same Mark I containment as the Fukushima reactors.

Four of the U.S. BWRs are early designs which are similar to Fukushima Unit 1.

Nineteen U.S. BWRs are similar to Fukushima Unit 3.

Additional technical information:

Fukushima Unit 1 is a BWR-3 with a Mark 1 containment similar to Oyster Creek, Nine Mile Point Unit 1, and Dresden Units 2 and 3.

Fukushima Unit 3 is a BWR-4 with a Mark 1 containment and a Reactor Core Isolation Cooling (RCIC) system. The remaining 31 U.S. BWRs use a Reactor Core Isolation Cooling (RCIC) system instead of an isolation condenser. Nineteen of those 31 reactors have a Mark 1 containment, while the remainder are more recent designs.

21. What could you say about the dangers to the American public from our nuclear plants?

As the events in Japan continue to unfold, the NRC is focused on supporting the Japanese government and people in bringing this crisis to closure in the safest manner possible. The NRC remains convinced that U.S. nuclear power plants are designed and operated in a manner that protects public health and safety. The time will come, after this crisis is behind us, to evaluate what, if any, changes are needed at U.S. nuclear power plants. We will assess all the available information and, as we have done with previous natural disasters, such as the 2007 earthquake in the Sea of Japan and the 2004 tsunami in the Indian Ocean, evaluate whether enhancements to U.S. nuclear power plants are warranted.

22. Compare this incident to the Three Mile Island. What are the similarities?

The events at Three Mile Island in 1979 were the result of an equipment malfunction that resulted in the loss of cooling water to the reactor fuel. Subsequent operator actions compounded the malfunction ultimately resulting in the partial core meltdown. While details are still developing, the events in Japan appear to be the result of an earthquake and subsequent tsunami that knocked out electrical power to emergency safety systems designed to cool the reactor fuel. In both events the final safety barrier, the containment building, contained the majority of the radioactivity preventing its release to the environment.

23. Is our battery backup power less effective than the Japanese?

We currently do not have sufficient information to compare the differences in design requirements and performance characteristics of nuclear-grade batteries in the U.S. and Japanese nuclear power plants. However, in the U.S., nuclear power plants utilize redundant nuclear-grade (i.e., Class 1E, safety-related) batteries that are designed and constructed using rigorous standards and are routinely tested in accordance to ensure adequate capacity and capability exists to perform their intended safety functions. These batteries are located in structures that can withstand natural phenomena such as earthquakes, tornadoes, tsunami, and floods in accordance with NRC regulations. For U.S. nuclear power plants, the typical design duty cycles for safety grade batteries range from 1-8 hrs.

24. What are US plants required to have for backup power? More than what the Japanese reactors did?

The NRC requires U.S. nuclear power plants need to have 2 independent power supplies. All US (except Oconee) plants have diesels and battery backup systems. Most of the U.S. plants with diesels have two diesels per unit and those that have only one dedicated diesel have a swing diesel available. The regulations do not specify the length of time that you need to have the diesels and batteries operate following a loss of offsite power (most sites plan to run the diesels for multiple days and have battery backup capability for 8 hours). Instead the amount of time is dependent on the site recovery strategy and is based on providing sufficient capacity to assure that the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

[[[Japanese regulations to follow from OIP.]]]

25. Some in the media and in Hill briefings are suggesting that Mark 1 containment is flawed. What are the concerns about this type of containment? Are the US plants with this safe?

The NRC considers BWRs with Mark I containment designs to be safe. BWR Mark I containments have smaller volumes than PWR containments. This makes the BWR Mark I containment more susceptible to containment failure given a core meltdown severe enough to (1) fail the reactor vessel and also (2) severe enough so that the core melt reaches the containment boundary. However, BWRs have more ways of adding water to the core than PWRs. This includes 2 water injection sources which do not rely on AC electric power. These systems include Reactor Core Isolation Cooling (RCIC) and High pressure coolant injection (HPCI).

26. Any quick-hit info about how the Southeast Reactors performed during Katrina? What damage did the flood water do? Any power loss?

The reactors performed as designed.

Additional technical information:

Waterford 3 (near New Orleans, LA) did not have damage to any safety equipment during, or shortly after Katrina. They shut down on August 28, 2005, in advance of the hurricane strike. The flooding did affect local infrastructure, including communications and power distribution. However, the plant successfully used their emergency diesel generators to furnish plant power. Access was maintained to the plant throughout the event. On September 9, 2005, after a comprehensive review by FEMA and the NRC, the plant was authorized to restart.

River Bend Station (30 miles north of Baton Rouge, LA) did not experience damage to any safety relate equipment and only minimal damage to emergency planning equipment (one siren) during and after Hurricane Katrina. The station reduced power to 70 percent core thermal power on August 28, 2005, due to reduced electrical grid loads. Access was maintained to the plant throughout the event. On September 2, 2005, the plant returned to 100% power.

Also, in 1992 the eye of Hurricane Andrew, a category 5 hurricane, passed directly over the Turkey Point nuclear plant. The plant was shut down prior to the hurricane making landfall and an assessment of the plant following the hurricane demonstrated that the plant sustained very little damage and all of the safety equipment was intact. (Most of the damage was too the security fences being blown down).

Protecting U.S. Citizens

27. What should be done to protect people in Alaska, Hawaii and the West Coast from radioactive fallout?

The NRC continues to believe that the type and design of the Japanese reactors, combined with how events have unfolded, will prevent radiation at harmful levels from reaching U.S. territory.

Additional technical information:

NRC is working with DHS, EPA and other federal partners to ensure monitoring equipment for confirmatory readings is properly positioned, based on meteorological and other relevant information.

28. Why is KI administered during nuclear emergencies?

KI – potassium iodide – is one of the protective measures that might be taken in a radiological emergency in this country. A KI tablet will saturate the thyroid with non-radioactive iodine and prevent the absorption of radioactive iodine that could be part of the radioactive material mix of radionuclides in a release. KI does not prevent exposure from other radionuclides.

Additional technical information:

There are a range of protective measures that we use ... the most effective is evacuation. Local government officials are responsible for determining the best means to protect their public. KI is another means for protection but evacuation and sheltering are the primary means that are used.

29. Are any Americans in danger – armed forces, citizens in Tokyo?

The NRC, in consultation with the White House and U.S. Embassy, has advised United States citizens in Japan to follow the protective measures recommended by the Japanese government. These measures appear to be consistent with steps the United States would take. The Department of Defense has

personnel trained in radiation protective measures and is responsible for providing guidance to U.S. armed forces. Inquiries regarding U.S. citizens in Japan should be directed to the State Department, Consular Services at 202-647-7004.

30. 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.

31. It has been reported that the Japanese have expanded their protective actions out to 30km (~19 miles). Does the Japanese decision to expand their protective actions call into question NRC requirements for Emergency Planning Zones out to 10 miles?

The NRC remains confident that the EPZs around U.S. nuclear reactor plants are adequate to protect public health and safety during a nuclear accident. Nevertheless, the NRC will certainly be looking closely at this incident and the effects on the Japanese nuclear power plant in the future to see if any changes are necessary to NRC regulations.

Future NRC Actions/Evaluations

32. Has this incident changed the NRC perception about earthquake risk?

There has been no change in the NRC's perception of earthquake hazard (i.e. ground shaking levels) for U.S. nuclear power plants. As is prudent, the NRC will certainly be looking closely at this incident and the effects on the Japanese nuclear power plant in the future to see if any changes are necessary to NRC regulations.

Additional technical information:

We expect that there would be lessons learned, etc. It appears that the sites did not have any critical damage due to the earthquake from the fact that the emergency diesel generators initially responded to provide power to the site. The tsunami and consequential site flooding was responsible for the complete loss of power to the site, including the diesel generators which resulted in a Station Blackout.

33. Will this incident affect new reactor licensing?

It is not appropriate to hypothesize on such a future scenario at this point.

Additional technical information:

This event could potentially call into question the NRC's seismic requirements which could require the staff to re-evaluate the staff's approval of the AP1000 and ESBWR design and certifications.

34. How will the events in Japan impact ongoing NRC licensing actions such as power uprates and license renewals and NRC inspections at operating reactors?

The NRC remains committed to its mission to protect public health and safety. The NRC staff is dedicated to that mission and applies a strong safety and security focus to each of our licensing action reviews. The time will come, after this crisis is behind us, to evaluate what, if any, changes are needed. We will assess all the available information from this event and, as we have done with previous natural disasters, such as the 2007 earthquake in the Sea of Japan and the 2004 tsunami in the Indian Ocean,

evaluate whether enhancements to our licensing processes or U.S. nuclear power plants are warranted. In the meantime, we will continue to implement our rigorous inspection and oversight activities at operating U.S. nuclear power plants. It would be premature to speculate about any potential changes to our inspection, licensing or oversight activities.

35. With NRC moving to design certification, at what point is seismic capability tested – during design or modified to be site-specific? If in design, what strength seismic event must these be built to withstand?

The regulations related to seismic requirements are contained in 10 CFR 50 Appendix A criterion 2.

During design certification, vendors propose a seismic design in terms of a ground motion spectrum for their nuclear facility. This spectrum is called a standard design response spectrum and is developed so that the proposed nuclear facility can be sited at most locations in the central and eastern United States. The vendors show that this design ground motion is suitable for a variety of different subsurface conditions such as hard rock, deep soil, or shallow soil over rock. Combined License and Early Site Permits applicants are required to develop a site specific ground motion response spectrum that takes into account all of the earthquakes in the region surrounding their site as well as the local site geologic conditions. Applicants estimate the ground motion from these postulated earthquakes to develop seismic hazard curves. These seismic hazard curves are then used to determine a site specific ground motion response spectrum that has a maximum annual likelihood of $1x10^{-4}$ of being exceeded. This can be thought of as a ground motion with a 10,000 year return period. This site specific ground motion response spectrum is then compared to the standard design response spectrum for the proposed design. If the standard design ground motion spectrum envelopes the site specific ground motion spectrum then the site is considered to be suitable for the proposed design. If the standard design spectrum does not completely envelope the site specific ground motion spectrum, then the COL applicant must do further detailed structural analysis to show that the design capacity is adequate. Margin beyond the standard design and site specific ground motions must also be demonstrated before fuel loading can begin.

From: McIntyre, David
To: Harrington, Holly
Subject: FAQ Can It Happen Here.docx
Date: Tuesday, March 15, 2011 10:16:00 PM
Attachments: FAQ Can It Happen Here.docx

LLL/324

Frequently Asked Questions About the Japan Nuclear Crisis:

"Can It Happen Here?"

1. **Can the Japanese nuclear crisis happen here in the United States?**

   The events that have occurred in Japan are the result of a combination of highly unlikely natural disasters. These include the fifth largest earthquake in recorded history and the resulting devastating tsunami. It is highly unlikely that a similar event could occur in the United States.

2. **I live near a nuclear power plant similar to the ones having trouble in Japan. How can we now be confident that this plant won't experience a similar problem?**

   U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. 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 is confident that the robust design of these plants makes it highly unlikely that a similar event could occur in the United States.

3. **Has this crisis changed your opinion about the safety of U.S. nuclear power plants?**

   No. The NRC remains confident that the design of U.S. nuclear power plants ensures the continued protection of public health and safety and the environment.

4. **With all this happening, how can the NRC continue to approve new nuclear power plants?**

   It is premature to speculate what, if any, effect the events in Japan will have on the licensing of new nuclear power plants.

5. **What is the NRC doing in response to the situation in Japan?**

   The NRC has taken a number of actions:

   a. Since the beginning of the event, the NRC has continuously manned its Operations Center in Rockville, MD in order to gather and examine all available information as part of the effort to analyze the event and understand its implications both for Japan and the United States.

b. A team of 11 officials from the NRC with expertise in boiling water nuclear reactors have deployed to Japan as part of a U.S. International Agency for International Development (USAID) team.
c. The NRC has spoken with its counterpart agency in Japan, offering the assistance of U.S. technical experts.
d. The NRC is coordinating its actions with other Federal agencies as part of the U.S. government response.

6. What other U.S. agencies are involved, and what are they doing?

The entire federal family is responding to this event. The NRC is closely coordinating its efforts with the White House, DOE, DOD, USAID, and others. The U.S. government is providing whatever support requested by the Japanese government.

7. What else can go wrong?

The NRC is continuously monitoring the developments at the nuclear power plants in Japan. Circumstances are constantly evolving and it would be inappropriate to speculate on how this situation might develop over the coming days.

8. What is the worst-case scenario?

In a nuclear emergency, the most important action is to ensure the core is covered with water to provide cooling to remove any heat from the fuel rods. Without adequate cooling, the fuel rods will melt. Should the final containment structure fail, radiation from these melting fuel rods would be released to the atmosphere and additional protective measures may be necessary depending on factors such as prevailing wind patterns.

9. The United States has troops in Japan and has sent ships to help the relief effort – are they in danger from the radiation?

The Department of Defense is the appropriate agency to provide information regarding its personnel.

From:	McIntyre, David
To:	Harrington, Holly; Brenner, Eliot; Uselding, Lara; Hannah, Roger; Mitlyng, Viktoria; Chandrathil, Prema; Burnell, Scott; Screnci, Diane; Sheehan, Neil
Subject:	EPA Statement
Date:	Tuesday, March 15, 2011 9:19:32 PM

The EPA statement is on the web at this address: http://www.epa.gov/radiation/statement.html . It's kinda buried on the rad page, but my contact there assures me they will put something on their home page tomorrow.

Dave

LLL/225

From:	Harrington, Holly
To:	Coggins, Angela; Taylor, Robert
Cc:	McIntyre, David; Schmidt, Rebecca; Powell, Amy
Subject:	RE: Japanese-Rx-Incident addtl questions - March-14-2011 doc.docx
Date:	Tuesday, March 15, 2011 9:51:00 PM
Attachments:	Chairman JaczkoQA8_031511.docx

Angela, Amy, Becki – These are fully approved by relevant folks in the Op Center. For your use. I have not added to WebEOC yet as it's not clear these should also be used by others . . .

From: Coggins, Angela
Sent: Tuesday, March 15, 2011 8:36 PM
To: Taylor, Robert
Cc: Harrington, Holly; McIntyre, David; Schmidt, Rebecca; Powell, Amy
Subject: Re: Japanese-Rx-Incident addtl questions - March-14-2011 doc.docx

Thanks so much!! I appreciate all the effort!
Angela Coggins
Policy Director
Office of Chairman Gregory B Jaczko
US Nuclear Regulatory Commission
angela.coggins@nrc.gov/301-415-1828

From: Taylor, Robert
To: Coggins, Angela
Cc: Harrington, Holly; McIntyre, David; Schmidt, Rebecca; Powell, Amy
Sent: Tue Mar 15 20:29:17 2011
Subject: Japanese-Rx-Incident addtl questions - March-14-2011 doc.docx

Angela,

We have done our best to incorporate your questions into the Chairman's Q&As that were developed earlier today and provided to OCA. The updated set of Q&As is undergoing ET review and we will hopefully have it to you in the near future. The attached provides a roadmap of where we believe the responses can be found. A few questions fell into the broader "After this event is over, we will determine what changes need to be made in the US" message. I did not directly incorporate them, but you can see a draft response in the attached.

Regarding the third question about past events, I did not try to evaluate all of the events you listed. I would propose sticking to the party line, in that, "The NRC routinely reassess its regulatory requirements in light of new operating experience and plant events."

Regards,
Rob

LLL/326

From: Harrington, Holly
To: Brenner, Eliot
Subject: chairman Q&As
Date: Tuesday, March 15, 2011 9:49:00 PM
Attachments: Chairman JaczkoQA8_031511.docx

These are updated Q&As. They have been vetted and approved internally. They include Qs requested by Jaczko's office. I'm not quite sure where they go, to be honest. For now I am not posting them in WEBEOC.

Questions and Answers for Chairman Jaczko

Japan Earthquake/Tsunami Aftermath
As of 10 p.m. 3/15/2011

Current Status of Events in Japan

1. **What damage was caused by the earthquake and/or tsunami at each of the Japanese plants?**

On March 31st at approximately 2:46pm local time, a magnitude 8.9 earthquake occurred off the coast of Honshu, Japan. The earthquake knocked out offsite power to the three operating Fukushima Daiichi nuclear power plants (Units 1, 2 and 3). As designed, the nuclear reactors shutdown and on-site emergency diesel generators started up to power emergency safety systems that cool the reactor fuel. Subsequently, at approximately 3:41pm, a tsunami, resulting from the underwater earthquake, struck the site knocking out the emergency diesel generators. After depleting its battery power, the nuclear power plants lost the ability to provide cooling water to the reactor fuel. The best information currently available indicates that fuel damage has occurred Units 1, 2, and 3 but that the primary containment structures have remained intact and only limited releases of radiation have occurred.

2. **What's going to happen following the hydrogen explosions everyone's seen from the video footage?**

The NRC is monitoring the Japanese efforts to stabilize conditions at the affected reactors, and those actions are in line with what would be done in the United States. The NRC continues to monitor information on the status of the reactor core, the reactor vessel and the containment structure – all three areas are important to controlling the situation and protecting the public.

Additional technical information:

The explosions affected the secondary containment buildings for Units 1 and 3 of the reactor plant. The primary containment was unaffected by the explosion. This does expose the spent fuel pools to atmosphere but should not affect the integrity of the spent fuel pool. With the integrity of the Secondary Containment breached it is more essential to maintain Primary Containment intact.

To provide additional protection to Primary Containment, US reactors of the containment type similar to Fukushima Unit 1 installed a hardened vent line from primary containment directly to the vent stack. A hardened vent provides a release path which would prevent an overpressurization of containment as experienced at Fukushima Unit One. Venting from the hardened vent is typically a manual operation that is controlled by the Emergency Operating Procedures as a last resort to protect the containment from failure. This vent path can be directly from the upper containment or from the torus (the preferred vent path due to scrubbing effect of the torus water).

3. **What happens when/if a plant "melts down"?**

In short, nuclear power plants are designed to be safe. To prevent the release of radioactive material, there are multiple barriers between the radioactive material and the environment, including the fuel cladding, the heavy steel reactor vessel itself and the containment building, usually a heavily reinforced structure of concrete and steel several feet thick.

Additional technical information:

The melted core may melt through the bottom of the vessel and flow onto the concrete containment floor. The core may melt through the containment liner and release radioactive material to the environment.

4. What should the American public know about the incident in Japan?

The events unfolding in Japan are the result of a catastrophic series of natural disasters. These include the fifth largest earthquake in recorded history and the resulting devastating tsunami. Despite these unique circumstances, the Japanese appear to have taken reasonable actions to mitigate the event and protect the surrounding population. Since the beginning of the event, the NRC has continuously manned its Operations Center in Rockville, MD in order to gather and examine all available information as part of the effort to analyze the event and understand its implications both for Japan and the United States.

5. What happens next in Japan? How long will it take to assess the damage to the reactors?

The current focus is ensuring that adequate cooling of the reactor fuel at each of the affected Japanese reactors is established and maintained. In the days, weeks, and months that follow, there will be adequate time to assess the damage and determine next steps.

6. Why did the seawater fail to cool the reactor?

Based on information available to the NRC, it appears that the seawater has been effective at providing some cooling for the reactor. While it appears that some fuel damage has occurred, there will be plenty of time once this crisis is resolved to determine the effectiveness of the measures taken in response to this event.

7. If Chernobyl was a 7 and Three Mile Island was a 5, when does this event move from the 4 level?

The International Atomic Energy Agency (IAEA) rates nuclear events in accordance with its International Nuclear and Radiological Event Scale (INES). IAEA has assigned the events in Japan an INES rating of 4, "Accident with Local Consequences." This rating is subject to change as events unfold and additional information becomes available. INES classifies nuclear accidents based on the radiological effects on people and the environment and the status of barriers to the release of radiation. IAEA determinations regarding the INES rating of events are made independently.

Three Mile Island was assigned an INES rating of 5, "Accident with Wider Consequences," due to the severe damage to the reactor core.

8. What is the worst case scenario for the plant?

In a nuclear emergency, the most important action is to ensure the core is covered with water to provide cooling to remove any heat from the fuel rods. Without adequate cooling, the fuel rods will melt. Should the final containment structure fail, radiation from these melting fuel rods would be released to the atmosphere and additional protective measures may be necessary, depending on factors such as prevailing wind patterns.

9. As time goes on, does the chance for a meltdown increase?

Not necessarily. Each passing hour the fuel rods will become cooler. If adequate cooling can be established and maintained, the risk of a meltdown will be mitigated.

NRC Support/Response to the Events in Japan

10. What is the NRC doing about the emergencies at the nuclear power plants in Japan? Are you sending staff over there?

We are closely following events in Japan, working with other agencies of the federal government, and have been in direct contact with our counterparts in that country. We have sent a total of 11 staff to Tokyo

in response to the Japanese government's request for assistance. Two of those NRC staff members, knowledgeable about boiling water reactors, are already in Japan participating in the USAID team.

Additional technical information:

We are taking the knowledge that the staff has about the design of the US nuclear plants and we are applying this knowledge to the Japan situation. For example, this includes calculations of severe accident mitigation that have been performed. Tony Ulses and Jim Trapp are in-country. Team led by Chuck Casto is enroute from various locations.

11. What resources are the Japanese asking for?

The Japanese have formally requested equipment needed to cool the reactor fuel. This includes such things as pumps, fire hoses, portable generators, and diesel fuel. The NRC is coordinating with General Electric, which has plant design specifications, to ensure any equipment provided will be capable of meeting the needs of the Japanese.

12. Are we providing additional KI to the Japanese?

The Japanese government has requested KI from the United States. The NRC is working with our federal partners to support any requests of assistance.

Similarities/Impact on U.S. Nuclear Power Plants

13. Can this happen here, i.e. an earthquake that significantly damages a nuclear power plant? Are the Japanese plants similar to U.S. plants?

All U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. Even those plants that are located in areas with low and moderate seismic activity are designed for safety in the event of such a natural disaster. The NRC requires that safety-significant structures, systems, and components be designed to take into account even very rare and extreme seismic and tsunami events.

The Japanese facilities are similar in design to several US facilities.

Additional technical information:

Currently, operating reactors were designed using a "deterministic" or "maximum credible earthquake" approach. Seismic hazard for the new plants is determined using a much more robust probabilistic seismic hazard assessment approach that explicitly addresses uncertainty and very rare events, as described in RG1.208. The NRC requires that adequate margin beyond the design basis ground shaking levels is assured. The NRC further enhances seismic safety for beyond-design-basis events through the use of a defense-in-depth approach.

In addition, the NRC periodically reviews the seismic risk at operating reactors when information may have changed. Over the last few years the NRC has undertaken a program called Generic Issue 199, which is focused on assessing hazard for plants in the central and eastern US using the latest techniques (developed in part during reviews of Western U.S. plants) and determining the possible risk implications of any increase in the anticipated ground shaking levels. This program will help us assure that the plants are safe under exceptionally rare and extreme ground motions that represent beyond-design-basis events.

14. What would U.S. plants do in this situation?

The NRC requires plant designs to include multiple and diverse safety systems, and plants must test their emergency preparedness capabilities on a regular basis. Plant operators are very capable of responding to significant events. In addition, NRC regulations require plants to have plans in place that would allow them to mitigate even "worst case scenarios".

Since 9/11, we have implemented requirements for licensees to have additional response capabilities for extreme situations.

Additional technical information:

U.S. nuclear plants have procedures in place to address a variety of accident scenarios, including abnormal operating procedures, emergency operating procedures, severe accident management guidelines and emergency plans. Additionally, the NRC activates Incident Response centers in Headquarters and individual Regions as necessary for the event to provide technical monitoring and support.

The NRC is capable of providing access to many external agencies (i.e., FEMA, Homeland Security, Military, etc.) to provide any additional help that individual plant sites may need. Additionally, the NRC has access to real-time plant information through the ERDS System for each site in the US and can monitor the status anytime.

15. Are U.S. power plants designed to withstand tsunamis?

Yes. Plants are built to withstand a variety of environmental hazards. Those plants that might face a threat from tsunami are required to withstand large waves and the maximum and minimum wave heights at the intake structure (which varies by plant.)

Additional technical information:

Tsunami have been considered in the design of US nuclear plants since the publication of Regulatory Guide 1.59 in 1977, although the approaches that were used for design of the existing plants varied significantly. Nuclear plants are designed to withstand flooding from not only tsunami, but also hurricane and storm surge; therefore there is often significant margin against tsunami flooding. However, it should be noted that Japanese experience has shown that drawdown can be a significant problem. Drawdown was not generally analyzed in the past.

Currently the US NRC has a tsunami research program that is focused on developing modern hazard assessment techniques and additional guidance through cooperation with the National Oceanic and Atmospheric Administration and the United States Geological Survey. This has already lead to several technical reports and an update to NUREG 0-800. The NOAA and USGS contractors are also assisting with NRO reviews of tsunami hazard. A new regulatory guide on tsunami hazard assessment is currently planned in the office of research, although it is not expected to be available in draft form until 2012.

16. Was there any damage to U.S. reactors from either the earthquake or the resulting tsunami?

No.

Additional technical information:

Diablo Canyon Units 1 and 2 were the only US plants to declare any type of an emergency classification. The site entered an "unusual event" based on a tsunami warning from the State, NOAA, NWS, Coast

Guard or System Dispatcher following the Japanese earthquake. They have since exited the "unusual event" declaration, based on a downgrade to a tsunami advisory.

17. What magnitude earthquake are US plants designed to?

Each plant is designed to a ground-shaking level that is appropriate for its location, given the possible earthquake sources that may affect the site and its tectonic environment. Ground shaking is a function of both the magnitude of the earthquake and the distance from the fault plane to the site. The probabilistic approaches currently used by the NRC account for a large number of different magnitudes.

Additional technical information:

In the past, "deterministic" or "scenario based" analyses were used to determine ground shaking (seismic hazard) levels. Now a probabilistic method is used that accounts for all possible earthquakes coming from all possible sources (including background seismicity) and the likelihood that each particular hypothetical earthquake occurs.

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19. How many reactors are along coastal areas that could be affected by a tsunami (and which ones)?

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

20. How many U.S. plants have designs similar to the affected Japanese reactors (and which ones)?

Thirty-five of the 104 operating nuclear power plants in the U.S. are boiling water reactors (BWRs), as are the reactors at Fukushima. Twenty-three of the U.S. BWRs have the same Mark I containment as the Fukushima reactors.

Four of the U.S. BWRs are early designs which are similar to Fukushima Unit 1.

Nineteen U.S. BWRs are similar to Fukushima Unit 3.

Additional technical information:

Fukushima Unit 1 is a BWR-3 with a Mark 1 containment similar to Oyster Creek, Nine Mile Point Unit 1, and Dresden Units 2 and 3.

Fukushima Unit 3 is a BWR-4 with a Mark 1 containment and a Reactor Core Isolation Cooling (RCIC) system. The remaining 31 U.S. BWRs use a Reactor Core Isolation Cooling (RCIC) system instead of an isolation condenser. Nineteen of those 31 reactors have a Mark 1 containment, while the remainder are more recent designs.

21. What could you say about the dangers to the American public from our nuclear plants?

As the events in Japan continue to unfold, the NRC is focused on supporting the Japanese government and people in bringing this crisis to closure in the safest manner possible. The NRC remains convinced that U.S. nuclear power plants are designed and operated in a manner that protects public health and safety. The time will come, after this crisis is behind us, to evaluate what, if any, changes are needed at U.S. nuclear power plants. We will assess all the available information and, as we have done with previous natural disasters, such as the 2007 earthquake in the Sea of Japan and the 2004 tsunami in the Indian Ocean, evaluate whether enhancements to U.S. nuclear power plants are warranted.

22. Compare this incident to the Three Mile Island. What are the similarities?

The events at Three Mile Island in 1979 were the result of an equipment malfunction that resulted in the loss of cooling water to the reactor fuel. Subsequent operator actions compounded the malfunction ultimately resulting in the partial core meltdown. While details are still developing, the events in Japan appear to be the result of an earthquake and subsequent tsunami that knocked out electrical power to emergency safety systems designed to cool the reactor fuel. In both events the final safety barrier, the containment building, contained the majority of the radioactivity preventing its release to the environment.

23. Is our battery backup power less effective than the Japanese?

We currently do not have sufficient information to compare the differences in design requirements and performance characteristics of nuclear-grade batteries in the U.S. and Japanese nuclear power plants. However, in the U.S., nuclear power plants utilize redundant nuclear-grade (i.e., Class 1E, safety-related) batteries that are designed and constructed using rigorous standards and are routinely tested in accordance to ensure adequate capacity and capability exists to perform their intended safety functions. These batteries are located in structures that can withstand natural phenomena such as earthquakes, tornadoes, tsunami, and floods in accordance with NRC regulations. For U.S. nuclear power plants, the typical design duty cycles for safety grade batteries range from 1-8 hrs.

24. What are US plants required to have for backup power? More than what the Japanese reactors did?

The NRC requires U.S. nuclear power plants need to have 2 independent power supplies. All US (except Oconee) plants have diesels and battery backup systems. Most of the U.S. plants with diesels have two diesels per unit and those that have only one dedicated diesel have a swing diesel available. The regulations do not specify the length of time that you need to have the diesels and batteries operate following a loss of offsite power (most sites plan to run the diesels for multiple days and have battery backup capability for 8 hours). Instead the amount of time is dependent on the site recovery strategy and is based on providing sufficient capacity to assure that the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

25. Some in the media and in Hill briefings are suggesting that Mark 1 containment is flawed. What are the concerns about this type of containment? Are the US plants with this safe?

The NRC considers BWRs with Mark I containment designs to be safe. BWR Mark I containments have smaller volumes than PWR containments. This makes the BWR Mark I containment more susceptible to containment failure given a core meltdown severe enough to (1) fail the reactor vessel and also (2) severe enough so that the core melt reaches the containment boundary. However, BWRs have more

ways of adding water to the core than PWRs. This includes 2 water injection sources which do not rely on AC electric power. These systems include Reactor Core Isolation Cooling (RCIC) and High pressure coolant injection (HPCI).

26. Any quick-hit info about how the Southeast Reactors performed during Katrina? What damage did the flood water do? Any power loss?

The reactors performed as designed.

Additional technical information:

Waterford 3 (near New Orleans, LA) did not have damage to any safety equipment during, or shortly after Katrina. They shut down on August 28, 2005, in advance of the hurricane strike. The flooding did affect local infrastructure, including communications and power distribution. However, the plant successfully used their emergency diesel generators to furnish plant power. Access was maintained to the plant throughout the event. On September 9, 2005, after a comprehensive review by FEMA and the NRC, the plant was authorized to restart.

River Bend Station (30 miles north of Baton Rouge, LA) did not experience damage to any safety relate equipment and only minimal damage to emergency planning equipment (one siren) during and after Hurricane Katrina. The station reduced power to 70 percent core thermal power on August 28, 2005, due to reduced electrical grid loads. Access was maintained to the plant throughout the event. On September 2, 2005, the plant returned to 100% power.

Also, in 1992 the eye of Hurricane Andrew, a category 5 hurricane, passed directly over the Turkey Point nuclear plant. The plant was shut down prior to the hurricane making landfall and an assessment of the plant following the hurricane demonstrated that the plant sustained very little damage and all of the safety equipment was intact. (Most of the damage was too the security fences being blown down).

Protecting U.S. Citizens

27. What should be done to protect people in Alaska, Hawaii and the West Coast from radioactive fallout?

The NRC continues to believe that the type and design of the Japanese reactors, combined with how events have unfolded, will prevent radiation at harmful levels from reaching U.S. territory.

Additional technical information:

NRC is working with DHS, EPA and other federal partners to ensure monitoring equipment for confirmatory readings is properly positioned, based on meteorological and other relevant information.

28. Why is KI administered during nuclear emergencies?

KI – potassium iodide – is one of the protective measures that might be taken in a radiological emergency in this country. A KI tablet will saturate the thyroid with non-radioactive iodine and prevent the absorption of radioactive iodine that could be part of the radioactive material mix of radionuclides in a release. KI does not prevent exposure from other radionuclides.

Additional technical information:

There are a range of protective measures that we use ... the most effective is evacuation. Local government officials are responsible for determining the best means to protect their public. KI is another means for protection but evacuation and sheltering are the primary means that are used.

29. Are any Americans in danger – armed forces, citizens in Tokyo?

The NRC, in consultation with the White House and U.S. Embassy, has advised United States citizens in Japan to follow the protective measures recommended by the Japanese government. These measures appear to be consistent with steps the United States would take. The Department of Defense has personnel trained in radiation protective measures and is responsible for providing guidance to U.S. armed forces. Inquiries regarding U.S. citizens in Japan should be directed to the State Department, Consular Services at 202-647-7004.

30. 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.

31. It has been reported that the Japanese have expanded their protective actions out to 30km (~19 miles). Does the Japanese decision to expand their protective actions call into question NRC requirements for Emergency Planning Zones out to 10 miles?

The NRC remains confident that the EPZs around U.S. nuclear reactor plants are adequate to protect public health and safety during a nuclear accident. Nevertheless, the NRC will certainly be looking closely at this incident and the effects on the Japanese nuclear power plant in the future to see if any changes are necessary to NRC regulations.

Future NRC Actions/Evaluations

32. Has this incident changed the NRC perception about earthquake risk?

There has been no change in the NRC's perception of earthquake hazard (i.e. ground shaking levels) for U.S. nuclear power plants. As is prudent, the NRC will certainly be looking closely at this incident and the effects on the Japanese nuclear power plant in the future to see if any changes are necessary to NRC regulations.

Additional technical information:

We expect that there would be lessons learned, etc. It appears that the sites did not have any critical damage due to the earthquake from the fact that the emergency diesel generators initially responded to provide power to the site. The tsunami and consequential site flooding was responsible for the complete loss of power to the site, including the diesel generators which resulted in a Station Blackout.

33. Will this incident affect new reactor licensing?

It is not appropriate to hypothesize on such a future scenario at this point.

Additional technical information:

This event could potentially call into question the NRC's seismic requirements which could require the staff to re-evaluate the staff's approval of the AP1000 and ESBWR design and certifications.

34. How will the events in Japan impact ongoing NRC licensing actions such as power uprates and license renewals and NRC inspections at operating reactors?

The NRC remains committed to its mission to protect public health and safety. The NRC staff is dedicated to that mission and applies a strong safety and security focus to each of our licensing action reviews. The time will come, after this crisis is behind us, to evaluate what, if any, changes are needed. We will assess all the available information from this event and, as we have done with previous natural disasters, such as the 2007 earthquake in the Sea of Japan and the 2004 tsunami in the Indian Ocean, evaluate whether enhancements to our licensing processes or U.S. nuclear power plants are warranted. In the meantime, we will continue to implement our rigorous inspection and oversight activities at operating U.S. nuclear power plants. It would be premature to speculate about any potential changes to our inspection, licensing or oversight activities.

35. With NRC moving to design certification, at what point is seismic capability tested – during design or modified to be site-specific? If in design, what strength seismic event must these be built to withstand?

The regulations related to seismic requirements are contained in 10 CFR 50 Appendix A criterion 2.

During design certification, vendors propose a seismic design in terms of a ground motion spectrum for their nuclear facility. This spectrum is called a standard design response spectrum and is developed so that the proposed nuclear facility can be sited at most locations in the central and eastern United States. The vendors show that this design ground motion is suitable for a variety of different subsurface conditions such as hard rock, deep soil, or shallow soil over rock. Combined License and Early Site Permits applicants are required to develop a site specific ground motion response spectrum that takes into account all of the earthquakes in the region surrounding their site as well as the local site geologic conditions. Applicants estimate the ground motion from these postulated earthquakes to develop seismic hazard curves. These seismic hazard curves are then used to determine a site specific ground motion response spectrum that has a maximum annual likelihood of $1x10^{-4}$ of being exceeded. This can be thought of as a ground motion with a 10,000 year return period. This site specific ground motion response spectrum is then compared to the standard design response spectrum for the proposed design. If the standard design ground motion spectrum envelopes the site specific ground motion spectrum then the site is considered to be suitable for the proposed design. If the standard design spectrum does not completely envelope the site specific ground motion spectrum, then the COL applicant must do further detailed structural analysis to show that the design capacity is adequate. Margin beyond the standard design and site specific ground motions must also be demonstrated before fuel loading can begin.

From: McIntyre, David
To: Harrington, Holly
Subject: FAQ What Do I Need To Know.docx
Date: Tuesday, March 15, 2011 10:16:00 PM
Attachments: FAQ What Do I Need To Know.docx

LL/327

Frequently Asked Questions About the Japan Nuclear Crisis

"What Do I Need to Know to Protect Myself?"

1. **Is there a danger of radiation making it to the United States?**

   In response to nuclear emergencies, the NRC works with other U.S. agencies to monitor radioactive releases and predict their path. The NRC continues to monitor information regarding wind patterns near the Japanese nuclear power plants. Nevertheless, given the thousands of miles between the two countries, Hawaii, Alaska, the U.S. Territories and the U.S. West Coast are not expected to experience any harmful levels of radioactivity.

2. **Is the U.S. government tracking the radiation released from the Japanese plants?**

   Yes. A number of U.S. agencies are involved in monitoring and assessing radiation including the Environmental Protection Agency, Department of Energy, and NRC. The best source of additional information is the EPA.

3. **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 United States and U.S.territories.

4. **The radiation "plume" seems to be going out to sea – what is the danger of it reaching Alaska? Hawaii? The west coast?**

   See response to Question 1.

5. **Should I be taking potassium iodide (KI) or other protective measures?**

   At this time, the NRC does not believe protective measures are necessary in the United States. We do not expect any U.S. states or territories to experience harmful levels of radioactivity. In the event circumstances change, U.S. residents should listen to the protective action decisions of their states and counties. These protective action decisions could include actions such as sheltering, evacuation, or taking potassium iodide. The NRC will provide technical assistance to the states should they request it.

United States citizens in Japan are encouraged to follow the protective measures recommended by the Japanese government. These measures appear to be consistent with steps the United States would take.

6. What are the risks to my children?

See response to Question 5.

7. My family has planned a vacation to Hawaii/Alaska/Seattle next week – is it safe to go, or should we cancel our plans?

The NRC does not expect that residents of the United States or its territories are at any risk of exposure to harmful levels of radiation resulting from the events in Japan. Any changes to travel are a personal decision. The NRC is not aware of any travel restrictions within the United States or its territories.

8. What are the short-term and long-term effects of exposure to radiation?

The NRC does not expect that residents of the United States or it territories are at any risk of exposure to harmful levels of radiation resulting from the events in Japan.

On a daily basis, people are exposed to naturally occurring sources of radiation, such as from the sun, and man-made radiation, such as medical X-rays. The resulting effects are dependent on the strength and type of radiation as well as the duration of exposure. See our Fact Sheet on the biological effects of radiation

9. I am traveling to Asia (not Japan). Should I adjust my travel plans to avoid flying through plume or being contaminated once on the ground?

You should consult the State Department for warnings or advisories on international travel.

10. What is the official agency to report radiation numbers and what is the public contact?

NRC regulations require nuclear power plants to report any radiation doses detected at the plant that could be harmful to the public. This would include doses that are generated by the plant or by an external source. During an event in the United States, it is the state's responsibility to provide protective action decisions for public health and

safety. For this incident, the Japanese are responsible for reporting the public dose; nevertheless, should radiation doses be detected within the United States, it would still be the state's responsibility to provide protective action decisions for public health and safety.

11. How many plants are located in seismic areas?

Although we often think of the US as having "active" and "non-active" earthquake zones, earthquakes can actually happen almost anywhere. Seismologists typically separate the United States into low-, moderate-, and high-seismicity zones. The NRC requires that every plant be designed for site-specific ground motions that are appropriate for their location. In addition, the NRC has specified a minimum ground shaking level to which the plants must be designed. See our Fact Sheet on seismic issues for more information.

12. Where would I get IOSAT Potassium Iodide if my city should experience fallout from the Japanese nuclear disaster? Is this the right precaution or is there anything else that can be done to protect myself?

We do not expect any U.S. states or territories to experience harmful levels of radioactivity. As such, we do not believe that there is any need for residents of the United States to take potassium iodide. U.S. residents should listen to the protective action decisions by their states and counties. If necessary, protective action decisions could include actions such as sheltering, evacuating, or taking potassium iodide.

For more information on the use of potassium iodide, click here.

Additional information is available from the Food and Drug Administration.

13. My loved one is overseas, how do I find out if they are ok?

We are directing public inquiries with regard to concern for loved ones overseas to the State Department, Consular Services at 202-647-7004.

From: Harrington, Holly
To: Brenner, Eliot
Subject: Summary from call I held today
Date: Tuesday, March 15, 2011 5:43:00 PM

Held a conference call with the regions this afternoon. Some things I passed along:

An EPA statement about monitoring, etc., is expected to go out soon. I'll get to the regions.
Rumors (attributed to us by DHS inadvertently) that we were standing up a National JIC were shot down in a SICCL call today
Getting lots of requests to interview our folks in Japan. So far turning down.
Volume of media calls are in the hundreds. Regions didn't seem to be clear on how buried we are. Tomorrow, we'll start funneling more requests to the regions to help reduce our backlog.
Amy is getting our "what to say to the public" q&As straight and I hope to get a process in place tomorrow to funnel those to a few people to respond to e-mail and phone calls. Would also like to post them as a document on the Web.
Lara wanted to know why we didn't have a media briefing via conference call, or put Borchardt out there or have a recorded update for the media. I said I didn't see any of those in the near future, but would funnel suggestions to you.
Relayed verbally how to response to President's television appearance today (I've not seen it or heard of it yet)
OP Center is expected to stand up as long as we have teams in Japan, which is expected to last at least a month. They plan to rotate teams in every two weeks.
We cannot get video of tomorrow's House briefing due to limitations in the room
Just heard about Thursday's briefing in the Senate and will get to the regions

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
Cc:	Landau, Mindy
Subject:	Senate Hearing on Thursday
Date:	Tuesday, March 15, 2011 5:47:00 PM

New: **Nuclear Crisis in Japan**

Senate Environment and Public Works Committee (Chairwoman Boxer, D-Calif.) will hold a briefing on the ongoing crisis associated with nuclear power facilities in Japan, including potential ramifications for the United States. *3:30 p.m., 406 Dirksen*

LL/329

From: Harrington, Holly
To: stricklerl@cbsnews.com
Subject: Request to Interview NRC Team in Japan
Date: Tuesday, March 15, 2011 6:19:00 PM

Laura – Got your request, but we're not doing interviews with the team at this time.

Holly Harrington
Office of Public Affairs
NRC

LLL/230

From: Shane, Raeann
To: Harrington, Holly
Subject: Press release 11-046
Date: Tuesday, March 15, 2011 6:36:58 PM

Holly, just an FYI, I tried to get the press release on no harmful levels of radiation reaching the US and I repeatedly get a file not found error. Just wanted you to know.

Raeann Shane
Sr. Intergovernmental and External Affairs Officer
Office of Congressional Affairs
U.S. NRC
301-415-1699
rms2@nrc.gov

LL/23/

From:	Taylor, Robert
To:	Harrington, Holly; Decker, David; Brenner, Eliot; Burnell, Scott
Cc:	Droggitis, Spiros; McIntyre, David
Subject:	RE: Radiation Detection/Monitoring
Date:	Tuesday, March 15, 2011 12:33:08 PM

Dave McIntyre and I are talking to Spiros right now about this. We are awaiting info from the White House that should clarify the rest of the governments roles and responsibilities. We promised to provide that as soon as we get it

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From: Harrington, Holly
Sent: Tuesday, March 15, 2011 12:29 PM
To: Decker, David; Brenner, Eliot; Burnell, Scott
Cc: Taylor, Robert
Subject: RE: Radiation Detection/Monitoring

Right now—I believe Rob is the keeper of the Q&As.

Rob – can you address?

From: Decker, David
Sent: Tuesday, March 15, 2011 11:44 AM
To: Brenner, Eliot; Harrington, Holly; Burnell, Scott
Subject: Radiation Detection/Monitoring

Eliot, Holly and Scott,

This bullet in the latest version of the "Talking Points" aspect has been one we've had a bunch of questions on from congressional staffers. Are the other agencies mentioned below DOD/DOE/EPA? The staffers real focus, however, seems to be on which US agency is responsible for monitoring domestic radiation danger. All we've said so far on the domestic monitoring is that DOE/EPA are involved in that (and mentioned the EPA RadNet program). Have you had any questions like this that we can tag on to? Thanks.

- The NRC is working with other U.S. agencies to monitor radioactive releases from Japan and to predict their path.

LLL 232

From: Taylor, Robert
To: Harrington, Holly
Subject: Potential OPA Questions.docx
Date: Tuesday, March 15, 2011 1:02:51 PM
Attachments: Potential OPA Questions.docx

Here are the responses I drafted to the questions Dave thought up. I added the last one regarding travel to Asia based on the email you sent me. I really don't think it is our place to speak regarding foreign travel. Your thoughts?

I plan to maintain this bank of questions and add as anyone from OPA deems necessary.

LLL/233

Questions and Answers for Potential OPA Questions:

1. **Can this happen here?**

   The events that have occurred in Japan are the result of a combination of highly unlikely natural disasters. It is extremely unlikely that a similar event could occur in the United States.

2. **I live near a nuclear power plant similar to the ones having trouble in Japan. How can we now be confident that this plant won't experience a similar problem?**

   U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. 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 is confident that the robust design of these plants makes it extremely unlikely that a similar event could occur it then U.S.

3. **Has this crisis changed your opinion about the safety of US nuclear power plants?**

   No. The NRC remains confident that the design of U.S. nuclear power plants ensure the continued protection of public health and safety.

4. **With all this happening, how can the NRC continue to approve new nuclear power plants?**

   It is premature to speculate what, if any, effect the events in Japan will have on the licensing of new nuclear power plants.

5. **What is the NRC doing in response to the situation in Japan?**

   The NRC has taken a number of actions:
   a. Since the beginning of the event, the NRC has continuously manned its Operations Center in Rockville, MD in order to gather and examine all available information as part of the effort to analyze the event and understand its implications both for Japan and the United States.
   b. A team of 11 officials from the U.S. Nuclear Regulatory Commission with expertise in boiling water nuclear reactors have deployed to Japan as part of a U.S. International Agency for International Development (USAID) team.
   c. The Nuclear Regulatory Commission has spoken with its counterpart agency in Japan, offering the assistance of U.S. technical experts.
   d. The NRC is coordinating its actions with other Federal agencies as part of the U.S. government response.

6. **What other US agencies are involved, and what are they doing?**

   The entire federal family is responding to this event. The NRC is closely coordinating its efforts with the White House, DOE, DOD, USAID, and others. The U.S. government is providing whatever support requested by the Japanese government.

7. **What else can go wrong?**

   The NRC is continuously monitoring the developments at the nuclear power plants in Japan. Circumstances are constantly evolving and it would be inappropriate to speculate on how this situation might develop over the coming days.

8. **What is the worst-case scenario?**

   In a nuclear emergency, the most important action is ensure the core is covered with water to provide cooling to remove any heat from the fuel rods. Without adequate cooling, the fuel rods will melt. Should the final containment structure fail, radiation from these melting fuel rods would be released to the atmosphere and additional protective measures may be necessary depending on factors such as prevailing wind patterns.

9. **The US has troops in Japan and has sent ships to help the relief effort – are they in danger from the radiation?**

   The NRC is not the appropriate federal agency to answer this question. DOD is better suited to provide information regarding its personnel.

10. **Is there a danger of radiation making it to the United States?**

    In response to nuclear emergencies, the NRC works with other U.S. agencies to monitor radioactive releases and predict their path. The NRC continues to monitor information regarding wind patterns near the Japanese nuclear power plants. Nevertheless, given the thousands of miles between the two countries, Hawaii, Alaska, the U.S. Territories and the U.S. West Coast are not expected to experience any harmful levels of radioactivity.

11. **Is the US Government tracking the radiation released from the Japanese plants?**

    See response to Question 10.

12. **Has the government set up radiation monitoring stations to track the release?**

    All U.S. nuclear power plants have existing monitoring stations with the ability to measure and track external radiation sources. However, should the federal government decide that additional monitoring stations are needed, the NRC will support that effort.

13. The radiation "plume" seems to be going out to sea – what is the danger of it reaching Alaska? Hawaii? The west coast?

See response to Question 10.

14. I live in the Western United States – should I be taking potassium iodide (KI)?

No protective measures are necessary in the United States. We do not expect any U.S. states or territories to experience harmful levels of radioactivity.

15. Are there other protective measures I should be taking?

The NRC supports the states with making protective measure recommendations for their residents. The NRC is not recommending any protective measures to the states as a result of the events in Japan. United States citizens in Japan are encouraged to follow the protective measures recommended by the Japanese government. These measures appear to be consistent with steps the United States would take.

16. What are the risks to my children?

See response to Question 15.

17. My family has planned a vacation to Hawaii/Alaska/Seattle next week – is it safe to go, or should we cancel our plans?

The NRC does not believe that the events in Japan warrant any travel restrictions within the United States or its territories.

18. What are the short-term and long-term effects of exposure to radiation?

The NRC does not expect that residents of the United States or it territories are at any risk of exposure to harmful levels of radiation resulting from the events in Japan.

On a daily basis, people are exposed to naturally occurring sources of radiation, such as from the sun or medical X-rays. The resulting effects are dependent on the strength and type of radiation as well as the duration of exposure.

19. I am traveling to Asia (not Japan). Should I adjust my travel plans to avoid flying through plume or being contaminated once on the ground?

The NRC is not the responsible federal agency to advise U.S. citizens on foreign travel restrictions. That responsibility belongs to the Department of State.

From: Harrington, Holly
To: Ousley, Elizabeth
Subject: RE: Can you tell me if you setup any NRC accounts on Twitter?
Date: Tuesday, March 15, 2011 12:51:00 PM

Not us.

From: Ousley, Elizabeth
Sent: Tuesday, March 15, 2011 12:49 PM
To: Harrington, Holly
Subject: RE: Can you tell me if you setup any NRC accounts on Twitter?

Are you aware of the Twitter account NRCUPDATE? It belongs to someone that has this website - http://nrcupdate.com/

It gives the appearance of NRC branding, but looks like it's a small company or individual promoting their editing services.

Liz Ousley
Branch Chief, Enterprise Architecture & Standards Branch (EASB)
Business Process Improvement and Applications Division (BPIAD)
301-415-8378

From: Harrington, Holly
Sent: Tuesday, March 15, 2011 12:30 PM
To: Ousley, Elizabeth
Subject: RE: Can you tell me if you setup any NRC accounts on Twitter?

Just monitoring

From: Ousley, Elizabeth
Sent: Tuesday, March 15, 2011 11:37 AM
To: Harrington, Holly
Subject: Can you tell me if you setup any NRC accounts on Twitter?

Hi Holly,

Were there any NRC accounts setup for sending tweets during the emergency or are you just using it for monitoring for now? Darren asked about this.

Thanks,

Liz

Liz Ousley
Branch Chief, Enterprise Architecture & Standards Branch (EASB)
Business Process Improvement and Applications Division (BPIAD)
301-415-8378

From: PDR Resource
To: Couret, Ivonne; Harrington, Holly
Subject: Washington Post request - document redaction needed
Date: Tuesday, March 15, 2011 1:06:31 PM

Hi Ivonne and Holly,

Here is the other document that I believe the Post requester wants. She asked for a fall 1986 NRC report on GE BWR Mark I containment, and said that it should mention that "the shell is expected to fail 9 out of 10 times during a severe accident".

I found this document from fall 1986, so I was going to ask that it be reviewed for SUNSI. I will wait to hear from you on this.

Item ID	004617595
Accession Number	8611070187
Estimated Page Count	103
Document Date	10/29/1986
Document Type	CONTRACTED REPORT - RTA,QUICK LOOK,ETC. (PERIODIC TEXT-PROCUREMENT & CONTRACTS
Availability	Publicly Available
Title	Draft "Prevention & Mitigation of Severe Accidents in BWR-4 W/Mark I Containment."
Author Name	FITZPATRICK R PERKINS K R PRATT W T
Author Affiliation	BROOKHAVEN NATIONAL LABORATORY
Author Affiliation Class	XI
Addressee Name	
Addressee Affiliation	NRC
Addressee Affiliation Class	N
Docket Number	
License Number	
Case/Reference Number	CON-FIN-A-3825
Document/Report Number	A-3825R-DRFT A-3825R-DRFT-01 A-3825R-DRFT-1
Keyword	BOILING WATER REACTORS CONTAINMENT DRAFTS MARK I SYSTEMS MH&S-16-5 MITIGATION Organizations File PREVENTION RD-9A REFAFFIL=NRC OFFICE OF NUCLEAR REACTOR REGULATION (NRR) SEVERE ACCIDENTS
Package Number	8611070182A
Date Docketed	
Related Date	
Comment	
Document Status	
Media Type	Microform
Physical File Location	PDR:ORG-NRRC-861031,PDR:ORG/NRRC/861031,CF:SUBJ//RD-9A 861031,CF:SUBJ//MH&S-16-5 861031
Microform Addresses	38521:062-38521:164
Distribution List Codes	
Text Source Flag	
Document Sensitivity	Non-Sensitive

Thanks,

LLL/235

Mary Mendiola
Technical Librarian
U.S. NRC Public Document Room O-1 F21
http://www.nrc.gov/reading-rm/pdr.html
301-415-2821
Mailstop O-1F13
Mary.Mendiola@nrc.gov

From: Screnci, Diane
To: Brenner, Eliot; Harrington, Holly
Subject: forward looking TNT
Date: Tuesday, March 15, 2011 1:29:50 PM

TMI's PR people tell me they will be hosting the Today Show, Fox News, CNN, and others at their Training facility over the next few days.

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

LLL/2316

From: Shoop, Undine
To: Harrington, Holly; Couret, Ivonne; Akstulewicz, Brenda; Steger (Tucci), Christine
Subject: FAQ
Date: Tuesday, March 15, 2011 1:59:11 PM
Attachments: FAQ for public on the events in Japan.docx

I added a few more. See attached.

Undine Shoop
Chief, Health Physics and Human Performance Branch
Division of Inspection and Regional Support
Office of Nuclear Reactor Regulation
301-415-2063

LLL/37

Q&As on Radiation Protection in light of recent events in Japan

What is Radiation?

Radiation is energy in the form of particles or rays given off by unstable atoms. Radiation exists in nature and the average person receives 620 millirem per year from natural and manmade sources.

Who is the official agency to report radiation numbers and what is the public contact?

In the US it is the licensee's responsibility to report public dose information. The NRC publishes the licensee's reports on our public web site. For this incident, the Japanese are responsible for reporting the public dose. NRC regulations require reporting any radiation doses that are detected at the plant that would be harmful to the public irrespective of whether they are generated by the plant or by an external source. Therefore, if the Diablo Canyon or San Onofre offsite monitoring systems were to detect radiation they would report it.

How many plants are located in seismic areas?

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

Seismic designs at U.S. nuclear power plants are developed in terms of seismic ground motion spectra, which are called the Safe Shutdown Earthquake ground motion response spectra (SSE). Each nuclear power plant is designed to a ground motion level that is appropriate for the geology and tectonics in the region surrounding the plant location. Currently operating nuclear power plants developed their SSEs based on a "deterministic" or "scenario earthquake" basis that account for the largest earthquake expected in the area around the plant. Seismic activity in the regions surrounding U.S. plants is much lower than that for Japan since most U.S. plants are located in the interior of the stable continental U.S. The largest earthquakes within the continental U.S. are the 1811-12 New Madrid sequence and the 1886 Charleston, SC, which were estimated to be between about magnitude 7.0 to 7.75. Nuclear power plants in the U.S. are sited far away from these two earthquake zones as well as other identified potential seismic sources. On the west coast of the U.S., the two nuclear power plants are designed to specific ground motions from earthquakes of about magnitude 7+ on faults located just offshore of the plants. The earthquakes on these faults are mainly strike-slip (horizontal motion) type earthquakes, not subduction zone earthquakes. Therefore, the likelihood of a tsunami from these faults is very remote.

Where would I get IOSAT Potassium Iodide if my city should experience fallout from the Japanese nuclear disaster? Walmart is saying they don't carry it. King Supers says they

can't get it. Where would I find such a thing? Is this the right precaution or is there anything else that can be done to protect myself?

Potassium Iodide is classified as a drug therefore, the best source of information is on the Food and Drug Administration's web site. The FAQ on KI is at: http://www.fda.gov/Drugs/EmergencyPreparedness/BioterrorismandDrugPreparedness/ucm072265.htm#Who really needs

A public information brochure is at: http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM080542.pdf

What is the definition of a transient?

Transients are usually referred too as the response of the reactor to postulated equipment failures or malfunctions. As part of the application for operating a nuclear power plant, licensees must analyze for these postulated events to demonstrate that the reactor can be safely operated and public health and safety is protected.

Is it safe to fly?

Yes. If events were to evolve into a situation that would result in travel being unsafe, a no fly zone would be established.

My loved one is overseas, how do I find out if they are ok?

We are directing public inquiries with regard to concern for loved ones oversees to the State Department, Consular Services at 202-647-7004.

How do I protect myself against radiation?

There are three components of protection against being exposed to radiation: time, distance, and shielding.

From: Shoop, Undine
To: Couret, Ivonne; Virgilio, Rosetta; Harrington, Holly
Subject: RE: Million dollar question
Date: Tuesday, March 15, 2011 1:35:16 PM

Then I am not understanding the question. Are you referring to who reports for the Japanese events? And what type of radiation? Drinking water? Air? I guess I just am not following what you are asking.

From: Couret, Ivonne
Sent: Tuesday, March 15, 2011 1:08 PM
To: Virgilio, Rosetta; Harrington, Holly; Shoop, Undine
Subject: RE: Million dollar question

official agency to report radiation – this doesn't answer the question is it EPA, FEMA, who? We need to give them an answer to who do I call or talk to if I'm in el paso, texas.....

From: Shoop, Undine
Sent: Tuesday, March 15, 2011 12:11 PM
To: Shoop, Undine; Couret, Ivonne; Burnell, Scott; Virgilio, Rosetta; Harrington, Holly
Subject: RE: Million dollar question

Final answer
Answer: In the US it is the licensee's responsibility to report public dose information. The NRC publishes the licensee's reports on our public web site. For this incident, the Japanese are responsible for reporting the public dose. NRC regulations require reporting any radiation doses that are detected at the plant that would be harmful to the public irrespective of whether they are generated by the plant or by an external source. Therefore, if the Diablo Canyon or San Onofre offsite monitoring systems were to detect radiation they would report it.

From: Shoop, Undine
Sent: Tuesday, March 15, 2011 11:49 AM
To: Couret, Ivonne; Burnell, Scott; Virgilio, Rosetta; Harrington, Holly
Subject: RE: Million dollar question

In the US it is the licensee's responsibility to report public dose information. The NRC publishes the licensee's reports on our public web site. For this incident, the Japanese are responsible although I am relatively sure that if the fence monitors at Diablo or San Onofre start to pick up radiation in the air, they will report it.

From: Couret, Ivonne
Sent: Tuesday, March 15, 2011 11:43 AM
To: Shoop, Undine; Burnell, Scott; Virgilio, Rosetta; Harrington, Holly
Subject: Million dollar question

Who is the official agency to report radiation numbers and what is the public contact. Undine add this to the script the answer. Ivonne

Ivonne L. Couret

IV 1288

From: Janbergs, Holly
To: Harrington, Holly
Subject: Fox Filming?
Date: Tuesday, March 15, 2011 1:37:33 PM

We are not now and are not likely to at any point allow media onto the NRC campus to film, correct? I told a fellow over at Fox that we didn't have any additional B-roll and his boss wants him to clarify that they're not shooting any themselves.

Thanks
-B.

Beth Janbergs
Public Affairs Assistant
301-415-8211

111239

From: Coggins, Angela
To: Brenner, Eliot; Harrington, Holly
Cc: Powell, Amy
Subject: a favor...
Date: Tuesday, March 15, 2011 2:25:45 PM
Attachments: Japanese-Rx-Incident addtl questions - March-14-2011 doc.docx

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I have a big favor to ask... Can you check to see if these attached questions are already included in the questions and answers, and if not, add them to the list and prepare some responses for us? Thanks so much!!

Angela B. Coggins
Policy Director
Office of Chairman Gregory B. Jaczko
U.S. Nuclear Regulatory Commission
301-415-1828/angela.coggins@nrc.gov

LLL/24D

(3/14/11)

1. With respect to the Japanese BWR reactors:
   a) what damage was caused by the earthquake and/or tsunami at each of the units?
   b) was that damage anticipated in the design basis? If yes, were these results forecast? If not, should they have been?
   c) what are the gaps between modeling and simulation tool projections and what actually happened at each of the sites?
   d) what technical differences exist between the Japanese units with expected core damage and comparable units in the US?
   e) other

2. With respect to US plants:
   a) for BWR's, what are technical safety areas that should be explored for US reactors?
   b) what seismic/tsunami/flooding related design aspects should be reviewed/investigated for US plants?
   c) what station blackout type concerns should be explored for US plants given the experience (as we understand it) in Japan?
   d) other

3. What process is the NRC staff in with respect to reviewing safety of existing US reactors?

4. With respect to licensing actions under review (new and operating),what considerations should be given to the Japanese reactor events and through what process?

5. What process is the Commission in with respect to providing direction to the staff on any inspections of existing US reactors (including their design basis) and any direction on new reactor license applications?

6. What does history tell us about how the Commission may consider proceeding going forward:
   a. Three Mile Island
   b. Chernobyl
   c. Browns Ferry fire
   d. Davis Besse
   e. 9/11
   f. Other?

From: Wittick, Susan
To: Harrington, Holly; McIntyre, David; Taylor, Robert
Cc: Droggitis, Spiros
Subject: FW: Do you have info on thursday Senate hearing? time?
Date: Tuesday, March 15, 2011 5:14:15 PM

Holly – info thanks to Spiros . . .

From: Droggitis, Spiros
Sent: Tuesday, March 15, 2011 5:11 PM
To: Wittick, Susan
Subject: RE: Do you have info on thursday Senate hearing? time?

Just out: 3:30

New: **Nuclear Crisis in Japan**
Senate Environment and Public Works Committee (Chairwoman Boxer, D-Calif.) will hold a briefing on the ongoing crisis associated with nuclear power facilities in Japan, including potential ramifications for the United States. *3:30 p.m., 406 Dirksen*

From: Wittick, Susan
Sent: Tuesday, March 15, 2011 5:07 PM
To: Droggitis, Spiros
Subject: RE: Do you have info on thursday Senate hearing? time?

Thanks! OPA was wondering, so thought I could help. Holly will be contacting Becky. Perhaps she has some updated info. Thanks for checking.

From: Droggitis, Spiros
Sent: Tuesday, March 15, 2011 5:06 PM
To: Wittick, Susan
Subject: RE: Do you have info on thursday Senate hearing? time?

Just checked the Committee website and they do not show anything yet. There is another hearing advertised, so who knows, it could replace that one or maybe it is in the pm.

From: Wittick, Susan
Sent: Tuesday, March 15, 2011 5:02 PM
To: Droggitis, Spiros
Subject: RE: Do you have info on thursday Senate hearing? time?

Ok, thanks.

From: Droggitis, Spiros
Sent: Tuesday, March 15, 2011 5:02 PM
To: Wittick, Susan
Subject: RE: Do you have info on thursday Senate hearing? time?

None, just that it is before the Senate Committee on Environment and Public Works. My guess is 9:30 or 10:00am. I'd ask Becky/Amy.

241

From: Wittick, Susan
Sent: Tuesday, March 15, 2011 5:00 PM
To: Droggitis, Spiros
Subject: Do you have info on thursday Senate hearing? time?

From: bliss.imperfect@gmail.com on behalf of Beth Janbergs
To: Harrington, Holly
Subject: I suppose we can"t really push this, but...
Date: Tuesday, March 15, 2011 8:44:55 PM

I thought this was nicely laid out and relatively easy to understand:
http://mitnse.com/2011/03/13/why-i-am-not-worried-about-japans-nuclear-reactors/

There are updates on the main site here:
http://mitnse.com/

LL/242

From: Harrington, Holly
To: Taylor, Robert
Date: Tuesday, March 15, 2011 8:03:00 PM

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

LL/243

From: McIntyre, David
To: Harrington, Holly
Subject: RE: could you noodle around for an answer for this in your spare time?
Date: Tuesday, March 15, 2011 8:26:47 PM

This is a start, though it's not complete.

Rem and sievert are two different measurements of radiation dose. One rem is roughly equivalent to 10 millisieverts; which means 1 sievert equals 100 rem.

And yes, the radiation dose will be lower the farther away your are from the source of radiation. Remember "Time, Distance, Shielding" – reduce the time of your exposure as much as possible, increase distance from the source of radiation, and shield yourself (by staying indoors, for example).

From: Harrington, Holly
Sent: Tuesday, March 15, 2011 7:56 PM
To: McIntyre, David
Subject: could you noodle around for an answer for this in your spare time?

As stated, the recommendations for max radiation exposure is 1rem for the whole body and 5rem for the thyroid for the general public annually. The news media keeps tossing around numbers in "millisieverts/hour?" How do these two numbers compare? There are lots of statistics and no real explanation of what these numbers mean and the general public is completely confused. Does the amount of radiation decrease as the distance froml the source increases

LLL/244

From: Taylor, Robert
To: Coggins, Angela
Cc: Harrington, Holly; McIntyre, David; Schmidt, Rebecca; Powell, Amy
Subject: Japanese-Rx-Incident addtl questions - March-14-2011 doc.docx
Date: Tuesday, March 15, 2011 8:29:54 PM
Attachments: Japanese-Rx-Incident addtl questions - March-14-2011 doc.docx

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Angela,

We have done our best to incorporate your questions into the Chairman's Q&As that were developed earlier today and provided to OCA. The updated set of Q&As is undergoing ET review and we will hopefully have it to you in the near future. The attached provides a roadmap of where we believe the responses can be found. A few questions fell into the broader "After this event is over, we will determine what changes need to be made in the US" message. I did not directly incorporate them, but you can see a draft response in the attached.

Regarding the third question about past events, I did not try to evaluate all of the events you listed. I would propose sticking to the party line, in that, "The NRC routinely reassess its regulatory requirements in light of new operating experience and plant events."

Regards,
Rob

LLL/245

Additional Chairman Questions (3/14/11)

1. With respect to the Japanese BWR reactors:
a) what damage was caused by the earthquake and/or tsunami at each of the units?

See Chairman Question #1

b) was that damage anticipated in the design basis? If yes, were these results forecast? If not, should they have been?

The NRC is not privy to the exact design specifications for the Fukushima Daiichi nuclear power plants. However, we do know that Japanese nuclear power plants are designed for both seismic and tsunami events. As the events in Japan continue to unfold, the NRC is focused on supporting the Japanese government and people in bringing this crisis to closure in the safest manner possible. The time will come, after this crisis is behind us, to assess any differences that may exist between the actual seismic and tsunami events that occurred and the plant design basis.

c) what are the gaps between modeling and simulation tool projections and what actually happened at each of the sites?

The NRC has not reviewed the modeling and simulation tool projections regarding seismic conditions at the Daiichi plant. Therefore, we cannot speak to any "gaps" between the projections and actual events. The time will come, after this crisis is behind us, to assess any differences that may exist between modeling and simulation tool projections and what actually happened at Daiichi.

d) what technical differences exist between the Japanese units with expected core damage and comparable units in the US?

See Chairman Question #20

e) other

2. With respect to US plants:
a) for BWR's, what are technical safety areas that should be explored for US reactors?

See response to Chairman Q&A #18

b) what seismic/tsunami/flooding related design aspects should be reviewed/investigated for US plants?

See response to Chairman Q&A #18

c) what station blackout type concerns should be explored for US plants given the experience (as we understand it) in Japan?

See response to Chairman Q&A #18

d) other

3. What process is the NRC staff in with respect to reviewing safety of existing US reactors?

See Chairman Question #33

4. With respect to licensing actions under review (new and operating),what considerations should be given to the Japanese reactor events and through what process?

See Chairman Question #33

5. What process is the Commission in with respect to providing direction to the staff on any inspections of existing US reactors (including their design basis) and any direction on new reactor license applications?

See Chairman Question #33

6. What does history tell us about how the Commission may consider proceeding going forward:
   a. Three Mile Island
   b. Chernobyl
   c. Browns Ferry fire
   d. Davis Besse
   e. 9/11
   f. Other?

From: Harrington, Holly
To: Brenner, Eliot
Subject: RE: Potential OPA Questions.docx
Date: Tuesday, March 15, 2011 8:34:00 PM

I think we should pull Neil onto day shift for those two days, then. I'm not convinced overnight is all that critical. Rob already on board to continue to help. I can bring in people to answer phones and will ask Mindy to work with Ivonne to handle media requests.

From: Brenner, Eliot
Sent: Tuesday, March 15, 2011 8:27 PM
To: Harrington, Holly
Subject: Re: Potential OPA Questions.docx

Yes. And we are going into full outreach mode thursdady and friday. Need to pull inhelp to take calls, talkk on background from q/a, help with inerview logistics, etc. Pull all stops.

Will talkmore tomorrow. Aiming for morning shows friday, CNN the night before. Only blessing is no sunday shows. Also, we will probably coopt the aauditorium as a studio and may use it for a publi commission meeting next week. Will also see what we can work out with chuck casto to feed the beast from tokyo.

Eliot (still downtown and ready to drop.

Eliot Brenner
Director, Office of Public Affairs
US Nuclear Regulatory Commission
Protecting People and the Environment
301 415 8200
C:240 888 2923
Sent from my Blackberry

From: Harrington, Holly
To: Brenner, Eliot
Sent: Tue Mar 15 20:20:30 2011
Subject: FW: Potential OPA Questions.docx

After considerable work but a number of people, including Rob Taylor and Amy Bonocorrso, these have been developed and blessed by the Liaison Team, Protective Measures Team and Reactor Safety Team. In most cases, they mirror the Chairman's Q&A, with some additions. Tomorrow, I'd like to disseminate to the regions and give to folks designated to answer voice mails and e-mails from the public.

All OK with you?

From: Taylor, Robert
Sent: Tuesday, March 15, 2011 8:10 PM
To: Harrington, Holly
Subject: Potential OPA Questions.docx

Holly,

I have incorporated your comments. I think this is ready to go.

Rob

From:	Coggins, Angela
To:	Taylor, Robert
Cc:	Harrington, Holly; McIntyre, David; Schmidt, Rebecca; Powell, Amy
Subject:	Re: Japanese-Rx-Incident addtl questions - March-14-2011 doc.docx
Date:	Tuesday, March 15, 2011 8:36:00 PM

Thanks so much!! I appreciate all the effort!
Angela Coggins
Policy Director
Office of Chairman Gregory B Jaczko
US Nuclear Regulatory Commission
angela.coggins@nrc.gov/301-415-1828

From: Taylor, Robert
To: Coggins, Angela
Cc: Harrington, Holly; McIntyre, David; Schmidt, Rebecca; Powell, Amy
Sent: Tue Mar 15 20:29:17 2011
Subject: Japanese-Rx-Incident addtl questions - March-14-2011 doc.docx

Angela,

We have done our best to incorporate your questions into the Chairman's Q&As that were developed earlier today and provided to OCA. The updated set of Q&As is undergoing ET review and we will hopefully have it to you in the near future. The attached provides a roadmap of where we believe the responses can be found. A few questions fell into the broader "After this event is over, we will determine what changes need to be made in the US" message. I did not directly incorporate them, but you can see a draft response in the attached.

Regarding the third question about past events, I did not try to evaluate all of the events you listed. I would propose sticking to the party line, in that, "The NRC routinely reassess its regulatory requirements in light of new operating experience and plant events."

Regards,
Rob

From:	Harrington, Holly
To:	Harrington, Holly; Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David; Chandrathil, Prema; Dricks, Victor; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Screnci, Diane; Sheehan, Neil; Uselding, Lara; Tobin, Jennifer; Wittick, Susan
Cc:	Landau, Mindy; Janbergs, Holly; Akstulewicz, Brenda; Shannon, Valerie; Taylor, Robert
Subject:	RE: Senate Hearing on Thursday
Date:	Tuesday, March 15, 2011 8:39:00 PM
Attachments:	Q&AforRespondingtothePublic.docx

These Q&As for use in responding to the public have been approved for verbal use. We will also consider posting them. Hopefully, these will help.

From: Harrington, Holly
Sent: Tuesday, March 15, 2011 5:47 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
Cc: Landau, Mindy
Subject: Senate Hearing on Thursday

New: **Nuclear Crisis in Japan**
Senate Environment and Public Works Committee (Chairwoman Boxer, D-Calif.) will hold a briefing on the ongoing crisis associated with nuclear power facilities in Japan, including potential ramifications for the United States. *3:30 p.m., 406 Dirksen*

Questions and Answers for OPA:

1. **Can this happen here?**

   The events that have occurred in Japan are the result of a combination of highly unlikely natural disasters. These include the fifth largest earthquake in recorded history and the resulting devastating tsunami. It is highly unlikely that a similar event could occur in the United States.

2. **I live near a nuclear power plant similar to the ones having trouble in Japan. How can we now be confident that this plant won't experience a similar problem?**

   U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. 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 is confident that the robust design of these plants makes it highly unlikely that a similar event could occur in the United States.

3. **Has this crisis changed your opinion about the safety of U.S. nuclear power plants?**

   No. The NRC remains confident that the design of U.S. nuclear power plants ensures the continued protection of public health and safety and the environment.

4. **With all this happening, how can the NRC continue to approve new nuclear power plants?**

   It is premature to speculate what, if any, effect the events in Japan will have on the licensing of new nuclear power plants.

5. **What is the NRC doing in response to the situation in Japan?**

   The NRC has taken a number of actions:
   a. Since the beginning of the event, the NRC has continuously manned its Operations Center in Rockville, MD in order to gather and examine all available information as part of the effort to analyze the event and understand its implications both for Japan and the United States.
   b. A team of 11 officials from the NRC with expertise in boiling water nuclear reactors have deployed to Japan as part of a U.S. International Agency for International Development (USAID) team.
   c. The NRC has spoken with its counterpart agency in Japan, offering the assistance of U.S. technical experts.

d. The NRC is coordinating its actions with other Federal agencies as part of the U.S. government response.

6. What other U.S. agencies are involved, and what are they doing?

The entire federal family is responding to this event. The NRC is closely coordinating its efforts with the White House, DOE, DOD, USAID, and others. The U.S. government is providing whatever support requested by the Japanese government.

7. What else *can* go wrong?

The NRC is continuously monitoring the developments at the nuclear power plants in Japan. Circumstances are constantly evolving and it would be inappropriate to speculate on how this situation might develop over the coming days.

8. What is the worst-case scenario?

In a nuclear emergency, the most important action is to ensure the core is covered with water to provide cooling to remove any heat from the fuel rods. Without adequate cooling, the fuel rods will melt. Should the final containment structure fail, radiation from these melting fuel rods would be released to the atmosphere and additional protective measures may be necessary depending on factors such as prevailing wind patterns.

9. The United States has troops in Japan and has sent ships to help the relief effort – are they in danger from the radiation?

The NRC is not the appropriate federal agency to answer this question. DOD is better suited to provide information regarding its personnel.

10. Is there a danger of radiation making it to the United States?

In response to nuclear emergencies, the NRC works with other U.S. agencies to monitor radioactive releases and predict their path. The NRC continues to monitor information regarding wind patterns near the Japanese nuclear power plants. Nevertheless, given the thousands of miles between the two countries, Hawaii, Alaska, the U.S. Territories and the U.S. West Coast are not expected to experience any harmful levels of radioactivity.

11. Is the U.S. government tracking the radiation released from the Japanese plants?

Yes, a number of U.S. agencies are involved in monitoring and assessing radiation including EPA, DOE, and NRC. The best source of additional information is the Environmental Protection Agency.

12. 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.

13. The radiation "plume" seems to be going out to sea – what is the danger of it reaching Alaska? Hawaii? The west coast?

See response to Question 10.

14. I live in the Western United States – should I be taking potassium iodide (KI)?

At this time, the NRC does not believe that protective measures are necessary in the United States. We do not expect any U.S. states or territories to experience harmful levels of radioactivity. In the unlikely event that circumstances change, U.S. residents should listen to the protective action decisions of their states and counties. These protective action decisions could include actions such as sheltering, evacuation, or taking potassium iodide. The NRC will provide technical assistance to the states should they request it.

15. Are there other protective measures I should be taking?

At this time, the NRC does not believe that protective measures are necessary in the United States. We do not expect any U.S. states or territories to experience harmful levels of radioactivity. In the unlikely event that circumstances change, U.S. residents should listen to the protective action decisions of their states and counties. These protective action decisions could include actions such as sheltering, evacuation, or taking potassium iodide. The NRC will provide technical assistance to the states should they request it. United States citizens in Japan are encouraged to follow the protective measures recommended by the Japanese government. These measures appear to be consistent with steps the United States would take.

16. What are the risks to my children?

See response to Question 15.

17. My family has planned a vacation to Hawaii/Alaska/Seattle next week – is it safe to go, or should we cancel our plans?

The NRC does not expect that residents of the United States or its territories are at any risk of exposure to harmful levels of radiation resulting from the events in Japan. Any changes to travel are a personal decision. The NRC is unaware of any travel restrictions within the United States or its territories.

18. What are the short-term and long-term effects of exposure to radiation?

The NRC does not expect that residents of the United States or it territories are at any risk of exposure to harmful levels of radiation resulting from the events in Japan.

On a daily basis, people are exposed to naturally occurring sources of radiation, such as from the sun or medical X-rays. The resulting effects are dependent on the strength and type of radiation as well as the duration of exposure.

19. I am traveling to Asia (not Japan). Should I adjust my travel plans to avoid flying through plume or being contaminated once on the ground?

The NRC is not the responsible federal agency to advise U.S. citizens on foreign travel restrictions. That responsibility belongs to the Department of State.

20. **What is the official agency to report radiation numbers and what is the public contact?**

NRC regulations require nuclear power plants to report any radiation doses detected at the plant that could be harmful to the public. This would include doses that are generated by the plant or by an external source. During an event in the U.S., it is the state's responsibility to provide protective action decisions for public health and safety. For this incident, the Japanese are responsible for reporting the public dose; nevertheless, should radiation doses be detected within the U.S., it would still be the state's responsibility to provide protective action decisions for public health and safety.

21. How many plants are located in seismic areas?

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

22. Where would I get IOSAT Potassium Iodide if my city should experience fallout from the Japanese nuclear disaster? Is this the right precaution or is there anything else that can be done to protect myself?

We do not expect any U.S. states or territories to experience harmful levels of radioactivity. As such, we do not believe that there is any need for residents of the United States to take potassium iodide. U.S. residents should listen to the protective action decisions by their states and counties. If necessary, protective action decisions could include actions such as sheltering, evacuating, or taking potassium iodide.

Additional information regarding the use of potassium iodide can be found on NRC's webpage at the following link:
http://www.nrc.gov/about-nrc/emerg-preparedness/about-emerg-preparedness/potassium-iodide-use.html

Since Potassium Iodide is classified as a drug. Additional information is on the Food and Drug Administration's web site. www.fda.gov

23. My loved one is overseas, how do I find out if they are ok?

We are directing public inquiries with regard to concern for loved ones overseas to the State Department, Consular Services at 202-647-7004.

From:	Harrington, Holly
To:	Harrington, Holly; Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David; Chandrathil, Prema; Dricks, Victor; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Screnci, Diane; Sheehan, Neil; Uselding, Lara; Tobin, Jennifer; Wittick, Susan
Cc:	Landau, Mindy; Janbergs, Holly; Akstulewicz, Brenda; Shannon, Valerie; Taylor, Robert
Subject:	RE: Senate Hearing on Thursday
Date:	Tuesday, March 15, 2011 8:39:38 PM
Attachments:	Q&AforRespondingtothePublic.docx

These Q&As for use in responding to the public have been approved for verbal use. We will also consider posting them. Hopefully, these will help.

From: Harrington, Holly
Sent: Tuesday, March 15, 2011 5:47 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
Cc: Landau, Mindy
Subject: Senate Hearing on Thursday

New: **Nuclear Crisis in Japan**
Senate Environment and Public Works Committee (Chairwoman Boxer, D-Calif.) will hold a briefing on the ongoing crisis associated with nuclear power facilities in Japan, including potential ramifications for the United States. *3:30 p.m., 406 Dirksen*

Questions and Answers for OPA:

1. **Can this happen here?**

   The events that have occurred in Japan are the result of a combination of highly unlikely natural disasters. These include the fifth largest earthquake in recorded history and the resulting devastating tsunami. It is highly unlikely that a similar event could occur in the United States.

2. **I live near a nuclear power plant similar to the ones having trouble in Japan. How can we now be confident that this plant won't experience a similar problem?**

   U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. 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 is confident that the robust design of these plants makes it highly unlikely that a similar event could occur in the United States.

3. **Has this crisis changed your opinion about the safety of U.S. nuclear power plants?**

   No. The NRC remains confident that the design of U.S. nuclear power plants ensures the continued protection of public health and safety and the environment.

4. **With all this happening, how can the NRC continue to approve new nuclear power plants?**

   It is premature to speculate what, if any, effect the events in Japan will have on the licensing of new nuclear power plants.

5. **What is the NRC doing in response to the situation in Japan?**

   The NRC has taken a number of actions:
   a. Since the beginning of the event, the NRC has continuously manned its Operations Center in Rockville, MD in order to gather and examine all available information as part of the effort to analyze the event and understand its implications both for Japan and the United States.
   b. A team of 11 officials from the NRC with expertise in boiling water nuclear reactors have deployed to Japan as part of a U.S. International Agency for International Development (USAID) team.
   c. The NRC has spoken with its counterpart agency in Japan, offering the assistance of U.S. technical experts.

d. The NRC is coordinating its actions with other Federal agencies as part of the U.S. government response.

6. What other U.S. agencies are involved, and what are they doing?

The entire federal family is responding to this event. The NRC is closely coordinating its efforts with the White House, DOE, DOD, USAID, and others. The U.S. government is providing whatever support requested by the Japanese government.

7. What else can go wrong?

The NRC is continuously monitoring the developments at the nuclear power plants in Japan. Circumstances are constantly evolving and it would be inappropriate to speculate on how this situation might develop over the coming days.

8. What is the worst-case scenario?

In a nuclear emergency, the most important action is to ensure the core is covered with water to provide cooling to remove any heat from the fuel rods. Without adequate cooling, the fuel rods will melt. Should the final containment structure fail, radiation from these melting fuel rods would be released to the atmosphere and additional protective measures may be necessary depending on factors such as prevailing wind patterns.

9. The United States has troops in Japan and has sent ships to help the relief effort – are they in danger from the radiation?

The NRC is not the appropriate federal agency to answer this question. DOD is better suited to provide information regarding its personnel.

10. Is there a danger of radiation making it to the United States?

In response to nuclear emergencies, the NRC works with other U.S. agencies to monitor radioactive releases and predict their path. The NRC continues to monitor information regarding wind patterns near the Japanese nuclear power plants. Nevertheless, given the thousands of miles between the two countries, Hawaii, Alaska, the U.S. Territories and the U.S. West Coast are not expected to experience any harmful levels of radioactivity.

11. Is the U.S. government tracking the radiation released from the Japanese plants?

Yes, a number of U.S. agencies are involved in monitoring and assessing radiation including EPA, DOE, and NRC. The best source of additional information is the Environmental Protection Agency.

12. 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.

13. The radiation "plume" seems to be going out to sea – what is the danger of it reaching Alaska? Hawaii? The west coast?

See response to Question 10.

14. I live in the Western United States – should I be taking potassium iodide (KI)?

At this time, the NRC does not believe that protective measures are necessary in the United States. We do not expect any U.S. states or territories to experience harmful levels of radioactivity. In the unlikely event that circumstances change, U.S. residents should listen to the protective action decisions of their states and counties. These protective action decisions could include actions such as sheltering, evacuation, or taking potassium iodide. The NRC will provide technical assistance to the states should they request it.

15. Are there other protective measures I should be taking?

At this time, the NRC does not believe that protective measures are necessary in the United States. We do not expect any U.S. states or territories to experience harmful levels of radioactivity. In the unlikely event that circumstances change, U.S. residents should listen to the protective action decisions of their states and counties. These protective action decisions could include actions such as sheltering, evacuation, or taking potassium iodide. The NRC will provide technical assistance to the states should they request it. United States citizens in Japan are encouraged to follow the protective measures recommended by the Japanese government. These measures appear to be consistent with steps the United States would take.

16. What are the risks to my children?

See response to Question 15.

17. My family has planned a vacation to Hawaii/Alaska/Seattle next week – is it safe to go, or should we cancel our plans?

The NRC does not expect that residents of the United States or its territories are at any risk of exposure to harmful levels of radiation resulting from the events in Japan. Any changes to travel are a personal decision. The NRC is unaware of any travel restrictions within the United States or its territories.

18. What are the short-term and long-term effects of exposure to radiation?

The NRC does not expect that residents of the United States or it territories are at any risk of exposure to harmful levels of radiation resulting from the events in Japan.

On a daily basis, people are exposed to naturally occurring sources of radiation, such as from the sun or medical X-rays. The resulting effects are dependent on the strength and type of radiation as well as the duration of exposure.

19. I am traveling to Asia (not Japan). Should I adjust my travel plans to avoid flying through plume or being contaminated once on the ground?

The NRC is not the responsible federal agency to advise U.S. citizens on foreign travel restrictions. That responsibility belongs to the Department of State.

20. **What is the official agency to report radiation numbers and what is the public contact?**

NRC regulations require nuclear power plants to report any radiation doses detected at the plant that could be harmful to the public. This would include doses that are generated by the plant or by an external source. During an event in the U.S., it is the state's responsibility to provide protective action decisions for public health and safety. For this incident, the Japanese are responsible for reporting the public dose; nevertheless, should radiation doses be detected within the U.S., it would still be the state's responsibility to provide protective action decisions for public health and safety.

21. How many plants are located in seismic areas?

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

22. Where would I get IOSAT Potassium Iodide if my city should experience fallout from the Japanese nuclear disaster? Is this the right precaution or is there anything else that can be done to protect myself?

We do not expect any U.S. states or territories to experience harmful levels of radioactivity. As such, we do not believe that there is any need for residents of the United States to take potassium iodide. U.S. residents should listen to the protective action decisions by their states and counties. If necessary, protective action decisions could include actions such as sheltering, evacuating, or taking potassium iodide.

Additional information regarding the use of potassium iodide can be found on NRC's webpage at the following link:
http://www.nrc.gov/about-nrc/emerg-preparedness/about-emerg-preparedness/potassium-iodide-use.html

Since Potassium Iodide is classified as a drug. Additional information is on the Food and Drug Administration's web site. www.fda.gov

23. My loved one is overseas, how do I find out if they are ok?

We are directing public inquiries with regard to concern for loved ones overseas to the State Department, Consular Services at 202-647-7004.

From: Shannon, Valerie
To: Burnell, Scott; McIntyre, David
Cc: Couret, Ivonne
Subject: Call from Washington Post
Date: Tuesday, March 15, 2011 12:22:12 PM

Call Rob Stein from the Washington Post
Phone Number: 202-334-7338
Re: Potassium Iodide.
Val

LL/246

From: Couret, Ivonne
To: Burnell, Scott; McIntyre, David
Cc: Screnci, Diane
Subject: RE: Media Request (Bethany)
Date: Tuesday, March 15, 2011 12:47:06 PM

Please follow up

From: Screnci, Diane
Sent: Tuesday, March 15, 2011 12:05 PM
To: Couret, Ivonne
Subject: RE: Media Request (Bethany)

Wondering why this wasn't passed along to Scott, as requested by the reporter.

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

From: Couret, Ivonne
Sent: Tuesday, March 15, 2011 11:41 AM
To: Screnci, Diane
Subject: FW: Media Request (Bethany)

Can you follow up with this reporter. Ivonne

From: OPA Resource
Sent: Tuesday, March 15, 2011 11:02 AM
To: Couret, Ivonne
Subject: Media Request (Bethany)

Tom Olson from the Pittsburgh Tribune Review is looking for Scott or Dave to do a follow-up story for him on nuclear reactors in light of the situation in Japan.

412-320-7854 ✓

Office of Public Affairs
US Nuclear Regulatory Commission
301-415-8200
opa.resource@nrc.gov

LLL247

From: Couret, Ivonne
To: McIntyre, David
Subject: Media Questions on current PRess Release
Date: Tuesday, March 15, 2011 12:34:59 PM

Cyndi@TV-asahi.net
Cyndi
Phone 202-347-2933 ✓

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

(301) 415-8205
ivonne.couret@nrc.gov

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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/

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

Please consider the environmental impact before printing this email.

LLL/248

From: Akstulewicz, Brenda
To: McIntyre, David
Subject: Quote
Date: Tuesday, March 15, 2011 12:39:28 PM

Miriam
East County Magazine
(San Diego)
619-698-7617

You were quoted by the British and wants to make sure quote is correct.

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

111/249

From:	Burnell, Scott
To:	Shannon, Valerie; McIntyre, David
Cc:	Couret, Ivonne
Subject:	RE: Call from Washington Post
Date:	Tuesday, March 15, 2011 12:46:15 PM

I'll be replying if no one else has.

From: Shannon, Valerie
Sent: Tuesday, March 15, 2011 12:22 PM
To: Burnell, Scott; McIntyre, David
Cc: Couret, Ivonne
Subject: Call from Washington Post

Call Rob Stein from the Washington Post
Phone Number: 202-334-7338
Re: Potassium Iodide.
Val

LLL/250

From: Couret, Ivonne
To: McIntyre, David; Burnell, Scott
Subject: Media question about press release -CBS
Date: Tuesday, March 15, 2011 12:48:39 PM

From: Tanner [mailto:kenneyt@cbsnews.com]
Sent: Monday, March 14, 2011 9:22 PM
To: OPA Resource
Subject: Request to Speak w/Your Office

Below is the result of your feedback form. It was submitted by

Tanner (kenneyt@cbsnews.com) on Monday, March 14, 2011 at 21:22:13
---

comments: Hello,

I'm Tanner Kenney and I work with CBS Radio News. We were wondering if we could speak with someone in your office regarding the following press release: http://www.nrc.gov/reading-rm/doc-collections/news/2011/11-048.pdf

If your department to get back to us at: (212) 975-1115 or via the e-mail address listed below, it would be greatly appreciated.

Thank you.

organization: CBS Radio News

address1:

address2:

city: New York

state: NY

zip: 10019

country:

phone: 212-975-1115

LLL/251

From: Couret, Ivonne
To: McIntyre, David; Burnell, Scott
Subject: FW: Interview Request
Date: Tuesday, March 15, 2011 1:26:02 PM

From: Janbergs, Holly
Sent: Tuesday, March 15, 2011 12:31 PM
To: Couret, Ivonne
Subject: Interview Request

Molly Hennessy-Fiske from the LA Times would like an on-the-record interview with someone discussing the risks associated with nuclear releases. Her deadline is today.

213-237-7107✓

Beth Janbergs
Public Affairs Assistant
301-415-8211

LLL/252

From: Harrington, Holly
To: McIntyre, David; Burnell, Scott
Subject: RE: Msnbc.com: potassium iodide?
Date: Tuesday, March 15, 2011 1:27:16 PM

Scott. Pls call him

From: McIntyre, David
Sent: Tuesday, March 15, 2011 1:26 PM
To: Harrington, Holly; Burnell, Scott
Subject: RE: Msnbc.com: potassium iodide?

Scott is the KI expert today.

From: Harrington, Holly
Sent: Tuesday, March 15, 2011 1:25 PM
To: Burnell, Scott; McIntyre, David
Subject: FW: Msnbc.com: potassium iodide?

I don't recall what we're doing with this. Can one of you call and figure it out??

From: Jonel Aleccia [mailto:JoNel.Aleccia@msnbc.com]
Sent: Tuesday, March 15, 2011 1:19 PM
To: Harrington, Holly
Subject: Msnbc.com: potassium iodide?

Hi Holly,
Just checking in about answers to my questions about NRC and potassium iodide?
Thanks,
JoNel

JoNel Aleccia, health writer/editor 425.705.1839 ✓
msnbc digital network | TODAY.com

From: McIntyre, David
To: Harrington, Holly
Subject: RE: Call from Washington Post
Date: Tuesday, March 15, 2011 2:09:00 PM

She's still disseminating to multiple people.

From: Harrington, Holly
Sent: Tuesday, March 15, 2011 1:27 PM
To: McIntyre, David; Burnell, Scott; Couret, Ivonne; Shannon, Valerie
Subject: RE: Call from Washington Post

Sorry. Val did not know the process. She does now. Media calls to Ivonne to disseminate

---

From: McIntyre, David
Sent: Tuesday, March 15, 2011 1:25 PM
To: Burnell, Scott; Couret, Ivonne; Shannon, Valerie; Harrington, Holly
Subject: RE: Call from Washington Post

That's why these things shouldn't be sent to three people!

From: Burnell, Scott
Sent: Tuesday, March 15, 2011 1:22 PM
To: Couret, Ivonne; McIntyre, David
Subject: RE: Call from Washington Post

DONE!!

From: Couret, Ivonne
Sent: Tuesday, March 15, 2011 1:19 PM
To: McIntyre, David; Burnell, Scott
Subject: FW: Call from Washington Post

Who is taking this call please advise when complete

From: Shannon, Valerie
Sent: Tuesday, March 15, 2011 12:22 PM
To: Burnell, Scott; McIntyre, David
Cc: Couret, Ivonne
Subject: Call from Washington Post

Call Rob Stein from the Washington Post
Phone Number: 202-334-7338
Re: Potassium Iodide.
Val

LLL/254

From:	Couret, Ivonne
To:	Brenner, Eliot; McIntyre, David; Harrington, Holly
Subject:	Media Request - 60 Minutes want to be with NRC team on the ground in Japan
Date:	Tuesday, March 15, 2011 2:29:14 PM
Importance:	High

Rachel Kun
CBS – 60 minutes t
In Japan
NRC has additional experts link up and interview and show work there. Wants to get footage in Japan/interview for a hour with team in Japan. Wants to air this for this Sunday broad.
212-975-7974 ✓
kunr@cbsnews.com

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

☎ **(301) 415-8205**
✉ **ivonne.couret@nrc.gov**

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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/

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

LLL/255

From:	Couret, Ivonne
To:	McIntyre, David
Subject:	Media Request - FW: Dow Jones - Questions on plant safety
Date:	Tuesday, March 15, 2011 2:34:28 PM

From: Steger (Tucci), Christine
Sent: Tuesday, March 15, 2011 1:33 PM
To: Couret, Ivonne
Subject: Dow Jones - Questions on plant safety

Call from: Naureen Malik
Organization: Dow Jones
Number: 212-416-4210 ✓

Questions on plant safety

LL/256

From: Couret, Ivonne
To: McIntyre, David
Subject: FW: Quick question
Date: Tuesday, March 15, 2011 4:23:51 PM

Want to try this TV person?

From: Janbergs, Holly
Sent: Tuesday, March 15, 2011 2:12 PM
To: Couret, Ivonne
Subject: Quick question

Jane Miller from WBAL in Baltimore – 30 seconds

410-458-4107

Beth Janbergs
Public Affairs Assistant
301-415-8211

111/257

From: Couret, Ivonne
To: Burnell, Scott; McIntyre, David; Brenner, Eliot
Subject: FW: Interview Request NPR
Date: Tuesday, March 15, 2011 12:31:10 PM

Left message that we are unable to accommodate interview put placed in list

---

From: Steger (Tucci), Christine
Sent: Tuesday, March 15, 2011 11:34 AM
To: Couret, Ivonne
Subject: Interview Request NPR

Call from: Eliza Barclay
Organization: NPR
Number: 202-513-2775 ✓

Request interview with Chuck Casto

LLL/258

From: Couret, Ivonne
To: McIntyre, David
Subject: Third Media Request by this outfitFW: KGO Radio Interview Request
Date: Tuesday, March 15, 2011 5:08:31 PM

-----Original Message-----
From: OPA Resource
Sent: Tuesday, March 15, 2011 2:55 PM
To: Couret, Ivonne
Subject: FW: KGO Radio Interview Request

-----Original Message-----
From: Claudia Lamb [mailto:claudialamb@abc-sf.com]
Sent: Tuesday, March 15, 2011 1:35 PM
To: OPA Resource
Subject: KGO Radio Interview Request

Good morning,

My name is Claudia Lamb. I produce the morning news at KGO radio in San Francisco, the ABC affiliate.

I'm hoping you have someone available at either 9:15, 10:15 or 11:15 am EDT tomorrow 3/16/11 morning to discuss the Japanese nuclear situation. There would be a 3 minute Q & A with our anchors, Ed and Jennifer.

Thank you for your time.

Best,

Claudia Lamb
Producer
Morning News
KGO Radio
NewsTalk 810
(415) 216 - 1300

LL/259

From: McIntyre, David
To: Hannah, Roger
Subject: FW: Media Request - FW: Dow Jones - Questions on plant safety
Date: Tuesday, March 15, 2011 5:57:00 PM

Roger – I spoke to the nice Naureen about waste confidence, spent fuel pools, and Japan; but she stumped me with Crystal River. She may be on the phone with you right now if you're still in the office. If not, could you please call her?

Thanks,
Dave

From: Couret, Ivonne
Sent: Tuesday, March 15, 2011 2:34 PM
To: McIntyre, David
Subject: Media Request - FW: Dow Jones - Questions on plant safety

---

From: Steger (Tucci), Christine
Sent: Tuesday, March 15, 2011 1:33 PM
To: Couret, Ivonne
Subject: Dow Jones - Questions on plant safety

Call from: Naureen Malik
Organization: Dow Jones
Number: 212-416-4210

Questions on plant safety

LLL/360

From: McIntyre, David
To: Couret, Ivonne
Subject: RE: Quick question
Date: Tuesday, March 15, 2011 5:58:00 PM

This was the wrong number. Oh well.

From: Couret, Ivonne
Sent: Tuesday, March 15, 2011 4:24 PM
To: McIntyre, David
Subject: FW: Quick question

Want to try this TV person?

From: Janbergs, Holly
Sent: Tuesday, March 15, 2011 2:12 PM
To: Couret, Ivonne
Subject: Quick question

Jane Miller from WBAL in Baltimore – 30 seconds

410-458-4107 ✓

Beth Janbergs
Public Affairs Assistant
301-415-8211

LLL/2661

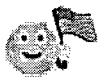
From:	Couret, Ivonne
To:	McIntyre, David
Subject:	Media Inquiry - FW: Reporter Information
Date:	Tuesday, March 15, 2011 6:26:18 PM

Please follow up

From: Akstulewicz, Brenda
Sent: Tuesday, March 15, 2011 5:05 PM
To: Couret, Ivonne
Subject: Reporter Information

Justin Solomon
CNBC
201 735 2319 ✓
How many sites store spent fuel and how many states are included.

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



LL 3263

From:	McIntyre, David
To:	Couret, Ivonne
Subject:	RE: Media Inquiry - FW: Reporter Information
Date:	Tuesday, March 15, 2011 6:53:00 PM

Done. As was NBC. Discover. Dow Jones.

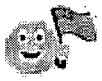
From: Couret, Ivonne
Sent: Tuesday, March 15, 2011 6:26 PM
To: McIntyre, David
Subject: Media Inquiry - FW: Reporter Information

Please follow up

From: Akstulewicz, Brenda
Sent: Tuesday, March 15, 2011 5:05 PM
To: Couret, Ivonne
Subject: Reporter Information

Justin Solomon
CNBC
201 735 2319 ✓
How many sites store spent fuel and how many states are included.

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



uu263

From: Droggitis, Spiros
Sent: Tuesday, March 15, 2011 11:58 AM
To: Powell, Amy
Subject: RE: revised press release

Curious, that's what I have for Mary Frances, but the kick back did not have the . between Mary and Francis. Ethan appears corrects as well.

From: Powell, Amy
Sent: Tuesday, March 15, 2011 11:54 AM
To: Droggitis, Spiros
Subject: RE: revised press release

Yes, for future reference:

Mary.frances.repko@mail.house.gov
Ethan.Rosenkranz@mail.house.gov

From: Droggitis, Spiros
Sent: Tuesday, March 15, 2011 11:50 AM
To: Powell, Amy
Subject: RE: revised press release

Rejected from Mary Frances and Ethan Rosencratz (sp). Can you forward to them?

From: Powell, Amy
Sent: Tuesday, March 15, 2011 11:46 AM
To: Droggitis, Spiros
Subject: revised press release

Would you send the revised press release to the Japan list? I am concerned about list fidelity if I try to relay it to Jeannette at this point…

Thanks
AP

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

LU/264

From: Uselding, Lara
To: Stone@kron4.com
Subject: FW: WORKING ON STORY...
Date: Tuesday, March 15, 2011 6:25:00 PM

We are working with other U.S. government agencies to monitor the situation in Japan — and to monitor for radioactive releases and to be prepared to predict their path.

Fortunately, all the available information at this time indicates weather conditions have taken the small releases from the Fukushima reactors out to sea away from the population.

And, importantly, given the thousands of miles between Japan and us – including Hawaii, Alaska, the U.S. territories and the U.S. West Coast – we are not expecting to experience any harmful levels of radioactivity here. We would like to repeat — **we are not expecting to experience any harmful levels of radioactivity here.**

Lara Uselding
U.S. Nuclear Regulatory Commission (NRC)
Public Affairs - Region IV

Lara.Uselding@nrc.gov

For more information visit **www.nrc.gov**

From: OPA Resource
Sent: Tuesday, March 15, 2011 5:23 PM
To: Uselding, Lara
Subject: FW: WORKING ON STORY...

From: JR Stone [mailto:Stone@kron4.com]
Sent: Tuesday, March 15, 2011 5:30 PM
To: OPA Resource
Subject: WORKING ON STORY...

My name is J.R. Stone and I'm a reporter at Channel 4 KRON in San Francisco. I have talked with experts who tell me that effects from the explosions in Japan will not harm us. I'm curious is there a policy in place if radiation levels were picked up on the west coast specifically in California or here in San Francisco? Also what levels would be deemed dangerous to those living here in America? I know the data collected at towers like the one here in San Francisco goes straight to Alabama but I was just looking at what happens after that. I'm putting a story together for 4 PM and 5 PM pacific time.

Thank you,

J.R. Stone
KRON Reporter
(918) 237-9435

LU 3265

stone@kron4.com

For more weather and traffic in the morning, watch the biggest block of news in the Bay Area, the KRON 4 Morning News, weekdays from 4-to-11am. 7-hours of news every weekday morning. KRON 4, The Bay Area's News Station.

From:	Hayden, Elizabeth
To:	Brenner, Eliot; Harrington, Holly; Burnell, Scott; McIntyre, David
Subject:	Fw: EXAMPLE OF REQUEST: Earthquake plans/reports/risk analysis for San Onofre nuclear power plant
Date:	Tuesday, March 15, 2011 1:25:41 AM

Just saw this e-mail re JMeserve's request. It may be too late for her report but it is useful for future inquiries.

From: Stutzke, Martin
To: Ake, Jon; Kammerer, Annie; Hayden, Elizabeth
Cc: Burnell, Scott; Manoly, Kamal; Munson, Clifford; Chokshi, Nilesh
Sent: Mon Mar 14 15:20:33 2011
Subject: RE: EXAMPLE OF REQUEST: Earthquake plans/reports/risk analysis for San Onofre nuclear power plant

It's misleading to say that the GI-199 Safety/Risk Assessment determined which plants were OK and which were not. The purpose of the assessment was to determine, on a generic basis, if the risk associated with increased seismic hazard estimates in the Central and Eastern US (CEUS) warrants further investigation for potential imposition of cost-justified backfits. We determined that the seismic core-damage frequencies for 27 plants had increased by 1E-5/y or more, relative to what we thought upon conclusion of the Individual Plant Examination of External Events (Generic Letter 88-20, Supplement 4). This finding is the basis for continuing GI-199 and transitioning it to NRR for development of a generic letter that will request information needed to identify potential plant-specific backfits.

We presented a map that showed the locations of the 27 plants in the GI-199 "continue zone" during a public meeting held October 6, 2010 (see Slide #25 in ML102770665). The GI-199 Safety/Risk Assessment (ML100270582) is also publically available. It does not specifically identify the 27 plants, but contains information in appendices that could be used to figure out which CEUS plants are in the "continue zone."

Marty

From: Ake, Jon
Sent: Monday, March 14, 2011 2:08 PM
To: Kammerer, Annie; Hayden, Elizabeth
Cc: Burnell, Scott; Manoly, Kamal; Munson, Clifford; Stutzke, Martin; Chokshi, Nilesh
Subject: RE: EXAMPLE OF REQUEST: Earthquake plans/reports/risk analysis for San Onofre nuclear power plant

As Annie has pointed out, all 96 operating reactors in the Central and Eastern U.S. were evaluated as part of the GI-199 assessment. Currently a Generic Letter is being prepared requesting additional seismic and plant-specific information, that letter will be sent to all NPP licensees in the CEUS. It is important to note that the Generic Letter has not yet been finalized, the specific information requests are being developed and reviewed internally. So, at this time we are unable to state exactly what path (analysis, back-fit etc.) a particular plant may follow as a result of the Generic Letter.

Kamal, Marty, Cliff-
Is this an accurate representation of our current path?

LLU/26

From: Kammerer, Annie
Sent: Monday, March 14, 2011 11:53 AM
To: Hayden, Elizabeth
Cc: Burnell, Scott; Ake, Jon
Subject: RE: EXAMPLE OF REQUEST: Earthquake plans/reports/risk analysis for San Onofre nuclear power plant

The list that was analyzed was basically everything in the CEUS. I don't think we made the list of which plants were OK and which not public due to too much uncertainty. Jon Ake would know.

Jon, can you answer? Did we make the list of plant names and which screened in public?

From: Hayden, Elizabeth
Sent: Monday, March 14, 2011 1:48 PM
To: Kammerer, Annie
Cc: Burnell, Scott
Subject: RE: EXAMPLE OF REQUEST: Earthquake plans/reports/risk analysis for San Onofre nuclear power plant

Is the list of plants that were analyzed and those found problematic public?

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: Kammerer, Annie
Sent: Monday, March 14, 2011 1:24 PM
To: Hayden, Elizabeth
Cc: Burnell, Scott
Subject: RE: EXAMPLE OF REQUEST: Earthquake plans/reports/risk analysis for San Onofre nuclear power plant

Yes. Wolf Creek was analyzed as part of GI-199. It was not one of the plants that the NRC identified as problematic (i.e. staff believes this plant still has adequate margin given the latest ground shaking estimates). However, due to uncertainties in the data available to our staff, we will be sending a letter to all US plants in the central and eastern US.

I hope this helps.

From: Hayden, Elizabeth
Sent: Monday, March 14, 2011 1:18 PM
To: Kammerer, Annie
Cc: Burnell, Scott
Subject: FW: EXAMPLE OF REQUEST: Earthquake plans/reports/risk analysis for San Onofre nuclear power plant

Annie,

Can you help with this question we received from a reporter?

Also, can you verify whether Wolf Creek is one of the plants evaluated in GSI-199?

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: Uselding, Lara
Sent: Monday, March 14, 2011 1:10 PM
To: Hayden, Elizabeth; Screnci, Diane
Subject: EXAMPLE OF REQUEST: Earthquake plans/reports/risk analysis for San Onofre nuclear power plant

---

From: keith.darce@uniontrib.com [mailto:keith.darce@uniontrib.com]
Sent: Monday, March 14, 2011 12:08 PM
To: Uselding, Lara
Subject: Earthquake plans/reports/risk analysis for San Onofre nuclear power plant

Lara,
I am trying to track down any documents on file with the NRC concerning the risk of earthquakes occurring near the San Onofre nuclear plant north of San Diego. I am particularly interested in emergency plans, analysis of the risks faced by the plant from earthquakes and predictions of the types of damage and dangers that could be created by earthquake damage to the plant. I'm also interested in documents looking at the risk and dangers posed by tsunamis to the plant.
Can you tell me if these types of documents exist and when I might be able to get them? I am trying to turn a story around on this topic for tomorrow's (Tuesday's) edition of the paper.
Thanks,
Keith

Keith Darcé
Biotechnology writer
The San Diego Union-Tribune
keith.darce@uniontrib.com
619.293.1020
www.signonsandiego.com/news/business/biotech/
Follow me on Twitter at **KeithDarce**

From:	Mitlyng, Viktoria
To:	Sheehan, Neil; Screnci, Diane; McIntyre, David
Subject:	RE: Lots of NRC viewpoints
Date:	Tuesday, March 15, 2011 9:06:57 AM

It's actually breathtaking...

From: Sheehan, Neil
Sent: Tuesday, March 15, 2011 8:06 AM
To: Mitlyng, Viktoria; Screnci, Diane; McIntyre, David
Subject: RE: Lots of NRC viewpoints

I believe it. Sounds like the reporter took lots of liberties

---

From: Mitlyng, Viktoria
Sent: Tuesday, March 15, 2011 9:03 AM
To: Sheehan, Neil; Screnci, Diane; McIntyre, David
Subject: RE: Lots of NRC viewpoints

Of course, the language in the first part of the quote - What's important to keep in mind, as doomsday scenarios and panic about nuclear power gets aired and promulgated in the United States in the wake of this disaster - has nothing to do with what I actually said...

From: Sheehan, Neil
Sent: Tuesday, March 15, 2011 3:16 AM
To: Screnci, Diane; Mitlyng, Viktoria; McIntyre, David
Subject: Lots of NRC viewpoints

This may be a first. Three NRC PAOs quoted in the same story: http://www.pittsburghlive.com/x/pittsburghtrib/news/pittsburgh/s_727442.html . Of course, the reporter did ID Vika as a FirstEnergy spokeswoman so the NRC views don't seem too overwhelming.

LL/267

From: Taylor, Robert
To: Harrington, Holly; Decker, David; Brenner, Eliot; Burnell, Scott
Cc: Droggitis, Spiros; McIntyre, David
Subject: RE: Radiation Detection/Monitoring
Date: Tuesday, March 15, 2011 12:33:05 PM

Dave McIntyre and I are talking to Spiros right now about this. We are awaiting info from the White House that should clarify the rest of the governments roles and responsibilities. We promised to provide that as soon as we get it

---

From: Harrington, Holly
Sent: Tuesday, March 15, 2011 12:29 PM
To: Decker, David; Brenner, Eliot; Burnell, Scott
Cc: Taylor, Robert
Subject: RE: Radiation Detection/Monitoring

Right now—I believe Rob is the keeper of the Q&As.

Rob – can you address?

From: Decker, David
Sent: Tuesday, March 15, 2011 11:44 AM
To: Brenner, Eliot; Harrington, Holly; Burnell, Scott
Subject: Radiation Detection/Monitoring

Eliot, Holly and Scott,

This bullet in the latest version of the "Talking Points" aspect has been one we've had a bunch of questions on from congressional staffers. Are the other agencies mentioned below DOD/DOE/EPA? The staffers real focus, however, seems to be on which US agency is responsible for monitoring domestic radiation danger. All we've said so far on the domestic monitoring is that DOE/EPA are involved in that (and mentioned the EPA RadNet program). Have you had any questions like this that we can tag on to? Thanks.

- The NRC is working with other U.S. agencies to monitor radioactive releases from Japan and to predict their path.

LL/268

From: McIntyre, David
To: news@dailymail.co.uk
Subject: INCORRECT QUOTE IN STORY ABOUT US NUCLEAR
Date: Tuesday, March 15, 2011 1:15:00 PM

Dear Editors:

Your story on US expecting nuclear fallout, posted here: http://www.dailymail.co.uk/news/article-1366341/Japan-tsumani-earthquake-America-nuclear-accident-radiation-alert.html

Contains a quote attributed to me that radiation has already reached the US. I never said that, and I am fairly confident that I never spoke to one of your reporters.

I do see an alternate version of the story posted here: http://www.dailymail.co.uk/news/article-1366055/Japan-earthquake-tsunami-America-nuclear-alert-Fukushima-explosion.html in which the quote does not appear, and in which my agency's position is misstated as "NRC believes there is no danger of radiation reaching the United States." We have said we do not believe harmful levels of radiation will reach the US.

Please pull the story with the erroneous quote off the Web immediately, and please correct the second story.

David McIntyre
U.S. Nuclear Regulatory Commission
Office of Public Affairs

LU/269

From: McIntyre, David
To: Brenner, Eliot
Subject: EPA
Date: Tuesday, March 15, 2011 2:14:00 PM
Importance: High

Eliot - did you handle this or would you like me to?

Dave

-----Original Message-----
From: LIA04 Hoc
Sent: Tuesday, March 15, 2011 2:09 PM
To: McIntyre, David
Subject: FW: ASAP: PLEASE CALL
Importance: High

Dave - see below sent at 1:21; She and I had played phone tag

-----Original Message-----
From: LIA04 Hoc
Sent: Tuesday, March 15, 2011 1:21 PM
To: Brenner, Eliot
Cc: McIntyre, David
Subject: FW: ASAP: PLEASE CALL
Importance: High

Eliot - Just got off the phone with Adora Andy; I had returned her call earlier, but she's been busy; said she needed to talk with HIGH LEVEL person she and Deputy EPA Administrator can talk to with regard to statement EPA plans to make shortly wrt communications on Air Monitoring Activities - will have NRC piece and want to clear it.

If she doesn't answer - EMAIL HER - SHE WILL SEE IT!!

-----Original Message-----
From: Andy.Adora@epamail.epa.gov [mailto:Andy.Adora@epamail.epa.gov]
Sent: Tuesday, March 15, 2011 12:35 PM
To: LIA04 Hoc
Subject: RE: ASAP: PLEASE CALL

call you back shortly.
Adora Andy
Deputy Associate Administrator
U.S. Environmental Protection Agency
Office of External Affairs and Environmental Education
202-564-2715
andy.adora@epa.gov

From: LIA04 Hoc <LIA04.Hoc@nrc.gov>
To: Adora Andy/DC/USEPA/US@EPA
Cc: "Browder, Rachel" <Rachel.Browder@nrc.gov>, "Virgilio, Rosetta" <Rosetta.Virgilio@nrc.gov>, "Turtil, Richard" <Richard.Turtil@nrc.gov>
Date: 03/15/2011 12:32 PM
Subject: RE: ASAP: PLEASE CALL

LL/270

Adora - Just tried to call you - what can I do to help?

Rosetta Virgilio
State Liaison
NRC Operations Center
301-816-5193
LIA04.HOC@nrc.gov

-----Original Message-----
From: Andy.Adora@epamail.epa.gov [mailto:Andy.Adora@epamail.epa.gov]
Sent: Tuesday, March 15, 2011 12:23 PM
To: Browder, Rachel; LIA04 Hoc; Virgilio, Rosetta; Turtil, Richard
Subject: Re: ASAP: PLEASE CALL

Sorry. Multi-tasking and sent too soon.
I'm with EPA!
Thanks!
Adora Andy
Deputy Associate Administrator
EPA Office of External Affairs
T

----- Original Message -----
From: Adora Andy
Sent: 03/15/2011 12:22 PM EDT
To: "Browder, Rachel" <Rachel.Browder@nrc.gov>; "LIA04 Hoc" <LIA04.Hoc@nrc.gov>; "Virgilio, Rosetta" <Rosetta.Virgilio@nrc.gov>; "Turtil, Richard" <Richard.Turtil@nrc.gov>
Subject: ASAP: PLEASE CALL
Hey NRC folks,
I'm the deputy for communications and Is there a high-level communications person I can talk to asap? 202-527-5866 or 202-564-2715.
Thanks,
Adora

From: McIntyre, David
To: Miriam Raftery
Subject: RE: McIntyre - quote in Daily Mail
Date: Tuesday, March 15, 2011 2:15:00 PM
Attachments: image001.png

I've emailed them, dunno what will come of it ...

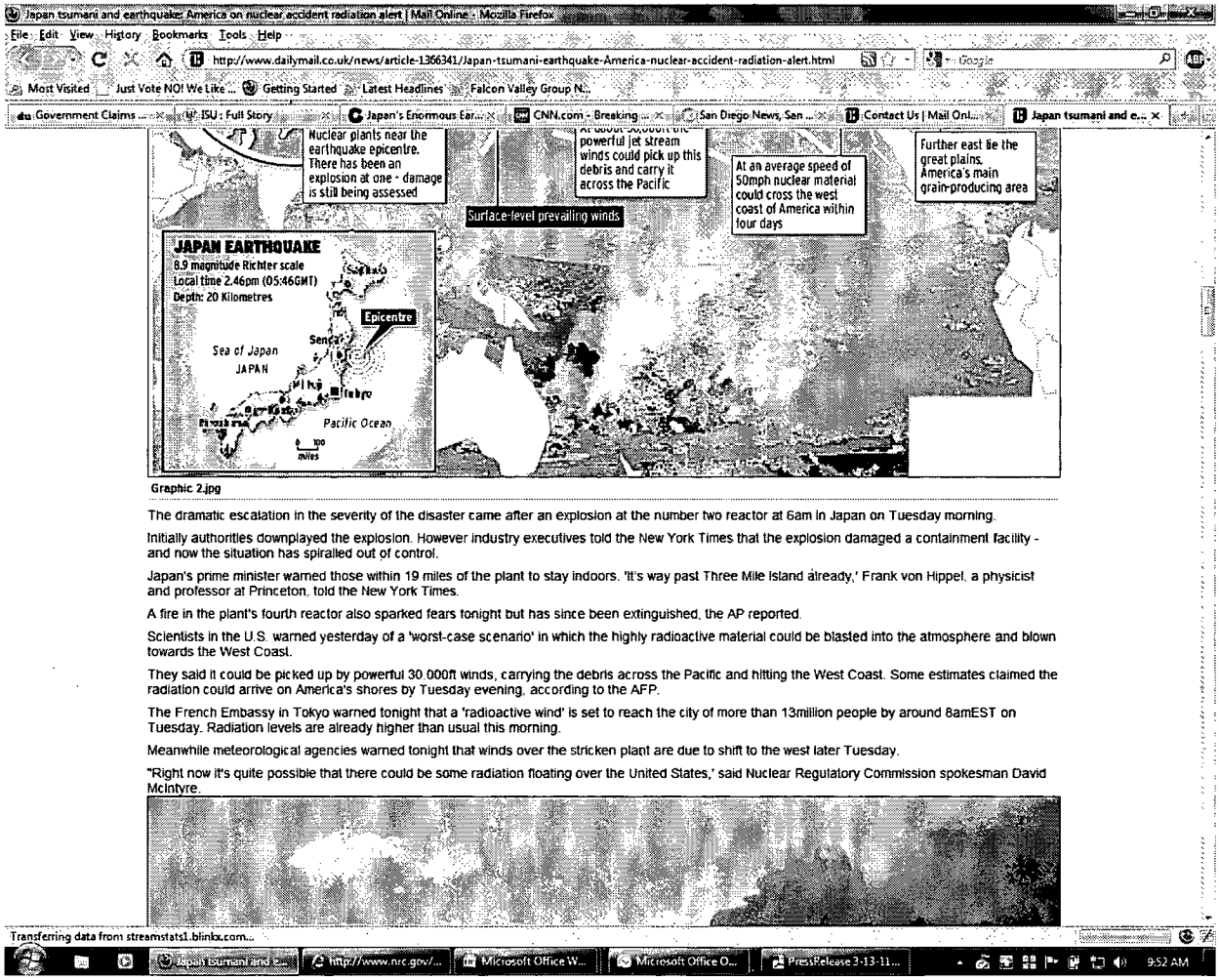
From: Miriam Raftery [mailto:writerink@cox.net]
Sent: Tuesday, March 15, 2011 1:02 PM
To: McIntyre, David
Subject: RE: McIntyre - quote in Daily Mail

You may want to contact them and ask for an official correction to be posted on this one, before other media pick up the quote and run with it. - M

From: McIntyre, David [mailto:David.McIntyre@nrc.gov]
Sent: Tuesday, March 15, 2011 9:56 AM
To: Miriam Raftery
Subject: RE: McIntyre - quote in Daily Mail

Wow. Thanks. I appreciate your skepticism!

From: Miriam Raftery [mailto:writerink@cox.net]
Sent: Tuesday, March 15, 2011 12:54 PM
To: McIntyre, David
Subject: McIntyre - quote in Daily Mail



The dramatic escalation in the severity of the disaster came after an explosion at the number two reactor at 6am in Japan on Tuesday morning.

Initially authorities downplayed the explosion. However industry executives told the New York Times that the explosion damaged a containment facility - and now the situation has spiralled out of control.

Japan's prime minister warned those within 19 miles of the plant to stay indoors. 'It's way past Three Mile Island already,' Frank von Hippel, a physicist and professor at Princeton, told the New York Times.

A fire in the plant's fourth reactor also sparked fears tonight but has since been extinguished, the AP reported.

Scientists in the U.S. warned yesterday of a 'worst-case scenario' in which the highly radioactive material could be blasted into the atmosphere and blown towards the West Coast.

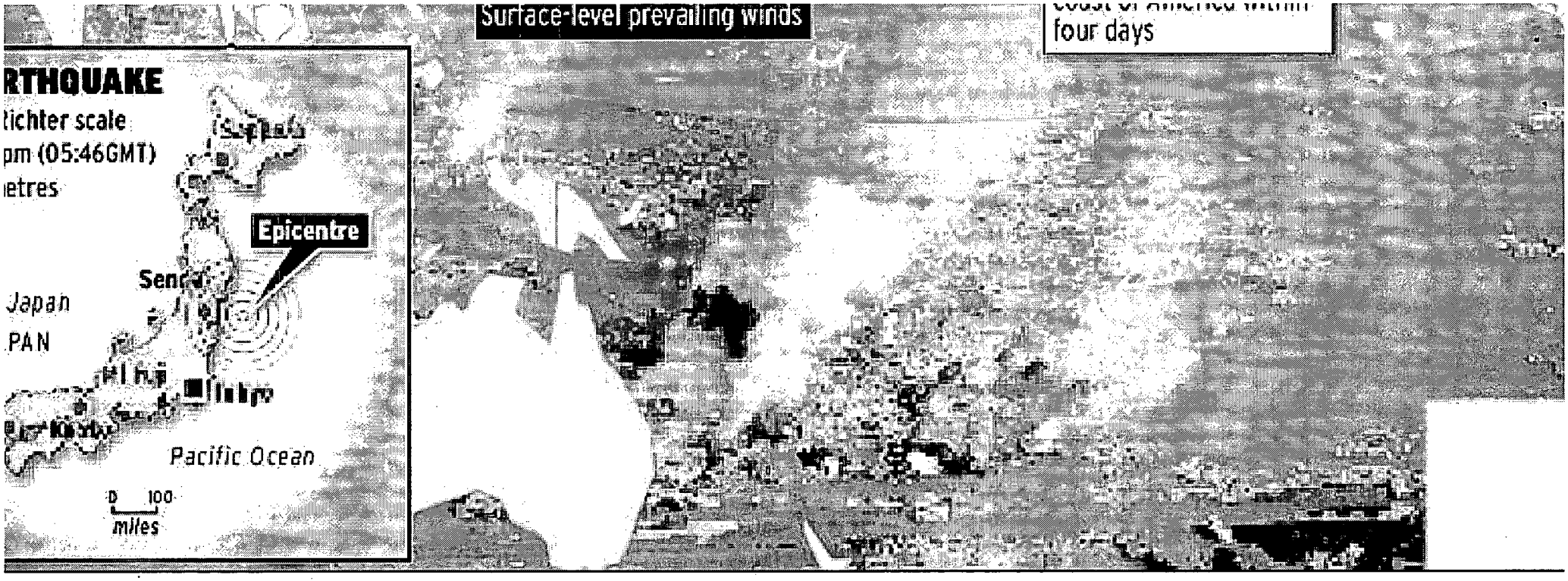
They said it could be picked up by powerful 30,000ft winds, carrying the debris across the Pacific and hitting the West Coast. Some estimates claimed the radiation could arrive on America's shores by Tuesday evening, according to the AFP.

The French Embassy in Tokyo warned tonight that a 'radioactive wind' is set to reach the city of more than 13million people by around 8amEST on Tuesday. Radiation levels are already higher than usual this morning.

Meanwhile meteorological agencies warned tonight that winds over the stricken plant are due to shift to the west later Tuesday.

"Right now it's quite possible that there could be some radiation floating over the United States,' said Nuclear Regulatory Commission spokesman David McIntyre.

LL/271



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From:	Andy.Adora@epamail.epa.gov
To:	McIntyre, David
Cc:	Johnson.Alisha@epamail.epa.gov
Subject:	ACTION: STATEMENT
Date:	Tuesday, March 15, 2011 2:44:11 PM

As the U.S. Nuclear Regulatory Commission has said, we do not expect to see radiation at harmful levels reaching the U.S. from damaged Japanese Nuclear Power Plants. As part of the federal government's continuing effort to make our activities and science transparent and available to the public, EPA will continue to keep all RadNet data available in the current online database. In addition, EPA plans to work with its federal partners to deploy additional monitoring capabilities to parts of the western U.S. and U.S. territories.

As always, the U.S. Environmental Protection Agency (EPA) is utilizing its existing nationwide radiation monitoring system, RadNet, which continuously monitors the nation's air and regularly monitors drinking water, milk and precipitation for environmental radiation. The RadNet online searchable database contains historical data of environmental radiation monitoring data from all fifty states and U.S. territories.

Adora Andy
Deputy Associate Administrator
U.S. Environmental Protection Agency
Office of External Affairs and Environmental Education
202-564-2715
andy.adora@epa.gov

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From: Harrington, Holly
To: McIntyre, David; Couret, Ivonne; Burnell, Scott
Subject: FW: Questions from NJ
Date: Tuesday, March 15, 2011 2:45:14 PM

Pls note – referral of questions on this topic to DHS/TSA. (ignore if you already know this)

From: LIA04 Hoc
Sent: Tuesday, March 15, 2011 2:39 PM
To: Nguyen, Quynh
Cc: McNamara, Nancy; McIntyre, David; Harrington, Holly; Flannery, Cindy; Lukes, Kim; Noonan, Amanda; Rautzen, William; Rivera, Alison; Ryan, Michelle; Turtil, Richard; Virgilio, Rosetta
Subject: FW: Questions from NJ

Quynh – note Q below from NJ

DHS/TSA would be the contact for these: National Operations Center Senior Watch Officer: 202-282-8100
NOC.SWO@dhs.gov

From: McNamara, Nancy
Sent: Tuesday, March 15, 2011 2:19 PM
To: LIA04 Hoc
Cc: Tifft, Doug
Subject: Questions from NJ

Will the US be monitoring people coming into the country from Japan or those that travel through Japan. If so, who will be responsible for the monitoring? What are the thresholds and what is the plan if excessive contamination is found?

Has there been any "just in time" training for folks that carry rad devices to be alerted that it is possible that they encounter contaminated individuals?

Is Japan monitoring people exiting the evacuation areas? Has decontamination of the general population been necessary?

LL/273

From: McIntyre, David
To: McCrea, Molly
Subject: RE: KI question
Date: Tuesday, March 15, 2011 4:07:00 PM

Not from NRC. We have not been asked to provide KI.

We understand the Japanese authorities have included KI as part of their protective action guidelines, which would indicate they have some stockpiled.

From: McCrea, Molly [mailto:McCrea@kpix.cbs.com]
Sent: Tuesday, March 15, 2011 3:51 PM
To: McIntyre, David
Subject: KI question

I heard that the US may be sending some KI to Japan or sent KI to Japan to help out. What can you tell me about this? Can you confirm? If not, to whom should I talk?
Molly

111/274

From: McIntyre, David
To: Wald, Matthew
Subject: KI info
Date: Tuesday, March 15, 2011 4:10:00 PM

Matt – I'm told we distributed approximately 11 million pills.

Dave

From:	Burnell, Scott
To:	Hannah, Roger; Ledford, Joey; Screnci, Diane; Sheehan, Neil; Chandrathil, Prema; Mitlyng, Viktoria; Uselding, Lara; Harrington, Holly; McIntyre, David; Couret, Ivonne
Cc:	Brenner, Eliot; Hayden, Elizabeth
Subject:	FW: Estimated Fatalities for US Nuclear Plant Spent Fuel Fires: 77,000
Date:	Tuesday, March 15, 2011 4:54:07 PM

The gentleman has submitted a petition; the NRC will review it to determine if it has ***any*** scientific validity. The NRC believes spent fuel pools are safe, even in cases of extended blackouts, given the very low heat levels involved and the ease with which the pools can be refilled. In some cases analysis has shown the spent fuel can be safely air-cooled.

[[deflect any questions about scary numbers with the "we'll review for scientific validity"]]

From: Thomas Popik [mailto:thomasp@resilientsocieties.org]
Sent: Tuesday, March 15, 2011 4:35 PM
To: thomasp@resilientsocieties.org
Subject: Estimated Fatalities for US Nuclear Plant Spent Fuel Fires: 77,000

FOR IMMEDIATE RELEASE

March 15, 2011

FIRE BREAKS OUT AT SPENT FUEL POOL FOR FUKUSHIMA DAIICHI UNIT 4

ESTIMATED FATALITIES FOR US NUCLEAR PLANT SPENT FUEL FIRES WOULD BE 77,000

NASHUA NH (March 15)--The recently reported spent fuel pool fire at Fukushima Daiichi Unit 4 demonstrated the vulnerability of nuclear power plants to loss of outside power. The Unit 4 spent fuel pool has been without outside power for cooling circulation pumps since the earthquake on March 11.

The Foundation for Resilient Societies has projected there would be widespread United States fatalities from spent fuel pool fires should there be a similar loss of outside power from natural disaster. Using data supplied by Oak Ridge National Laboratories, the Nuclear Regulatory Commission, and the US Census Bureau, the Foundation estimates fatalities of 77,000. United States population within 10 miles of nuclear power plants exceeds 3.5 million. Detailed information about data sources is provided in a Petition for Rulemaking submitted to the Nuclear Regulatory Commission on March 14 and available for download at www.resilientsocieties.org. The Petition contains fatality estimates for all 104 operating nuclear power plants in the United States.

Spent fuel pools are present at all operating nuclear power plants. Fuel rods continue to generate substantial heat after removal from the reactor core, necessitating active cooling in water pools. There are 104 nuclear power reactors operating in the United States at 65

LLL/276

sites in 31 states. Each site has one or more spent fuel pools. Spent fuel contains a number of radioactive elements resulting from fission within the reactor core, the most significant being Ruthenium-106 with a half-life of one year and Cesium-137 with a half-life of 30 years. Should spent fuel rods become uncovered by water as a result of boiling, the zirconium cladding of the rods would likely catch fire.

While there are multiple scenarios that could cause uncovering of spent fuel rods and result in zirconium fire, the most significant scenario is long-term loss of outside power supplied by the commercial electric grid. Current design criteria for nuclear power plants and associated spent fuel pools assume reliable and quickly restored commercial grid power. In the event of a long-term loss of commercial grid power, it is likely that water in spent fuel pools would heat up and boil-off, fuel rods would become uncovered by water, zirconium cladding would catch fire, and large quantities of radioactive elements would be released into the atmosphere.

The Petition of the Foundation for Resilient Societies, submitted to the NRC on February 14, proposes requirements for unattended spent fuel pool cooling at nuclear power plants. For more information contact Thomas Popik, Foundation for Resilient Societies, email thomasp@resilientsocieties.org, phone 603-321-1090.

###

From: Couret, Ivonne
To: McIntyre, David; Harrington, Holly
Subject: Media Request - FW: BBC interview
Date: Tuesday, March 15, 2011 5:05:13 PM

I have sent email to the reporter that we are not able to accommodate interview , placing in cue and join the listserv - Ivonne

-----Original Message-----
From: OPA Resource
Sent: Tuesday, March 15, 2011 2:54 PM
To: Couret, Ivonne
Subject: FW: BBC interview

-----Original Message-----
From: sarah teasdale [mailto:sarah.teasdale@bbc.co.uk]
Sent: Tuesday, March 15, 2011 12:20 PM
To: OPA Resource
Subject: BBC interview

Below is the result of your feedback form. It was submitted by

sarah teasdale (sarah.teasdale@bbc.co.uk) on Tuesday, March 15, 2011 at 12:19:48
---

comments: I'm a producer from BBC Newsnight television current affairs programme in London, UK. I'm trying to find out whether a representative of the USNRC would be available to interview on the subject of the events in Japan's nuclear industry.
Regards
Sarah Teasdale

organization: BBC Newsnight

address1: Television Centre

address2: Wood Lane

city: London

state: ---

zip:

country: UK

phone:

LL/277

From: Couret, Ivonne
To: McIntyre, David
Subject: Media Question and Interview request for Japan
Date: Tuesday, March 15, 2011 5:07:30 PM

From: OPA Resource
Sent: Tuesday, March 15, 2011 2:54 PM
To: Couret, Ivonne
Subject: FW: Attention: Yvonne

From: Goodley, Tristan [mailto:Tristan.Goodley@darlowsmithson.com]
Sent: Tuesday, March 15, 2011 12:24 PM
To: OPA Resource
Subject: Attention: Yvonne

Dear Yvonne,

Thanks very much for speaking to me a moment ago. I'm an assistant producer with Darlow Smithson Productions in the UK and we're working on a documentary about the ongoing disaster in Japan. The Discovery Channel have commissioned a film for US and UK audiences looking at the international effort involved with controlling the damaged Fukushima reactors. The focus of the film will be slanted more toward the difficulties controlling the Fukushima nuclear facility but we will also be covering the natural forces that caused the disaster. Discovery would like to pay particular attention to the expert assistance offered by the NRC team that has travelled to Japan, and the back-up infrastructure in the US.

If you are able to send me the chain of recent NRC press releases that would be extremely helpful.

Some questions I'd really like to explore further include:

- The specifics of the assistance that the NRC experts in Japan will be able to offer?
- What physical measures might be deployed over the coming weeks?
- The projected length of time that the NRC assistance team will be stationed in Japan?

If there is a possibility of making contact with Charles Castro in Japan I'd also be extremely keen to briefly discuss the operation with him though fully understand that this is an ongoing crisis and that opportunity is particularly unlikely.

Kindest Regards
Tristan

TRISTAN GOODLEY
DARLOW SMITHSON PRODUCTIONS
SHEPHERDS BUILDING CENTRAL
CHARECROFT WAY
LONDON W14 0EE
DIRECT LINE: +44 (0)20 7482 9642
OFFICE: +44 (0)20 7482 7027
FAX: +44 (0)20 7482 7039

LLL/278

From: McIntyre, David
To: Harrington, Holly; Couret, Ivonne; Brenner, Eliot; Burnell, Scott; Uselding, Lara; Sheehan, Neil; Hannah, Roger
Subject: RE: Media Request - FW: BBC interview
Date: Tuesday, March 15, 2011 5:13:00 PM

Glenn Beck is now explaining the China Syndrome, using a wok as the containment vessel ...

-----Original Message-----
From: Harrington, Holly
Sent: Tuesday, March 15, 2011 5:10 PM
To: Couret, Ivonne; McIntyre, David
Subject: RE: Media Request - FW: BBC interview

fine

-----Original Message-----
From: Couret, Ivonne
Sent: Tuesday, March 15, 2011 5:05 PM
To: McIntyre, David; Harrington, Holly
Subject: Media Request - FW: BBC interview

I have sent email to the reporter that we are not able to accommodate interview , placing in cue and join the listserv - Ivonne

-----Original Message-----
From: OPA Resource
Sent: Tuesday, March 15, 2011 2:54 PM
To: Couret, Ivonne
Subject: FW: BBC interview

-----Original Message-----
From: sarah teasdale [mailto:sarah.teasdale@bbc.co.uk]
Sent: Tuesday, March 15, 2011 12:20 PM
To: OPA Resource
Subject: BBC interview

Below is the result of your feedback form. It was submitted by

sarah teasdale (sarah.teasdale@bbc.co.uk) on Tuesday, March 15, 2011 at 12:19:48
---

comments: I'm a producer from BBC Newsnight television current affairs programme in London, UK. I'm trying to find out whether a representative of the USNRC would be available to interview on the subject of the events in Japan's nuclear industry.
Regards
Sarah Teasdale

organization: BBC Newsnight

address1: Television Centre

address2: Wood Lane

city: London

From:	McIntyre, David
To:	Harrington, Holly; Couret, Ivonne; Brenner, Eliot; Burnell, Scott; Uselding, Lara; Sheehan, Neil; Hannah, Roger
Subject:	RE: Media Request - FW: BBC interview
Date:	Tuesday, March 15, 2011 5:14:00 PM

Maybe it's a big mixing bowl, I can't tell ...

-----Original Message-----
From: Harrington, Holly
Sent: Tuesday, March 15, 2011 5:14 PM
To: McIntyre, David; Couret, Ivonne; Brenner, Eliot; Burnell, Scott; Uselding, Lara; Sheehan, Neil; Hannah, Roger
Subject: RE: Media Request - FW: BBC interview

ohmigod

-----Original Message-----
From: McIntyre, David
Sent: Tuesday, March 15, 2011 5:14 PM
To: Harrington, Holly; Couret, Ivonne; Brenner, Eliot; Burnell, Scott; Uselding, Lara; Sheehan, Neil; Hannah, Roger
Subject: RE: Media Request - FW: BBC interview

Glenn Beck is now explaining the China Syndrome, using a wok as the containment vessel ...

-----Original Message-----
From: Harrington, Holly
Sent: Tuesday, March 15, 2011 5:10 PM
To: Couret, Ivonne; McIntyre, David
Subject: RE: Media Request - FW: BBC interview

fine

-----Original Message-----
From: Couret, Ivonne
Sent: Tuesday, March 15, 2011 5:05 PM
To: McIntyre, David; Harrington, Holly
Subject: Media Request - FW: BBC interview

I have sent email to the reporter that we are not able to accommodate interview , placing in cue and join the listserv - Ivonne

-----Original Message-----
From: OPA Resource
Sent: Tuesday, March 15, 2011 2:54 PM
To: Couret, Ivonne
Subject: FW: BBC interview

-----Original Message-----
From: sarah teasdale [mailto:sarah.teasdale@bbc.co.uk]
Sent: Tuesday, March 15, 2011 12:20 PM
To: OPA Resource
Subject: BBC interview

Below is the result of your feedback form. It was submitted by

LLL/280

From: Mitlyng, Viktoria
To: Burnell, Scott; McIntyre, David
Cc: Chandrathil, Prema
Subject: questions about radiation measurements
Date: Tuesday, March 15, 2011 5:21:56 PM

I am getting questions about how the NRC gathers and analyzes radiation release data to be able to state that harmful levels of radiation won't reach the US and that NRC agrees with Japan's protective measures. I was also asked where reporters can get raw data on for radiation measurements at site boundaries a Japanese plants. Can we respond to any of this?

Thanks.

Vika

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

LLL/281

From: Bradford, Anna
To: McIntyre, David
Subject: RE: talking points
Date: Tuesday, March 15, 2011 5:40:09 PM

Got it, thanks.

Anna Bradford
Policy Advisor for Nuclear Materials
Office of Chairman Jaczko
U.S. Nuclear Regulatory Commission
301-415-1827

From: McIntyre, David
Sent: Tuesday, March 15, 2011 5:40 PM
To: Bradford, Anna
Subject: talking points

Anna – left you a voice msg a while ago. MJ says the OPA Talking Points, OPA Q&A, and the 2-pager she developed are the only papers given Borchardt, and that your office was provided all of them earlier for distribution to the other Commission offices.

Dave

LL/2823

From:	Coggins, Angela
To:	Taylor, Robert; Harrington, Holly; Brenner, Eliot
Cc:	Powell, Amy
Subject:	RE: a favor...
Date:	Tuesday, March 15, 2011 2:54:25 PM
Attachments:	Japanese-Rx-Incident addtl questions - March-14-2011 doc.docx

Here it is. Thanks!!

Angela B. Coggins
Policy Director
Office of Chairman Gregory B. Jaczko
U.S. Nuclear Regulatory Commission
301-415-1828/angela.coggins@nrc.gov

From: Taylor, Robert
Sent: Tuesday, March 15, 2011 2:38 PM
To: Harrington, Holly; Coggins, Angela; Brenner, Eliot
Cc: Powell, Amy
Subject: RE: a favor...

Attachment didn't come through. Please send and I will update.

From: Harrington, Holly
Sent: Tuesday, March 15, 2011 2:37 PM
To: Coggins, Angela; Brenner, Eliot; Taylor, Robert
Cc: Powell, Amy
Subject: RE: a favor...

Rob is our current "keeper of the Q&As." I will ask him to pursue for you.

From: Coggins, Angela
Sent: Tuesday, March 15, 2011 2:26 PM
To: Brenner, Eliot; Harrington, Holly
Cc: Powell, Amy
Subject: a favor...

I have a big favor to ask... Can you check to see if these attached questions are already included in the questions and answers, and if not, add them to the list and prepare some responses for us? Thanks so much!!

Angela B. Coggins
Policy Director
Office of Chairman Gregory B. Jaczko
U.S. Nuclear Regulatory Commission
301-415-1828/angela.coggins@nrc.gov

LLL 1283

(3/14/11)

1. With respect to the Japanese BWR reactors:
   a) what damage was caused by the earthquake and/or tsunami at each of the units?
   b) was that damage anticipated in the design basis? If yes, were these results forecast? If not, should they have been?
   c) what are the gaps between modeling and simulation tool projections and what actually happened at each of the sites?
   d) what technical differences exist between the Japanese units with expected core damage and comparable units in the US?
   e) other

2. With respect to US plants:
   a) for BWR's, what are technical safety areas that should be explored for US reactors?
   b) what seismic/tsunami/flooding related design aspects should be reviewed/investigated for US plants?
   c) what station blackout type concerns should be explored for US plants given the experience (as we understand it) in Japan?
   d) other

3. What process is the NRC staff in with respect to reviewing safety of existing US reactors?

4. With respect to licensing actions under review (new and operating),what considerations should be given to the Japanese reactor events and through what process?

5. What process is the Commission in with respect to providing direction to the staff on any inspections of existing US reactors (including their design basis) and any direction on new reactor license applications?

6. What does history tell us about how the Commission may consider proceeding going forward:
   a. Three Mile Island
   b. Chernobyl
   c. Browns Ferry fire
   d. Davis Besse
   e. 9/11
   f. Other?

From: McIntyre, David
To: OPA Resource; schogolj@stripes.osd.mil
Subject: RE: For David McIntyre From Jeffrey Shogol
Date: Tuesday, March 15, 2011 2:23:00 PM

Thanks, Jeff. Nice piece!

From: OPA Resource
Sent: Tuesday, March 15, 2011 1:51 PM
To: McIntyre, David
Subject: FW: For David McIntyre From Jeffrey Shogol

From: Schogol, Jeffrey [mailto:schogolj@stripes.osd.mil]
Sent: Tuesday, March 15, 2011 1:10 PM
To: OPA Resource
Subject: For David McIntyre

Here is the story:

http://www.stripes.com/blogs/the-rumor-doctor/the-rumor-doctor-1.104348/is-radiation-from-japan-heading-to-the-u-s-1.137815

Thank you for all of your help!

Jeff Schogol

111/284

From: McIntyre, David
To: Harrington, Holly
Subject: RE: EPA STATEMENT
Date: Tuesday, March 15, 2011 6:42:00 PM

I just checked, it's not there yet. Of course, Jack Grobe read it and wondered where the NRC language came from. "Ummm, the Chairman?"

Every shift change, we have to justify each and every booger we pull out of our noses.

-----Original Message-----
From: Harrington, Holly
Sent: Tuesday, March 15, 2011 6:41 PM
To: McIntyre, David; Uselding, Lara; Burnell, Scott; Couret, Ivonne; Hannah, Roger; Mitlyng, Viktoria; Chandrathil, Prema; Screnci, Diane; Sheehan, Neil
Subject: RE: EPA STATEMENT

Thanks Dave.
When it goes up, I'm going to reference in blog post

-----Original Message-----
From: McIntyre, David
Sent: Tuesday, March 15, 2011 6:30 PM
To: Uselding, Lara; Harrington, Holly; Burnell, Scott; Couret, Ivonne; Hannah, Roger; Mitlyng, Viktoria; Chandrathil, Prema; Screnci, Diane; Sheehan, Neil
Subject: EPA STATEMENT

This should be on the EPA website soon! I'll add it to Web EOC and show it to the ET. Note data is ONLINE!

EPA STATEMENT:
As the U.S. Nuclear Regulatory Commission has said, we do not expect to see radiation at harmful levels reaching the U.S. from damaged Japanese nuclear power plants. As part of the federal government's continuing effort to make our activities and science transparent and available to the public, the Environmental Protection Agency (EPA) will continue to keep all RadNet data available in the current online database. In addition, EPA plans to work with its federal partners to deploy additional monitoring capabilities to parts of the western U.S. and U.S. territories.

As always, EPA is utilizing this existing nationwide radiation monitoring system, RadNet, which continuously monitors the nation's air and regularly monitors drinking water, milk and precipitation for environmental radiation. The RadNet online searchable database contains historical data of environmental radiation monitoring data from all fifty states and U.S. territories.

###
NOTE: RadNet air monitoring data can be always be viewed on EPA's Central Data Exchange (CDX) website at www.epa.gov/cdx.

Adora Andy
Deputy Associate Administrator
U.S. Environmental Protection Agency
Office of External Affairs and Environmental Education

LLL/285

202-564-2715
andy.adora@epa.gov

From: McIntyre, David
To: Andy.Adora@epamail.epa.gov
Cc: Johnson.Alisha@epamail.epa.gov; Brenner, Eliot
Subject: RE: ACTION: STATEMENT
Date: Tuesday, March 15, 2011 6:28:00 PM

WooHoo! Thanks!

-----Original Message-----
From: Andy.Adora@epamail.epa.gov [mailto:Andy.Adora@epamail.epa.gov]
Sent: Tuesday, March 15, 2011 6:03 PM
To: McIntyre, David
Cc: Johnson.Alisha@epamail.epa.gov; Brenner, Eliot
Subject: RE: ACTION: STATEMENT

Final statement, I'm sending to reporters who are asking now. Should be on our website in the next 20-30. Thanks!

EPA STATEMENT:
As the U.S. Nuclear Regulatory Commission has said, we do not expect to see radiation at harmful levels reaching the U.S. from damaged Japanese nuclear power plants. As part of the federal government's continuing effort to make our activities and science transparent and available to the public, the Environmental Protection Agency (EPA) will continue to keep all RadNet data available in the current online database. In addition, EPA plans to work with its federal partners to deploy additional monitoring capabilities to parts of the western U.S. and U.S. territories.

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Adora Andy
Deputy Associate Administrator
U.S. Environmental Protection Agency
Office of External Affairs and Environmental Education
202-564-2715
andy.adora@epa.gov

From:	McIntyre, David
To:	Uselding, Lara; Harrington, Holly; Burnell, Scott; Couret, Ivonne; Hannah, Roger; Mitlyng, Viktoria; Chandrathil, Prema; Screnci, Diane; Sheehan, Neil
Subject:	EPA STATEMENT
Date:	Tuesday, March 15, 2011 6:29:00 PM

This should be on the EPA website soon! I'll add it to Web EOC and show it to the ET. Note data is ONLINE!

EPA STATEMENT:
As the U.S. Nuclear Regulatory Commission has said, we do not expect to see radiation at harmful levels reaching the U.S. from damaged Japanese nuclear power plants. As part of the federal government's continuing effort to make our activities and science transparent and available to the public, the Environmental Protection Agency (EPA) will continue to keep all RadNet data available in the current online database. In addition, EPA plans to work with its federal partners to deploy additional monitoring capabilities to parts of the western U.S. and U.S. territories.

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Adora Andy
Deputy Associate Administrator
U.S. Environmental Protection Agency
Office of External Affairs and Environmental Education
202-564-2715
andy.adora@epa.gov

From: Andy.Adora@epamail.epa.gov
To: McIntyre, David
Cc: Johnson.Alisha@epamail.epa.gov; Brenner, Eliot
Subject: RE: ACTION: STATEMENT
Date: Tuesday, March 15, 2011 6:03:17 PM

Final statement, I'm sending to reporters who are asking now. Should be on our website in the next 20-30. Thanks!

EPA STATEMENT:
As the U.S. Nuclear Regulatory Commission has said, we do not expect to see radiation at harmful levels reaching the U.S. from damaged Japanese nuclear power plants. As part of the federal government's continuing effort to make our activities and science transparent and available to the public, the Environmental Protection Agency (EPA) will continue to keep all RadNet data available in the current online database. In addition, EPA plans to work with its federal partners to deploy additional monitoring capabilities to parts of the western U.S. and U.S. territories.

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Adora Andy
Deputy Associate Administrator
U.S. Environmental Protection Agency
Office of External Affairs and Environmental Education
202-564-2715
andy.adora@epa.gov

From: McIntyre, David
To: McCrea, Molly
Subject: RE: KI question
Date: Tuesday, March 15, 2011 7:12:00 PM

Molly – late word is that Japan today did ask Secretary Chu (DOE) for KI. No word on if any is being delivered; that request was apparently not relayed to NRC.

Dave McIntyre

From: McCrea, Molly [mailto:McCrea@kpix.cbs.com]
Sent: Tuesday, March 15, 2011 3:51 PM
To: McIntyre, David
Subject: KI question

I heard that the US may be sending some KI to Japan or sent KI to Japan to help out. What can you tell me about this? Can you confirm? If not, to whom should I talk?
Molly

LLL/286

From: McIntyre, David
To: Bollwerk, Paul
Subject: RE: Don"t Know If You Bother to Try to Correct Stuff Like This
Date: Tuesday, March 15, 2011 7:16:00 PM

Ha! Yes, we'll try to "re-align" this reporter. Thanks for sharing.

From: Bollwerk, Paul
Sent: Tuesday, March 15, 2011 6:14 PM
To: McIntyre, David
Subject: Don't Know If You Bother to Try to Correct Stuff Like This

APPROPRIATIONS: Japanese nuclear crisis dominates DOE budget hearing (03/15/2011)

Katie Howell, E&E reporter

Energy Secretary Steven Chu today used a House Appropriations subcommittee hearing to try to quell fears about U.S. nuclear energy safety and to reassure nuclear advocates that the Obama administration remains committed to the energy source.

"The American people should have full confidence that the United States has rigorous safety regulations in place to ensure that our nuclear power is generated safely and responsibly," Chu said during the Energy and Water Development Subcommittee hearing.

"Information is still coming in about the events unfolding in Japan, but the administration is committed to learning from Japan's experience as we work to continue to strengthen America's nuclear industry," he added.

His comments come days after an earthquake and tsunami devastated Japan and threatened a number of nuclear reactors there.

Chu said the "world learns a lot from each new incident" and that the United States is "ever increasing our vigilance in nuclear safety."

He said current efforts are geared toward helping the Japanese government and power companies cool down the reactors and stop leaking. "Then, we'll learn what happened and we'll look at our own reactors," Chu said.

But he indicated America's 104 operating nuclear plants are already safe. Those in earthquake-prone areas are built to withstand conditions well beyond the worst earthquake that geologists say a region could experience. And reactors situated near coastlines are built with tsunami protections, he said.

"We look at the maximum size geologists say could ever happen, and then we design above and beyond that," Chu said.

He also touted reactor technology under development in the United States and the oversight of the Nuclear Regulatory Commission, an autonomous Energy Department agency.

LL 1287

But lawmakers appeared more concerned about the administration's commitment to continue nuclear energy development and stressed that the disaster in Japan and the current political unrest in North Africa highlight the need for a comprehensive energy policy.

"Whether natural or man-made, we must be able to confront disasters ... with diversity of supply that doesn't leave" the United States tied to one energy source, said Rep. Rodney Frelinghuysen (R-N.J.), chairman of the subcommittee. "To the administration's credit, after a 30-year hiatus, the U.S. is now committing more resources to nuclear power. I hope to hear about your own commitment as President Obama's chief spokesman on energy policy."

Chu stressed that all forms of energy production involve risks and that the Japanese crisis may yield important safety lessons like the BP PLC oil spill in the Gulf of Mexico did last summer.

"Whenever there's an incident such as what's happening in Japan, we pay close attention to that," Chu said. "We still believe that despite the tragedy in Japan, we can learn lessons, and it's probably premature to say anything but we will learn from this. All our baseload forms of energy right now do produce risk."

From: McIntyre, David
To: khowell@eenews.net
Subject: Error in your story on Japan
Date: Tuesday, March 15, 2011 7:20:00 PM

Katie – an oversight in your description of our oversight – the NRC is not part of the DOE. We are an independent regulatory agency.

Regards,
Dave McIntyre
NRC Public Affairs

APPROPRIATIONS: Japanese nuclear crisis dominates DOE budget hearing (03/15/2011)

Katie Howell, E&E reporter

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But he indicated America's 104 operating nuclear plants are already safe. Those in earthquake-prone areas are built to withstand conditions well beyond the worst earthquake that geologists say a region could experience. And reactors situated near coastlines are built with tsunami protections, he said.

"We look at the maximum size geologists say could ever happen, and then we design above and beyond that," Chu said.

He also touted reactor technology under development in the United States and the oversight of the Nuclear Regulatory Commission, an autonomous Energy Department agency.

LLL/288

But lawmakers appeared more concerned about the administration's commitment to continue nuclear energy development and stressed that the disaster in Japan and the current political unrest in North Africa highlight the need for a comprehensive energy policy.

"Whether natural or man-made, we must be able to confront disasters ... with diversity of supply that doesn't leave" the United States tied to one energy source, said Rep. Rodney Frelinghuysen (R-N.J.), chairman of the subcommittee. "To the administration's credit, after a 30-year hiatus, the U.S. is now committing more resources to nuclear power. I hope to hear about your own commitment as President Obama's chief spokesman on energy policy."

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From: McIntyre, David
To: Bollwerk, Paul
Cc: Harrington, Holly; Couret, Ivonne
Subject: RE: Don"t Know If You Bother to Try to Correct Stuff Like This
Date: Tuesday, March 15, 2011 7:20:00 PM

I emailed the reporter.

From: Bollwerk, Paul
Sent: Tuesday, March 15, 2011 6:14 PM
To: McIntyre, David
Subject: Don't Know If You Bother to Try to Correct Stuff Like This

APPROPRIATIONS: Japanese nuclear crisis dominates DOE budget hearing (03/15/2011)

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LL 1289

But lawmakers appeared more concerned about the administration's commitment to continue nuclear energy development and stressed that the disaster in Japan and the current political unrest in North Africa highlight the need for a comprehensive energy policy.

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From: McIntyre, David
To: Harrington, Holly
Subject: RE: could you noodle around for an answer for this in your spare time?
Date: Tuesday, March 15, 2011 8:26:00 PM

This is a start, though it's not complete.

Rem and sievert are two different measurements of radiation dose. One rem is roughly equivalent to 10 millisieverts; which means 1 sievert equals 100 rem.

And yes, the radiation dose will be lower the farther away your are from the source of radiation. Remember "Time, Distance, Shielding" – reduce the time of your exposure as much as possible, increase distance from the source of radiation, and shield yourself (by staying indoors, for example).

From: Harrington, Holly
Sent: Tuesday, March 15, 2011 7:56 PM
To: McIntyre, David
Subject: could you noodle around for an answer for this in your spare time?

As stated, the recommendations for max radiation exposure is 1rem for the whole body and 5rem for the thyroid for the general public annually. The news media keeps tossing around numbers in "millisieverts/hour?" How do these two numbers compare? There are lots of statistics and no real explanation of what these numbers mean and the general public is completely confused. Does the amount of radiation decrease as the distance froml the source increases

LL4/290

From: Andy.Adora@epamail.epa.gov
To: McIntyre, David
Subject: RE: ACTION: STATEMENT
Date: Tuesday, March 15, 2011 8:47:19 PM

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http://www.epa.gov/radiation/statement.html

Adora Andy
Deputy Associate Administrator
U.S. Environmental Protection Agency
Office of External Affairs and Environmental Education
202-564-2715
andy.adora@epa.gov

From: "McIntyre, David" <David.McIntyre@nrc.gov>
To: Adora Andy/DC/USEPA/US@EPA
Date: 03/15/2011 08:30 PM
Subject: RE: ACTION: STATEMENT

Adora - There is still no statement on the EPA website. Any changes?

Dave McIntyre

-----Original Message-----
From: Andy.Adora@epamail.epa.gov [mailto:Andy.Adora@epamail.epa.gov]
Sent: Tuesday, March 15, 2011 6:03 PM
To: McIntyre, David
Cc: Johnson.Alisha@epamail.epa.gov; Brenner, Eliot
Subject: RE: ACTION: STATEMENT

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NOTE: RadNet air monitoring data can be always be viewed on EPA's

LCC1291

Central Data Exchange (CDX) website at www.epa.gov/cdx.

Adora Andy
Deputy Associate Administrator
U.S. Environmental Protection Agency
Office of External Affairs and Environmental Education
202-564-2715
andy.adora@epa.gov

From:	McIntyre, David
To:	Harrington, Holly; Brenner, Eliot; Uselding, Lara; Hannah, Roger; Mitlyng, Viktoria; Chandrathil, Prema; Burnell, Scott; Screnci, Diane; Sheehan, Neil
Subject:	EPA Statement
Date:	Tuesday, March 15, 2011 9:19:00 PM

The EPA statement is on the web at this address: http://www.epa.gov/radiation/statement.html . It's kinda buried on the rad page, but my contact there assures me they will put something on their home page tomorrow.

Dave

LLL/292

From: McIntyre, David
To: Miriam Raftery
Subject: RE: McIntyre - quote in Daily Mail is still online
Date: Tuesday, March 15, 2011 10:05:00 PM
Attachments: image001.png

EPA issued a statement today: http://www.epa.gov/radiation/statement.html You'll be interested in noting that their monitoring data is available online.

Too early to comment on the latest developments.

Good question on the debris – unfortunately I can't answer that at this time, as we are not in charge of the cleanup.

We have advised US citizens in Japan to follow the protective action recommendations of the Japanese government, as they are consistent with what the NRC would advise in similar circumstances. If that changes, believe me, you'll hear about it.

Have a nice evening.

From: Miriam Raftery [mailto:writerink@cox.net]
Sent: Tuesday, March 15, 2011 8:57 PM
To: McIntyre, David
Subject: RE: McIntyre - quote in Daily Mail is still online

Dave – Given the newest fire and explosion late today (new since yesterday) Japan now says spent fuel rods are leaking substantial amounts of radiation directly into the atmosphere. Just checking...is there still no risk? Our state agency says they monitor radiation monthly ! Not exactly reassuring. Isn't ANYBODY checking to make sure no contamination is reaching our shores?

Another question. What's going to happen to all the debris left from the quake and tsunami in areas where the debris is now radioactive? Is the US making sure this stuff doesn't just get dumped in the ocean or otherwise lead to further contamination?

Lastly do you believe Japan is doing an adequate job of being forthcoming with the Japanese people and Americans/foreign nationals about the dangers? Should evacuation zones be wider? How far away is safe in a worst-case scenario? Our area has many American students studying in Japan; if you were a parent would you bring your kid home? If not how far is safe enough?

Miriam

From: McIntyre, David [mailto:David.McIntyre@nrc.gov]
Sent: Tuesday, March 15, 2011 10:05 AM
To: Miriam Raftery
Subject: RE: McIntyre - quote in Daily Mail is still online

Thanks! Sheesh.

From: Miriam Raftery [mailto:writerink@cox.net]
Sent: Tuesday, March 15, 2011 1:04 PM
To: McIntyre, David
Subject: RE: McIntyre - quote in Daily Mail is still online

David – It's still there. You may been looking at a similar, new story posted. I just clicked through and it has NOT been updated, at least your quote is still here:
http://www.dailymail.co.uk/news/article-1366341/Japan-tsunami-earthquake-America-nuclear-accident-radiation-alert.html

Miiriam

From: McIntyre, David [mailto:David.McIntyre@nrc.gov]
Sent: Tuesday, March 15, 2011 9:56 AM
To: Miriam Raftery
Subject: RE: McIntyre - quote in Daily Mail

Wow. Thanks. I appreciate your skepticism!

From: Miriam Raftery [mailto:writerink@cox.net]
Sent: Tuesday, March 15, 2011 12:54 PM
To: McIntyre, David
Subject: McIntyre - quote in Daily Mail

LLL 1293

From: McIntyre, David
To: Harrington, Holly
Subject: FAQ What Do I Need To Know.docx
Date: Tuesday, March 15, 2011 10:15:00 PM
Attachments: FAQ What Do I Need To Know.docx

LLL/294

Frequently Asked Questions About the Japan Nuclear Crisis

"What Do I Need to Know to Protect Myself?"

1. **Is there a danger of radiation making it to the United States?**

   In response to nuclear emergencies, the NRC works with other U.S. agencies to monitor radioactive releases and predict their path. The NRC continues to monitor information regarding wind patterns near the Japanese nuclear power plants. Nevertheless, given the thousands of miles between the two countries, Hawaii, Alaska, the U.S. Territories and the U.S. West Coast are not expected to experience any harmful levels of radioactivity.

2. **Is the U.S. government tracking the radiation released from the Japanese plants?**

   Yes. A number of U.S. agencies are involved in monitoring and assessing radiation including the Environmental Protection Agency, Department of Energy, and NRC. The best source of additional information is the EPA.

3. **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 United States and U.S.territories.

4. **The radiation "plume" seems to be going out to sea – what is the danger of it reaching Alaska? Hawaii? The west coast?**

   See response to Question 1.

5. **Should I be taking potassium iodide (KI) or other protective measures?**

   At this time, the NRC does not believe protective measures are necessary in the United States. We do not expect any U.S. states or territories to experience harmful levels of radioactivity. In the event circumstances change, U.S. residents should listen to the protective action decisions of their states and counties. These protective action decisions could include actions such as sheltering, evacuation, or taking potassium iodide. The NRC will provide technical assistance to the states should they request it.

United States citizens in Japan are encouraged to follow the protective measures recommended by the Japanese government. These measures appear to be consistent with steps the United States would take.

6. What are the risks to my children?

See response to Question 5.

7. My family has planned a vacation to Hawaii/Alaska/Seattle next week – is it safe to go, or should we cancel our plans?

The NRC does not expect that residents of the United States or its territories are at any risk of exposure to harmful levels of radiation resulting from the events in Japan. Any changes to travel are a personal decision. The NRC is not aware of any travel restrictions within the United States or its territories.

8. What are the short-term and long-term effects of exposure to radiation?

The NRC does not expect that residents of the United States or it territories are at any risk of exposure to harmful levels of radiation resulting from the events in Japan.

On a daily basis, people are exposed to naturally occurring sources of radiation, such as from the sun, and man-made radiation, such as medical X-rays. The resulting effects are dependent on the strength and type of radiation as well as the duration of exposure. See our Fact Sheet on the biological effects of radiation

9. I am traveling to Asia (not Japan). Should I adjust my travel plans to avoid flying through plume or being contaminated once on the ground?

You should consult the State Department for warnings or advisories on international travel.

10. What is the official agency to report radiation numbers and what is the public contact?

NRC regulations require nuclear power plants to report any radiation doses detected at the plant that could be harmful to the public. This would include doses that are generated by the plant or by an external source. During an event in the United States, it is the state's responsibility to provide protective action decisions for public health and

safety. For this incident, the Japanese are responsible for reporting the public dose; nevertheless, should radiation doses be detected within the United States, it would still be the state's responsibility to provide protective action decisions for public health and safety.

11. How many plants are located in seismic areas?

Although we often think of the US as having "active" and "non-active" earthquake zones, earthquakes can actually happen almost anywhere. Seismologists typically separate the United States into low-, moderate-, and high-seismicity zones. The NRC requires that every plant be designed for site-specific ground motions that are appropriate for their location. In addition, the NRC has specified a minimum ground shaking level to which the plants must be designed. See our Fact Sheet on seismic issues for more information.

12. Where would I get IOSAT Potassium Iodide if my city should experience fallout from the Japanese nuclear disaster? Is this the right precaution or is there anything else that can be done to protect myself?

We do not expect any U.S. states or territories to experience harmful levels of radioactivity. As such, we do not believe that there is any need for residents of the United States to take potassium iodide. U.S. residents should listen to the protective action decisions by their states and counties. If necessary, protective action decisions could include actions such as sheltering, evacuating, or taking potassium iodide.

For more information on the use of potassium iodide, click here.

Additional information is available from the Food and Drug Administration.

13. My loved one is overseas, how do I find out if they are ok?

We are directing public inquiries with regard to concern for loved ones overseas to the State Department, Consular Services at 202-647-7004.

From: McIntyre, David
To: Landau, Mindy
Cc: Harrington, Holly
Subject: RE: Logged in and emailed no
Date: Wednesday, March 16, 2011 3:28:00 PM

This seems related to the MSNBC piece;

From: Landau, Mindy
Sent: Wednesday, March 16, 2011 3:11 PM
To: McIntyre, David
Subject: Logged in and emailed no

From: Royer, Deanna
Sent: Wednesday, March 16, 2011 3:07 PM
To: Landau, Mindy
Subject: media call

Greg Ebben
Fox
212-301-5051
Re: Wants on air interview tomorrow morning. – Rankings of Safety of Nuclear Plants.
greg.ebben@foxnews.com

Deanna Royer
Contract Secretary
Division of New Reactor Licensing
(301) 415-7158
Deanna.Royer@nrc.gov

LLL/295

From: McIntyre, David
To: Landau, Mindy
Cc: Brenner, Eliot; Harrington, Holly
Subject: RE: For your awareness - I logged this and told her no
Date: Wednesday, March 16, 2011 3:03:00 PM

That show? Good answer! ☺

From: Landau, Mindy
Sent: Wednesday, March 16, 2011 3:03 PM
To: McIntyre, David
Subject: For your awareness - I logged this and told her no

Krista Braun
CNBC
201-735-3170
Re: Chairman on show with Host Larry Kudlow.

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

LLL/296

From: McIntyre, David
To: Landau, Mindy
Cc: Burnell, Scott
Subject: RE: Media
Date: Wednesday, March 16, 2011 2:47:00 PM

Including CBS? Make sure to mention Eliot and GBJ in the senate rotunda for interviews.

From: Landau, Mindy
Sent: Wednesday, March 16, 2011 2:47 PM
To: McIntyre, David; Burnell, Scott
Subject: RE: Media

Scott will take them

From: McIntyre, David
Sent: Wednesday, March 16, 2011 2:46 PM
To: Landau, Mindy
Subject: RE: Media

I'll take CBS. Can you take the other two?

From: Landau, Mindy
Sent: Wednesday, March 16, 2011 2:42 PM
To: McIntyre, David
Subject: RE: Media

No, if you can't handle them I'll take care of it. I wasn't sure who was at the Ops Center at the time.

From: McIntyre, David
Sent: Wednesday, March 16, 2011 2:41 PM
To: Landau, Mindy
Subject: RE: Media

Have these been handled? Holly said press calls weren't to be coming here.

From: Landau, Mindy
Sent: Wednesday, March 16, 2011 12:24 PM
To: McIntyre, David
Subject: FW: Media

Dave – if you're here, can you handle these?

From: Royer, Deanna
Sent: Wednesday, March 16, 2011 12:21 PM
To: Landau, Mindy
Subject: Media

John Shumway
KDKA
412-559-3429

LLL/297

Re: Interview regarding U.S. Sites

Michael Grabell
917-512-0217
ProPublic
Interview
I apologize I didn't get a subject

Laura Strickler
CBS
202-457-1597
Re: Our confidence in the measures Japan is taking

Deanna Royer
Contract Secretary
Division of New Reactor Licensing
(301) 415-7158
Deanna.Royer@nrc.gov

From: Harrington, Holly
To: McIntyre, David
Subject: FW: Japanese increased dose limits and misreported NRC limits
Date: Wednesday, March 16, 2011 2:50:32 PM

Call me when you have time. I have an idea for Michael – maybe some sort of rapid response, evalu of coverage with Rob helping? What do you think?

From: Shoop, Undine
Sent: Wednesday, March 16, 2011 2:36 PM
To: Harrington, Holly; Couret, Ivonne; Burnell, Scott; Brenner, Eliot
Subject: Japanese increased dose limits and misreported NRC limits

The Washington Post reported:
"In order for them to resume trying to cool the damaged sectors, Japan's health and welfare minister had to waive the nation's standard of radiation exposure, increasing the level of acceptable exposure from 100 millisieverts to 250 — five times the level allowed in the United States."

NRC regulations stipulate the dose to an individual can be increased to 25 rem for a planned special exposure such as an activity needed for lifesaving and EPA guideline for lifesaving is 25 rem.

Undine Shoop
Chief, Health Physics and Human Performance Branch
Division of Inspection and Regional Support
Office of Nuclear Reactor Regulation
301-415-2063

LLL/298

From: Harrington, Holly
To: McIntyre, David
Cc: Landau, Mindy
Subject: RE: NY Times call
Date: Wednesday, March 16, 2011 2:53:19 PM

Pls see if Scott can do or sent to Region 1.
How do the regions seem to be doing? Sending them many calls?

From: McIntyre, David
Sent: Wednesday, March 16, 2011 2:32 PM
To: Harrington, Holly
Subject: FW: NY Times call

Sounds like a generic EP question. Mindy keeps sending me these, is everyone swamped over there?

From: Landau, Mindy
Sent: Wednesday, March 16, 2011 2:26 PM
To: McIntyre, David
Subject: NY Times call

Gardiner Harris
NY Times
202-862-0443
Gardiner@nytimes.com
Re: Plans in place to handle nuclear accident in U.S.

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

LLL/299

From: Harrington, Holly
To: Sheehan, Neil
Subject: call me about this language
Date: Wednesday, March 16, 2011 8:33:00 AM

In response to nuclear emergencies, the NRC works with other U.S. agencies to monitor radioactive releases and predict their path. The NRC continues to monitor information regarding wind patterns near the Japanese nuclear power plants. Nevertheless, given the thousands of miles between the two countries, Hawaii, Alaska, the U.S. Territories and the U.S. West Coast are not expected to experience any harmful levels of radioactivity

LL/30

From: Schogol, Jeffrey
To: McIntyre, David
Subject: Is NRC tracking the path of the radioactive plume from Fukushima?
Date: Friday, March 18, 2011 6:40:58 PM

This is Jeff Schogol with Stars and Stripes again.

Are you tracking the path of this radioactive plume?

There are rumors going around the U.S. Navy base at Yokosuka that the cloud will hit them on Tuesday and I'd like to give our readers there some answers.

Thank you.

Jeff Schogol

From:	Burnell, Scott
To:	Kammerer, Annie; Ake, Jon; Manoly, Kamal
Cc:	Brenner, Eliot; Harrington, Holly; Screnci, Diane; Sheehan, Neil; Hannah, Roger; Ledford, Joey; Chandrathil, Prema; Mitlyng, Viktoria; Uselding, Lara; McIntyre, David; Couret, Ivonne
Subject:	FW: Numbers
Date:	Wednesday, March 16, 2011 7:21:46 AM
Importance:	High

Annie, Jon, Kamal;

I know you're going to have a cow over this – somewhat inevitable when a reporter new to the subject tries to summarize things. Apart from "you're totally off-base," what specific technical corrections can we ask for??

OPA – this is likely to spark a lot of follow-up. The immediate response would be "that's 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." I'll share whatever we get from the experts.

Scott

From: Bill Dedman [mailto:Bill.Dedman@msnbc.com]
Sent: Wednesday, March 16, 2011 6:47 AM
To: Burnell, Scott
Subject: RE: Numbers

Scott,

FYI, this story is online now.

If you or the NRC technical see any error, please let me know right away. I linked to all the source documents so people can also read in full.

Thanks,

Bill

http://www.msnbc.msn.com/id/42103936/ns/world_news-asiapacific/

From: Burnell, Scott [mailto:Scott.Burnell@nrc.gov]
Sent: Tuesday, March 15, 2011 3:38 PM
To: Bill Dedman
Subject: Numbers

Bill;

Staff's amazing here – they were compiling these numbers just in case – the Western plants are in there.

Scott Burnell

LLL/302

From:	Harrington, Holly
To:	Akstulewicz, Brenda; Shannon, Valerie; Landau, Mindy; Ellmers, Glenn; Janbergs, Holly; Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David; Chandrathil, Prema; Dricks, Victor; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Screnci, Diane; Sheehan, Neil; Uselding, Lara
Cc:	Bonaccorso, Amy; Deavers, Ron
Subject:	Public Inquiries
Date:	Wednesday, March 16, 2011 8:59:49 AM

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

Ron.deavers@nrc.gov and amy.bonaccorso@nrc.gov .

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

Pls cc Brenda and myself

LL/303

From:	Harrington, Holly
To:	Harrington, Holly; Akstulewicz, Brenda; Shannon, Valerie; Landau, Mindy; Ellmers, Glenn; Janbergs, Holly; Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David; Chandrathil, Prema; Dricks, Victor; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Screnci, Diane; Sheehan, Neil; Uselding, Lara
Subject:	Great News!!!!!!!
Date:	Wednesday, March 16, 2011 9:30:39 AM

Chad Wood at DHS says he can probably get CDC to start up their call center to start taking public questions!!!!!! Stay tuned!!!!!

Eliiot – DHS working on FEMA sending us two media relations types to work extended hours and through the weekend

111/304

From: McIntyre, David
To: Andy.Adora@epamail.epa.gov; Harrington, Holly
Subject: EPA/NRC/CNN
Date: Wednesday, March 16, 2011 10:25:26 AM

I'm not in the office now (I go on at 2 pm - midnight today) but I suspect this is a garble of "EPA is in charge on monitoring air in US" and that your RadNet data is online. It is quite possible the reporter is fishing.

We handled press calls in the 100s yesterday, as I'm sure you were busy too. Our only talking point on this is that EPA is the lead agency on monitoring radiation in the US, and we are now prepared to refer folks (press and public) to your statement.

I'll alert my colleagues to this by cc here.

Holly: Adora is my EPA contact from later. Note apparently garbled message below.

From: Andy.Adora@epamail.epa.gov [Andy.Adora@epamail.epa.gov]
Sent: Wednesday, March 16, 2011 9:33 AM
To: McIntyre, David
Cc: Johnson.Alisha@epamail.epa.gov
Subject: RE: ACTION: STATEMENT

Hey David,
We got this from CNN and it's a little disturbing because CNN is saying that someone at NRC sent them our way regarding tracking a "radio active plume." Before we get back to CNN and tell them they're crazy, are you at all aware of this? Can you tell me if they have your 3-13 statement and might just be fishing? What do you think?
Thanks my friend,
Adora

----- Forwarded by Alisha Johnson/DC/USEPA/US on 03/16/2011 09:14 AM -----

|------------>
| From: |
|------------>
>----------|
|"Rizzo, Jennifer" <Jennifer.Rizzo@turner.com> |
>----------|
|------------>
| To: |
|------------>
>----------|
|Press@EPA |
>----------|
|------------>
| Date: |
|------------>
>----------|
|03/16/2011 07:36 AM |

111/305

>----------
----------|
|---------->
| Subject: |
|---------->
>----------
----------|
|CNN Request: Japan Radiation
Plume |
>----------
----------|

Good morning-- I was told by the NRC that the EPA was putting something out tracking the radioactive plume in Japan. Is it up yet because I don't see it on the site.

Thanks,
Jennifer Rizzo
National Security Producer
202-772-2608

From: Adora Andy/DC/USEPA/US
To: "McIntyre, David" <David.McIntyre@nrc.gov>
Cc: Alisha Johnson/DC/USEPA/US@EPA, "Brenner, Eliot" <Eliot.Brenner@nrc.gov>
Date: 03/15/2011 06:03 PM
Subject: RE: ACTION: STATEMENT

Final statement, I'm sending to reporters who are asking now. Should be on our website in the next 20-30. Thanks!

EPA STATEMENT:
As the U.S. Nuclear Regulatory Commission has said, we do not expect to see radiation at harmful levels reaching the U.S. from damaged Japanese nuclear power plants. As part of the federal government's continuing effort to make our activities and science transparent and available to the public, the Environmental Protection Agency (EPA) will continue to keep all RadNet data available in the current online database. In addition, EPA plans to work with its federal partners to deploy additional monitoring capabilities to parts of the western U.S. and U.S. territories.

As always, EPA is utilizing this existing nationwide radiation monitoring system, RadNet, which continuously monitors the nation's air and regularly monitors drinking water, milk and precipitation for environmental radiation. The RadNet online searchable database contains historical data of environmental radiation monitoring data from all fifty states and U.S. territories.

###
NOTE: RadNet air monitoring data can be always be viewed on EPA's

Central Data Exchange (CDX) website at www.epa.gov/cdx.

Adora Andy
Deputy Associate Administrator
U.S. Environmental Protection Agency
Office of External Affairs and Environmental Education
202-564-2715
andy.adora@epa.gov

From: Landau, Mindy
To: McIntyre, David
Subject: FW: Rob Hendin - CBC- interview with Chairman - Awareness
Date: Wednesday, March 16, 2011 4:28:50 PM

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

Good Afternoon,

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

Rob Hendin – 202-457-4450

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

LLL/306

From: McIntyre, David
To: Shapiro, Nicholas S.
Subject: NYT Plume projection
Date: Wednesday, March 16, 2011 4:44:00 PM

Hi Nick – Can someone please forward the attachment from David Sanger of the nYT regarding the plume map. The one we got seems to be empty of plume data.

Thanks,
Dave Mc, NRC OPA

LLL/307

From: McIntyre, David
To: Bentz, Julie A.
Subject: Qs and As
Date: Wednesday, March 16, 2011 4:48:00 PM

Hi Julie – did this ever shake loose?

Thanks,
Dave McIntyre
NRC Public Affairs

LLL/308

From: Akstulewicz, Brenda
To: McIntyre, David
Subject: RE: bad link in press release
Date: Wednesday, March 16, 2011 2:17:50 PM

I just tried on the public site and it worked...rosetta virgillio called with the same thing – please try on your end again and le tme know what happens

---

From: McIntyre, David
Sent: Wednesday, March 16, 2011 2:10 PM
To: Akstulewicz, Brenda; Harrington, Holly
Subject: bad link in press release

The link in the PR to the calculations isn't working.

111/309

From: Landau, Mindy
To: McIntyre, David
Subject: FW: call
Date: Wednesday, March 16, 2011 2:24:15 PM

Can you handle?

From: Shannon, Valerie
Sent: Wednesday, March 16, 2011 2:23 PM
To: Landau, Mindy
Subject: call

Nuno Dominguez
From: Publico (newspaper in Spain)
Phone: 0034-610-396227
E-mail: ndominguez@publico.es
Re: Mark I containment systems

Val

LLL/310

From: Shannon, Valerie
To: McIntyre, David
Subject: RE:
Date: Wednesday, March 16, 2011 2:27:04 PM

Probably not but I will ask her when I call her. She is grouping them in 3's to send (if we want her to send them) since they are so large.

-----Original Message-----
From: McIntyre, David
Sent: Wednesday, March 16, 2011 2:11 PM
To: Shannon, Valerie
Subject: RE:

Are they all identical?

-----Original Message-----
From: Shannon, Valerie
Sent: Wednesday, March 16, 2011 2:02 PM
To: McIntyre, David
Subject: RE:

Dave,
I just got a call from Donna Sealing in FOIA. She said that she has about 60 more of these and want's to know if she should send them to us?
Val

-----Original Message-----
From: McIntyre, David
Sent: Wednesday, March 16, 2011 11:41 AM
To: Shannon, Valerie
Subject: RE:

Keep them on file, please. We can deal with them later.

From: Shannon, Valerie
Sent: Wednesday, March 16, 2011 10:50 AM
To: McIntyre, David
Subject: FW:

Dave,
I was not sure who to send these to (if anyone). Please let me know if I need to send them to anyone else.
Thanks, Val
From: OPA Resource
Sent: Wednesday, March 16, 2011 10:33 AM
To: Shannon, Valerie
Subject:

LL#311

From: McIntyre, David
To: Landau, Mindy
Subject: RE: call
Date: Wednesday, March 16, 2011 2:28:00 PM

I think we can triage this to the circular file.

From: Landau, Mindy
Sent: Wednesday, March 16, 2011 2:24 PM
To: McIntyre, David
Subject: FW: call

Can you handle?

From: Shannon, Valerie
Sent: Wednesday, March 16, 2011 2:23 PM
To: Landau, Mindy
Subject: call

Nuno Dominguez
From: Publico (newspaper in Spain)
Phone: 0034-610-396227
E-mail: ndominguez@publico.es
Re: Mark I containment systems

Val

111/312

From: Burnell, Scott
To: McIntyre, David; Taylor, Robert
Subject: FW: Nell Greenfield-Boyce -NPR
Date: Wednesday, March 16, 2011 7:19:15 PM

She might be calling the HOOs – perhaps you could inform them that overnights are ok for putting media calls through to you.

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

Good Evening,

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

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

LL/313

From: Shoop, Undine
To: Harrington, Holly; Couret, Ivonne; Burnell, Scott; Brenner, Eliot
Subject: Japanese increased dose limits and misreported NRC limits
Date: Wednesday, March 16, 2011 2:36:22 PM

The Washington Post reported:
"In order for them to resume trying to cool the damaged sectors, Japan's health and welfare minister had to waive the nation's standard of radiation exposure, increasing the level of acceptable exposure from 100 millisieverts to 250 — five times the level allowed in the United States."

NRC regulations stipulate the dose to an individual can be increased to 25 rem for a planned special exposure such as an activity needed for lifesaving and EPA guideline for lifesaving is 25 rem.

Undine Shoop
Chief, Health Physics and Human Performance Branch
Division of Inspection and Regional Support
Office of Nuclear Reactor Regulation
301-415-2063

LLL/314

From:	Harrington, Holly
To:	Akstulewicz, Brenda; Shannon, Valerie; Landau, Mindy; Ellmers, Glenn; Janbergs, Holly; Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David; Chandrathil, Prema; Dricks, Victor; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Screnci, Diane; Sheehan, Neil; Uselding, Lara
Cc:	Bonaccorso, Amy; Deavers, Ron
Subject:	Public Inquiries
Date:	Wednesday, March 16, 2011 8:59:00 AM

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

Ron.deavers@nrc.gov and amy.bonaccorso@nrc.gov .

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

Pls cc Brenda and myself

111/315

From:	Harrington, Holly
To:	Landau, Mindy
Cc:	Wyatt, Melissa; Akstulewicz, Brenda; Shannon, Valerie; Muessle, Mary; Taylor, Renee
Subject:	RE: Call Center
Date:	Wednesday, March 16, 2011 9:01:00 AM

Thank you!

From: Landau, Mindy
Sent: Wednesday, March 16, 2011 9:01 AM
To: Harrington, Holly
Cc: Wyatt, Melissa; Akstulewicz, Brenda; Shannon, Valerie; Muessle, Mary; Taylor, Renee
Subject: Call Center

Holly,

We can set up a call center in the OEDO space on 17 if needed at any time. We have at least six empty touchdown locations that are already set up with working computers and telephones. All we need is the people, they can log on as themselves and be in business.

Melissa Wyatt is the IT POC for this effort.

Mindy

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

3/16

From: Harrington, Holly
To: Wood, Chad
Subject: RE:
Date: Wednesday, March 16, 2011 9:21:00 AM

Call me

From: Wood, Chad [mailto:Chad.R.Wood@dhs.gov]
Sent: Wednesday, March 16, 2011 9:20 AM
To: Harrington, Holly
Subject:

Jeff just updated me on your conversation. If you're not too swamped right now do you have a quick minute?

uu/317

From: Taylor, Robert
To: Harrington, Holly; Burnell, Scott; McIntyre, David; Brenner, Eliot
Subject: FW: Chairman Testimony
Date: Wednesday, March 16, 2011 3:01:28 PM
Attachments: NRC Chairman Jaczko Testimony for 031611 Hearing.docx
FINAL - GBJ oral statement 031611 .docx

FYI

From: Decker, David
Sent: Wednesday, March 16, 2011 3:01 PM
To: Taylor, Robert
Cc: Droggitis, Spiros; Powell, Amy; Schmidt, Rebecca
Subject: RE: Chairman Testimony

Rob,
Here is the written and oral testimony. During the Chairman's oral testimony he provided details about what we believe the status of each of the 6 reactors at Fukushima is. This information is not in the attached oral statement, and I'm not sure where the info came from. I suspect it's what's in the latest situation report.

From: Taylor, Robert
Sent: Wednesday, March 16, 2011 2:43 PM
To: Droggitis, Spiros; Decker, David
Subject: Chairman Testimony

Can you guys share the Chairman's written/oral remarks from today's hearings?

111378

STATEMENT

BY GREGORY B. JACZKO, CHAIRMAN

UNITED STATES NUCLEAR REGULATORY COMMISSION

TO THE

HOUSE COMMITTEE ON ENERGY AND COMMERCE

SUBCOMMITTEES ON ENERGY AND POWER, ENVIRONMENT AND THE ECONOMY

MARCH 16, 2011

Mr. Chairmen, Ranking Members Rush and Green, and Members of the Subcommittees, I am honored to appear before you today to discuss the Fiscal Year (FY) 2012 budget request for the U. S. Nuclear Regulatory Commission (NRC) and to respond to any questions that you may have. During the past few weeks, I've had an opportunity to meet with a number of you and your staff. I appreciate these conversations and your interest in the NRC's work. I look forward to working with all of you as this session of Congress continues.

The NRC is an independent Federal agency established to license and regulate the Nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of public health and safety, promote the common defense and security, and protect the environment. Our critical mission entails broad responsibilities for the agency. The NRC currently licenses, inspects, and assesses the performance of 104 operating nuclear power plants, as well as many fuel cycle facilities and research and test reactors. Furthermore, nuclear materials are in use at thousands of hospitals, universities, and other locations around the country. Each of these facilities and materials users presents different challenges for the NRC and requires that the NRC develop and sustain a diverse array of regulatory capabilities. The safety and security of these facilities and materials is, and always will be, our number one priority.

The NRC's Safety goal is to ensure adequate protection of public health and safety and the environment. The agency's safety program objectives are to prevent the occurrence of any nuclear reactor accidents, inadvertent criticality events, acute radiation exposures resulting in fatalities, significant releases of radioactive materials and significant adverse environmental impacts. The Security goal is to ensure adequate protection in the secure use and management of radioactive materials. The security program objective is to prevent any instances in which licensed radioactive materials are used in a hostile manner in the United States.

The NRC can be proud of its strong track record and our recognition by the international community as a leader in regulating the nuclear industry. The Commission cannot give enough credit for the NRC's effectiveness as a regulator to the NRC's diverse, hard-working, talented, and dedicated staff. The Commission is continually impressed by their expertise, experience, diversity, and commitment to public service.

It is important that the NRC maintain our commitment to continuous improvement. That has long been a defining value of the NRC and a key to our success in meeting our important safety mission. We have a responsibility to the public to always try to do better – whether by planning and prioritizing to allow for more timely implementation of agency actions by licensees, or by communicating more effectively to better engage stakeholders in agency decisions.

We also, however, have an additional imperative, in light of the prevailing budgetary climate and the strong desire by many to see federal agencies do more with less. No matter the outcomes of these current budget decisions, the agency must continue focusing on the critical task of how to make the most efficient use of our funds. The NRC must ensure that we are in

the strongest possible position to efficiently and effectively use our financial resources to meet our mission.

In this area, as in many others, good process is the key to good outcomes. In accordance with the Government Performance and Results Act, the NRC is taking steps to improve our strategic planning and annual performance plans in order to achieve greater alignment of goals and performance across the agency. As part of the NRC's efforts to build a Strategic Acquisition Program, we are taking steps to ensure agency contracting initiatives are implemented in a more timely and efficient manner. We have resources dedicated to other business process improvements including the Transforming Assets into Business Solutions (TABS), a task force focused on identifying the most efficient, effective and cost-conscious manner for the NRC to accomplish its corporate support functions.

These initiatives allow us to fully meet our safety and security responsibilities while also effectively reviewing applications associated with a renewed interest in the construction of new nuclear power plants and applications to construct and operate facilities that are part of the nuclear fuel cycle. The NRC is actively reviewing 12 combined applications to construct and operate new nuclear power reactors. Five different reactor designs are referenced in these applications; the NRC is currently reviewing the design applications for certification. If these design certifications are approved they will be available to be referenced in future COL applications, and thereby make those reviews more straightforward. The NRC is also performing safety, security, and environmental reviews of facility applications, a uranium deconversion facility application, and applications for new uranium recovery facilities.

With these efforts as a backdrop, the agency has formulated its FY 2012 budget to support the agency's Safety and Security strategic goals and objectives.

Specifics of the FY 2012 Budget Request

The NRC's FY 2012 budget request is organized by business lines within our two program areas: (1) Nuclear Reactor Safety, and (2) Nuclear Materials and Waste Safety Programs. The NRC's proposed FY 2012 budget for both programs is $1,038.1 million, including 3,981.0 full-time equivalents (FTE), which represents a decrease of $28.7 million, including an increase of 0.8 FTE, when compared to the FY 2010 funding levels. The funding levels reflected above also support the Office of the Inspector General (OIG). The OIG FY 2012 proposed budget of $10.9 million includes resources to carry out the Inspector General's mission to independently and objectively conduct audits and investigations to ensure the efficiency and integrity of NRC programs and operations and to promote cost-effective management.

Pursuant to the provisions of the Energy Policy Act of 2005, the NRC's FY 2012 budget provides for 90 percent fee recovery, less (1) appropriations from the Nuclear Waste Fund, (2) appropriations to implement Section 3166 of the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005, (which pertain to waste incidental to reprocessing), and (3) appropriations to conduct generic homeland security activities. Accordingly, $909.5 million of the FY 2012 budget would be recovered from fees assessed to NRC licensees and applicants. This would result in a net appropriation of $128.6 million, which is a decrease of $26.1 million in net appropriations when compared to the FY 2010 funding levels.

Nuclear Reactor Safety Program

The Nuclear Reactor Safety Program encompasses NRC efforts to license, regulate, and oversee civilian nuclear power, research, and test reactors in a manner that adequately protects public health and safety and the environment. This program also provides high assurance of the

physical security of facilities and protection against radiological sabotage. This program contributes to the NRC's Safety and Security goals through the activities of the Operating Reactors and New Reactors Business Lines, which regulate existing and new nuclear reactors to ensure their safe operation and physical security. Overall resources requested in the FY 2012 budget for the Nuclear Reactor Safety Program are $800.8 million, including 3,032.9 FTE. This funding level represents an overall funding decrease of $8.0 million, with an increase of 48.4 FTE when compared with FY 2010 funding levels.

Within this program, the Operating Reactors Business Line supports the licensing, oversight, rulemaking, research, international activities, generic homeland security, and event response associated with the safe and secure operation of 104 civilian nuclear power reactors and 31 research and test reactors. The FY 2012 budget request for operating reactors is $521.3 million, including 2,064.4 FTE. This represents an overall funding decrease of $20.5 million, including 26.3 FTE, when compared with FY 2010 funding levels. Examples of activities that the requested resources would support include the following:

- conduct technical review for 950 licensing actions, including complex actions such as license amendment requests from power reactor licensees adopting the requirements for performance standards for fire protection, often referred to as National Fire Protection Association (NFPA) 805
- review extended power uprate requests for increasing electric generating capacity and one improved standard technical specification conversion
- conduct 13 active, high- and medium-priority rulemaking activities
- conduct critical research and test reactor project management functions pertaining to license renewal application efforts, and applications to produce medical isotopes
- continue reviews of 12 license renewal applications
- conduct inspection activities for the 104 operating nuclear power reactors, including the component design-basis inspections, fire protection inspections, and generic issues inspections (approximately 100 per year)
- continue the Resident Inspector Pipeline Initiative to maintain an experienced and stable onsite inspection presence of qualified resident inspectors at the 104 nuclear power reactors

- conduct domestic and international security reviews and support for screening approximately 3,000 national and international operational events, with detailed evaluation of approximately 200 of those events
- carry out cyber security evaluations, as well as 24 force-on-force security inspections to complete a 3-year cycle for inspecting power reactors
- evaluate licensee emergency preparedness during biennial exercises

The resources within the Operating Reactors Business Line reflect a decrease in license renewal activities because of schedule changes, and the reduced number of applications that will be under review.

The New Reactors Business Line supports the licensing, oversight, rulemaking, research, international activities, and generic homeland security associated with the safe and secure development of new power reactors from design, site approval, and construction to operational status. The FY 2012 budget request for new reactors is $279.5 million, including 968.6 FTE. This represents an overall funding increase of $12.5 million, including 74.8 FTE, when compared with FY 2010 funding levels. Examples of activities that the requested resources will support include the following:

- perform licensing and hearing support for 15 combined licenses, including two new combined license applications during FY 2012
- certify one design certification amendment, continue licensing reviews, rulemaking, or both on five applications and begin pre-application review on a new design
- review two early site permit applications and begin review of one new application expected in FY 2012
- develop and implement the construction inspection program
- inspect the four reactors expected to be under construction
- continue licensing and oversight activities for the construction of Watts Bar Unit 2
- conduct 15 domestic and international vendor inspections of component manufacturing quality
- conduct pre-application activities for two small modular reactor designs
- perform an acceptance review and initiate a design certification review for one small modular reactor
- continue the implementation of the Next Generation Nuclear Plant licensing strategy, which was developed in accordance with the Energy Policy Act of 2005

- continue to develop the regulatory framework that integrates the use of risk insights into the review process and support the resolution of key policy and safety issues associated with small modular reactors

The New Reactors Business Line shows an increase primarily driven by construction oversight of two new potential reactors under construction (for a total of five) and by development of the workforce to support inspection of up to an additional six reactors in future years. In addition, resources increase to support the review of new advanced reactor applications, increased pre-application interactions with prospective applicants, and funding for the one-time build-out of a new Headquarters office building.

Nuclear Materials and Waste Safety Program

The Nuclear Materials and Waste Safety Program encompasses the NRC's responsibility to license, regulate, and oversee nuclear materials and waste in a manner that adequately protects public health and safety and the environment. This program's goal is to verify the safety and security of materials and waste and protection against radiological sabotage, theft, or diversion of nuclear materials. Through this program, the NRC regulates uranium processing and fuel facilities; research and pilot facilities; nuclear materials users (medical, industrial, research, and academic); spent fuel storage; spent fuel storage casks and transportation packaging; decontamination and decommissioning of facilities; and low-level and high-level radioactive waste.

Overall resources requested in the FY 2012 budget for the Nuclear Materials and Waste Safety Program are $226.5 million, including 868.5 FTE. This funding level represents an overall funding decrease of $20.7 million, including 49.6 FTE, when compared with FY 2010 funding levels.

Within this program, the Fuel Facilities Business Line supports licensing, oversight, rulemaking, research, international activities, generic homeland security, and event response associated with the safe and secure operation of various fuel facilities, such as conversion, enrichment, and fuel fabrication facilities, and nuclear fuel research and pilot facilities. The FY 2012 budget request for fuel facilities is $55.2 million, including 226.5 FTE. This represents an overall funding increase of $0.6 million, including 18.2 FTE, when compared with FY 2010 funding levels. Examples of activities that the requested resources would support include the following:

- licensing and oversight activities associated with fuel facilities and licensees with greater than critical mass quantities of special nuclear material
- operation and maintenance of the Nuclear Material Management and Safeguards System database and the Nuclear Materials Information Program
- emergency preparedness, security, and licensee performance reviews
- licensing, certification, inspection, oversight, environmental reviews, research, adjudicatory, enforcement, allegation, and other regulatory activities associated with new and operating fuel facilities, including uranium conversion and enrichment and fuel fabrication
- completion of mandatory hearings on the uranium enrichment license applications for the AREVA centrifuge and General Electric-Hitachi laser enrichment facilities
- licensing review of the International Isotopes depleted uranium deconversion facility
- oversight of construction activities at the proposed Mixed Oxide (MOX) Fuel Fabrication Facility and commencement of construction of the AREVA, General Electric-Hitachi, and International Isotopes facilities

The Fuel Facilities Business Line resources increase to account for the significant construction activities planned at the MOX facility; the commencement of construction at the AREVA centrifuge and General Electric-Hitachi laser enrichment facilities, and the International Isotopes depleted uranium deconversion facility; and to reflect staffing required at resident inspector offices. Resources also increase to support rulemaking activities regarding the potential licensing of reprocessing facilities. These increases are offset by the completion of the licensing and environmental reviews of the AREVA and General Electric-Hitachi license applications, as well as the completion of the licensing and environmental reviews for the International Isotopes depleted uranium deconversion facility application.

The Nuclear Materials Users Business Line supports the licensing, oversight, rulemaking, research, international activities, generic homeland security, event response, and State, Tribal, and Federal program activities associated with the safe and secure possession, processing, handling, and use of nuclear materials for the many and diverse uses of these materials. Resources also support the National Materials Program and the Agreement State activities. The FY 2012 budget request for nuclear materials users is $92.1 million, including 347.1 FTE. This represents an overall funding increase of $0.4 million, including 9.1 FTE, when compared with FY 2010 funding levels. Examples of activities that the requested resources would support include the following:

- completion of 2,500 materials licensing actions and 1,000 routine health and safety inspections, including naturally occurring and accelerator-produced radioactive material and security inspections
- event evaluation, research, incident response, allegation, enforcement and investigations, and rulemaking activities to maintain the regulatory safety and security infrastructure needed to process and handle nuclear materials
- materials activities related to State, Tribal, and Federal programs, including oversight, technical assistance, regulatory development, and cooperative efforts
- operation of the National Source Tracking System, a secure, Web-based, nationalized central registry designed to enhance the accountability for radioactive sources
- development of the Integrated Source Management Portfolio, which consists of the National Source Tracking System, the Web-Based Licensing System, and the License Verification System
- reviews of 135–180 import/export of nuclear equipment and material license applications
- investigations into 45–55 allegations of materials-related wrongdoing

The Nuclear Materials Users Business Line resources increase slightly because of adjustments made within the business line to cover emergent activities. Overall, a slight increase resulted to address the workload associated with the implementation of the Integrated Source Management Portfolio major information technology system, which consists of the National Source Tracking System, the Web-Based Licensing System, and the License Verification System.

The Spent Fuel Storage and Transportation Business Line supports the licensing, oversight, rulemaking, research, event response, and international activities associated with the safe and secure storage of spent nuclear fuel and safe and secure transportation of radioactive materials. The FY 2012 budget request for spent fuel storage and transportation is $41.2 million, including 152.4 FTE. This represents an overall funding increase of $7.4 million, including 29.7 FTE, when compared with FY 2010 funding levels. Examples of activities that the requested resources would support include the following:

- review of license requests for site-specific independent spent fuel storage installations (ISFSIs), dual-purpose (storage and transport) casks, transportation security plans, and route approvals to support safe and secure domestic and international transportation of radioactive materials, regulatory requirements for full-core offload capability at operating reactor sites, and transfer of spent fuel to ISFSIs to support reactor decommissioning
- regulatory improvements to the proficiency and effectiveness of the licensing, inspection, and enforcement programs associated with storage and transportation of spent nuclear fuel
- inspection of storage cask and transportation package vendors, fabricators, and designers to ensure safety
- resolution of technical issues associated with allowance of burn-up credit for transportation and storage casks and the transportation and storage of high burn-up fuels (greater than 45 gigawatt-days/ metric tons of uranium)
- interaction with the International Atomic Energy Agency and other international regulators to inform the development of the regulatory framework for transportation of radioactive materials, long-term spent fuel and high-level waste storage, deferred transportation, and ultimate geologic disposal

The Spent Fuel Storage and Transportation Business Line resources would increase to develop the information necessary to evaluate extended long-term storage of radioactive material. Resources are provided for a risk-informing gap study to identify methods, data, decision criteria, and regulatory actions that are needed to implement a regulatory framework for very long-term (more than 120 years) dry spent fuel storage that is enhanced by risk insights. Resources will also support a scoping study for a generic environmental impact statement for ensuring protection of the environment from such spent fuel storage. Resources will also be provided to conduct research on technical issues associated with this storage, and to coordinate

with international partners on options for harmonizing international standards for certification of transport packages and licensing of storage cask designs.

The Decommissioning and Low-Level Waste Business Line supports the licensing, oversight, rulemaking, research, and international activities associated with the safe and secure removal of a nuclear facility from service and reduction of residual radioactivity to a level that permits release of the property and termination of the NRC license. The FY 2012 budget request for decommissioning and low-level waste is $37.9 million, including 142.6 FTE. This represents an overall funding decrease of $0.3 million, including 7.6 FTE, when compared with FY 2010 funding levels. Examples of activities that the requested resources would support include the following:

- project management and technical reviews for decommissioning activities for 10 power reactors, 10 decommissioning research and test reactors, 24 decommissioning materials facilities, 21 inactive Title I decommissioning, 11 Title II decommissioning, uranium recovery facilities, and five sites that are under general license with the U.S. Department of Energy (DOE)
- interfaces with licensees, applicants, Federal and State agencies, the public, other stakeholders, and Native American Tribal governments
- 8 environmental reviews and 11 safety reviews (hearings included) in support of licensing and oversight of uranium recovery facilities
- oversight of certain DOE waste determination activities and plans for waste incidental to reprocessing consistent with the NRC's responsibilities in the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005

The Decommissioning and Low-Level Waste Business Line resources decrease reflect a refocusing of long-term waste research activities and adjustments made to the contract, travel, and training needs and other carryover balances for waste incidental to reprocessing work.

The High-Level Waste Repository Business Line supports activities associated with DOE's Yucca Mountain geologic repository application. This activity terminates in FY 2011. No resources are requested in FY 2012 for this business line.

In the FY 2012 budget structure, the New Fuel Facilities and Operating Fuel Facilities Business Lines were merged into the Fuel Facilities Business Line.

Mr. Chairmen, Ranking Members, and Members of the Subcommittees, this concludes my formal testimony on the NRC's FY 2012 budget request. On behalf of the Commission, thank you for the opportunity to appear before you. I look forward to continuing to work with you to advance the NRC's important safety mission. I would be pleased to respond to any questions that you may have. Thank you.

STATEMENT
BY GREGORY B. JACZKO, CHAIRMAN
UNITED STATES NUCLEAR REGULATORY COMMISSION
TO THE
HOUSE COMMITTEE ON ENERGY AND COMMERCE
SUBCOMMITTEES ON ENERGY AND POWER, ENVIRONMENT AND THE ECONOMY
MARCH 16, 2011

Mr. Chairmen, Ranking Members Rush and Green, and Members of the Subcommittees, I am honored to appear before you today on behalf of the U.S. Nuclear Regulatory Commission. Given the events that are unfolding overseas, my opening remarks will focus on the crisis in Japan, and I have additional information on the Fiscal Year 2012 budget that I have submitted for the record.

I would first like to offer my condolences to all those affected by the earthquake and tsunami in Japan over the last few days. My heart goes out to those who have been dealing with the aftermath of these natural disasters.

I want to publicly acknowledge the tireless efforts, professionalism and dedication of the NRC staff in reacting to the events in Japan. This is just another example from my 6 ½ years on the Commission of the dedication of the NRC staff to the mission of protection of public health and safety. The American people can be proud of the commitment and dedication within the Federal workforce, exemplified by our staff every day.

While the NRC regulates the safe and secure commercial uses of radioactive materials in the United States, we also interact with nuclear regulators from around the world. Since Friday, the NRC's headquarters Operations Center has been operating on a 24-hour basis to monitor events unfolding at nuclear power plants in Japan. Since the earthquake hit northeastern Japan last Friday, some reactors at the Fukushima No. 1 plant have lost their cooling functions, leading to hydrogen explosions and rises in radiation levels. Two NRC experts on boiling-water reactors have already been deployed to Japan as part of a U.S. International Agency for International Development team, and they are currently in Tokyo. Since then, the Japanese government has formally asked for assistance from the United States as it continues to respond to the situation. Another NRC team is scheduled to land today.

Within the U.S., the NRC has been coordinating its efforts with other Federal agencies as part of the government response to the situation. This includes monitoring radioactive releases and predicting their path. Given the thousands of miles between Japan and the United States, Hawaii, Alaska, the U.S. Territories and the West Coast are not expected to experience any harmful levels of radioactivity.

Examining all available information is part of the effort to analyze the event and understand its implications both for Japan and the United States. The NRC has been working with several agencies to assess recent seismic research for the central and eastern part of the

country. That work continues to indicate that the U. S. public remains safe; we will continue to work to maintain that level of protection.

U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. Even those plants 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 accuracy. This means that U.S. nuclear power plants are designed to be safe based on historical data from the area's maximum credible earthquake.

The NRC remains attentive to any information that can be applied to U.S. reactors. Our focus is always on keeping plants in this country safe and secure. As this immediate crisis in Japan comes to an end, we will look at whatever information we can gain from the event and see if there are changes we need to make to our own system. Within the next few days, I intend to meet with my colleagues on the Commission on the current status and to begin a discussion of how we will systematically and methodically review information from the events in Japan. In the meantime, we continue to oversee and monitor plants to ensure that U. S. reactors remain safe.

The NRC will continue to monitor the situation and provide updates via press releases and our public blog. The NRC also stands ready to offer further technical assistance as needed. We hope that this situation will be resolved soon so that Japan can begin to recover from this terrible tragedy.

From: Harrington, Holly
To: AV-PHOTO Resource
Subject: RE: Hearing Today
Date: Wednesday, March 16, 2011 9:20:00 AM

Thank you, please make multiple copies ASAP for us. thanks

From: AV-PHOTO Resource
Sent: Wednesday, March 16, 2011 9:10 AM
To: Harrington, Holly
Subject: RE: Hearing Today

We will record the program.

Matt Williams
3Links Technologies
Audiovisual Support Contractor
Mailstop: T6E20
Tel: 301-415-6851

From: Harrington, Holly
Sent: Wednesday, March 16, 2011 9:01 AM
To: AV-PHOTO Resource
Subject: FW: Hearing Today

Can you tape this?

From: Shannon, Valerie
Sent: Wednesday, March 16, 2011 9:00 AM
To: Akstulewicz, Brenda; Brenner, Eliot; Burnell, Scott; Harrington, Holly; Hayden, Elizabeth; Couret, Ivonne; Janbergs, Holly; McIntyre, David
Subject: Hearing Today

FYI,
The hearing at 9:30 today can be viewed on C-Span 3 which is channel 39 (NRC Broadband)
Val

uu/319

From: Harrington, Holly
To: Kundrat, Christine
Subject: RE: No videographer for tommorrows hearing
Date: Wednesday, March 16, 2011 9:21:00 AM

Pls call me 301-415-8203

From: Kundrat, Christine
Sent: Wednesday, March 16, 2011 8:29 AM
To: Harrington, Holly
Subject: RE: No videographer for tommorrows hearing

If the footage is provided to AV, we can then edit it to the section that you want, have it captioned or transcript and uploaded to the public site. We have ASLBP's caption services standing by and our webcast contractor is aware of the urgent need. When you have info on the footage, please let me know so we can align our efforts.

The best format for us is DVCam-tape, raw digital files, or a standard DVD.

FYI – all webcast videos must have captions (or a posted transcript) so that the agency meets 508-compliance laws (for the hearing impaired). ASLBP provides these services for the agency.

From: Kundrat, Christine
Sent: Wednesday, March 16, 2011 8:24 AM
To: Harrington, Holly
Subject: RE: No videographer for tommorrows hearing
Importance: High

Holly,
David Decker from OCA indicated that a possibility to obtain footage of the hearing. Would you happen to know if this is the plan, and who will obtain the footage?

From: Harrington, Holly
Sent: Tuesday, March 15, 2011 3:25 PM
To: AV-PHOTO Resource; Kundrat, Christine
Subject: No videographer for tommorrows hearing

OCA now tells us that the videographer positions in the hearing room are extremely limited and we cannot send a videographer. Please STILL DO send a photographer tomorrow.

Thank you for all your help!

Holly

320

From: Harrington, Holly
To: AV-PHOTO Resource
Subject: RE: DVD
Date: Wednesday, March 16, 2011 9:23:00 AM

These are still where they were dropped off in the Op Center. Can you go by and get the DVD and the master and call me and I'll send someone there to review. thanks

---

From: AV-PHOTO Resource
Sent: Wednesday, March 16, 2011 8:14 AM
To: Harrington, Holly
Subject: RE: DVD

Many agency workstations don't play DVD's. Would you like to review up in the studio? If so, just give us a call and let us know when you're going to swing by. Also, if it's not too late, could we get back one of the tapes we gave you? I meant to keep one as a master to make future copies from...

Thanks!

Matt Williams
3Links Technologies
Audiovisual Support Contractor
Mailstop: T6E20
Tel: 301-415-6851

From: Harrington, Holly
Sent: Tuesday, March 15, 2011 9:52 PM
To: AV-PHOTO Resource
Subject: DVD

I've tried to watch the DVD for OPA review (left in the OP Center with six tapes) and I cannot get it to play on any computer here. Not sure what the problem is but I'd like to review what you've shot before we make it public. The DVD is still here in the first "cube" in the OPA section of the Op Center

LL/321

From: AV-PHOTO Resource
To: Harrington, Holly
Subject: RE: DVD
Date: Wednesday, March 16, 2011 9:31:49 AM

Matt has gone to pick up the DVD's and will be ready for someone to stop by the AV Studio for a review session by 9:45am.

Thank you and have a great day!

Aras Vasaitis
3 Links Technologies
Audio Visual Support
301-415-6851
MS T6E20

From: Harrington, Holly
Sent: Wednesday, March 16, 2011 9:24 AM
To: AV-PHOTO Resource
Subject: RE: DVD

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Thanks!

Matt Williams
3Links Technologies
Audiovisual Support Contractor
Mailstop: T6E20
Tel: 301-415-6851

From: Harrington, Holly
Sent: Tuesday, March 15, 2011 9:52 PM
To: AV-PHOTO Resource
Subject: DVD

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LLL/322

cannot get it to play on any computer here. Not sure what the problem is but I'd like to review what you've shot before we make it public. The DVD is still here in the first "cube" in the OPA section of the Op Center

From: Harrington, Holly
To: Landau, Mindy
Subject: RE: Are the Qs and As posted to the public web site? Staff is asking for something....
Date: Wednesday, March 16, 2011 9:43:00 AM

No. eliot says no. changing too fast

From: Landau, Mindy
Sent: Wednesday, March 16, 2011 9:33 AM
To: Harrington, Holly
Subject: Are the Qs and As posted to the public web site? Staff is asking for something....

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

From: Harrington, Holly
To: LIA04 Hoc
Subject: FW: Public Inquiries
Date: Wednesday, March 16, 2011 10:22:00 AM

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

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

Ron.deavers@nrc.gov and amy.bonaccorso@nrc.gov .

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

Pls cc Brenda and myself

LLL/324

From: Harrington, Holly
To: Olson, Bruce
Subject: RE: NRC Blog
Date: Wednesday, March 16, 2011 11:34:00 AM

Generally, we only link to federal government sources of info . . .

From: Olson, Bruce
Sent: Wednesday, March 16, 2011 11:33 AM
To: Harrington, Holly
Subject: NRC Blog

Suggestion....

Thanks.....

Bruce Olson
Environmental Project Manager
NRO/DSER/RAP2
301-415-3731

From: Jasinski, Robert
Sent: Wednesday, March 16, 2011 11:28 AM
To: Olson, Bruce
Subject: RE:

Holly Harrington in OPA oversees/moderates the NRC Blog...If you want to suggest something, please e-mail her. Thanks.

From: Olson, Bruce
Sent: Wednesday, March 16, 2011 11:24 AM
To: Jasinski, Robert
Subject:

An informative recent public report from the Japan Atomic Industrial Forum (JAIF) is available at:

http://www.jaif.or.jp/english/news_images/pdf/ENGNEWS01_1300252224P.pdf

It is estimated information but at least is an attempt at factual reporting.

Is this the kind of thing that can be put in the NRC Blog, say under operating reactors or is it out of bounds?

Thanks.....

Bruce Olson
Environmental Project Manager
NRO/DSER/RAP2
301-415-3731

111/325

From: Harrington, Holly
To: Hayden, Elizabeth
Subject: RE: Blog links
Date: Wednesday, March 16, 2011 11:53:00 AM

Already up

-----Original Message-----
From: Hayden, Elizabeth
Sent: Wednesday, March 16, 2011 11:53 AM
To: Harrington, Holly
Subject: Blog links

You might want to consider putting up the IAEA link along with others.

LLL/32C

From: Harrington, Holly
To: HOO Hoc
Subject: Statement
Date: Wednesday, March 16, 2011 11:49:00 AM

You can say this in response to the: Are we safe question

The Nuclear Regulatory Commission has said publicly and reiterated on our Web site in press releases that we do not expect to see radiation at harmful levels reaching the U.S. from damaged Japanese nuclear power plants. The NRC along with other federal agencies are continuing to monitor and assess information regarding wind patterns near the Japanese nuclear power plants.

uu 327

From: Harrington, Holly
To: Janbergs, Holly
Cc: Deavers, Ron; Bonaccorso, Amy
Subject: RE: Public Q Response?
Date: Wednesday, March 16, 2011 12:01:00 PM

We appreciate the suggestions of folks with idea to resolve the situation in Japan. Please understand that the NRC has some of the most expert people in the world available to assist the Japanese authorities in whatever way they request. We are fully staffed in all our response teams at this time and working 24-hours a day.

From: Janbergs, Holly
Sent: Wednesday, March 16, 2011 11:51 AM
To: Harrington, Holly
Subject: Public Q Response?

I am getting a lot of public comments from folks who are offering ideas and so forth to try and help with the situation in Japan, particularly involving the use of liquid nitrogen. I can give them a generic "thanks, we're looking into it" answer, but I thought it might be helpful to work out a response with someone technical to give them a fuller answer. Would that be okay? If so, whom should I work with?

Beth Janbergs
Public Affairs Assistant
301-415-8211

LLL 328

From:	Burnell, Scott
To:	Screnci, Diane; Sheehan, Neil; Hannah, Roger; Ledford, Joey; Chandrathil, Prema; Mitlyng, Viktoria; Uselding, Lara; Dricks, Victor; Harrington, Holly; McIntyre, David; Couret, Ivonne; Landau, Mindy; Brenner, Eliot
Subject:	FW: NRC response to MSNBC
Date:	Wednesday, March 16, 2011 12:09:56 PM

Staff's response, feel free to use it in responding to follow-ups on MSNBC's jaw-flapping.

From: Munson, Clifford
Sent: Wednesday, March 16, 2011 12:06 PM
To: Burnell, Scott
Subject: NRC response to MSNBC

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 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: Harrington, Holly
To: Taylor, Robert
Subject: talking points
Date: Wednesday, March 16, 2011 12:12:00 PM
Attachments: QUAKE TP 3 16.docx

First bullet is new to reflect press release, which is not quite out yet

LLL/330

Quake_TP_3_16.docx

OPA

TALKING POINTS

JAPAN NUCLEAR SITUATION

As of 3/16/2011 12:30 p.m. EDT

- The NRC no longer concurs with the existing protective action measures recommended by the Japanese government for evacuation to 20 miles and sheltering out to 30 miles from Fukushima. Under the guidelines for public safety that would be used in the United States under similar circumstances, the NRC would recommend that residents within 50 miles of the affected site evacuate.

- The NRC continues to believe that the type and design of the Japanese reactors, combined with how events have unfolded, will prevent radiation at harmful levels from reaching U.S. territory.

- The Japanese government has formally asked for U.S. assistance in responding to nuclear power plant cooling issues triggered by an earthquake and tsunami on March 11. The NRC has two staff on the ground in Japan as part of the USAID team and 10 other NRC personnel are enroute.

- The NRC is coordinating its actions with other federal agencies as part of the U.S. government response. The NRC's headquarters Operations Center is activated and monitoring the situation on a 24-hour basis.

- The NRC is always looking to learn information that can be applied to U.S. reactors and we will analyze the information that comes from this incident.

- The NRC is working with other U.S. agencies to monitor radioactive releases from Japan and to predict their path.

- Given the results of the monitoring and distance between Japan and Hawaii, Alaska, U.S. Pacific Territories and the U.S. West Coast, the NRC expects the U.S. to AVOID any harmful levels of radioactivity.

- U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes. Even those plants that are located outside of areas with extensive seismic activity are designed for safety in the event of such a natural disaster.

- The NRC requires that safety-significant structures, systems, and components be designed to take into account the most severe natural phenomena historically reported for the site and surrounding area. The NRC then adds a margin for error to account for the historical data's limited accuracy. In other words, U.S. nuclear power plants are designed to be safe based on historical data to predict the area's maximum credible earthquake.

From: Janbergs, Holly
To: Harrington, Holly
Subject: House Hearing Update 1
Date: Wednesday, March 16, 2011 12:15:28 PM

Opening Remarks:

Whitfield:
- -nuclear energy plays a vital role in our country
- -we need to maximize safety and learn from what happens in Japan

Rush:
- -Republican budget cuts
- -support nuclear energy but not at the expensive of other energy projects
- -nuke industry needs to be as transparent as possible

Shimkus:
- -budget
- -nuclear waste repository needs to be a priority

Waxman:
- -a lot of wakeup calls in the last year that tells us we need to revise energy policy
- -Republican budget cuts

Green:
- -need to produce clean energy at reasonable cost

Upton:
- -nuclear should be part of energy mix
- -doe budget needs to be examined carefully
- -reducing need for onsite storage will reduce risk for nuclear plants
- -Yucca Mountain or other repository needs to become reality

Markey:
- -we're not moving fast enough on KI; Obama admin needs to enforce KI laws
- -taxpayers can't be on the hook for investments in nuclear plants

Chu:
- -doe actions: experts, teams, monitoring equipment
- -budget supporting Obama's clean energy goals

Beth Janbergs
Public Affairs Assistant
301-415-8211

LL/331

From: McIntyre, David
To: Harrington, Holly
Subject: FW: Topline Talking Points (resend)
Date: Wednesday, March 16, 2011 2:35:00 PM

Michael got this ...

From: Widomski, Michael [mailto:michael.widomski@dhs.gov]
Sent: Wednesday, March 16, 2011 2:34 PM
To: McIntyre, David
Subject: Fw: Topline Talking Points (resend)

Sent from my BlackBerry Wireless Handheld

From: NATIONAL JIC <NationalJIC@dhs.gov>
To: NATIONAL JIC
Sent: Wed Mar 16 14:30:34 2011
Subject: Topline Talking Points (resend)

IF ASKED about any questions about harmful radiation headed towards the US: **NRC Chairman Jaczko continues to say the following: "You just aren't going to have any radiological material that, by the time it traveled those large distances, could present any risk to the American public."**

Topline Points

- The United States is continuing to do everything in its power to help Japan and American citizens who were there at the time of these tragic events.

- USAID is coordinating the overall U.S. government efforts in support of the Japanese government's response and are currently directing individuals to www.usaid.gov for information about response donations.

- The President is being kept up to date and is constantly being briefed by his national security staff. The National Security staff in the White House is also coordinating a large interagency response with experts meeting around the clock to monitor the latest information coming out of Japan.

- We have offered our Japanese friends includes disaster response experts, search and rescue teams, technical advisers with nuclear expertise and logistical support from the United States military.

- In response to the deteriorating situation at the Fukushima Nuclear Power Plant, the United States Nuclear Regulatory Commission (NRC), the Department of Energy and other technical experts in the U.S. Government have reviewed the scientific and technical information they have collected from assets in country, as well as what the Government of Japan has disseminated. Consistent with the NRC guidelines that would apply to such a situation in the United States, we are recommending, as a precaution, that American citizens who live within 50 miles (80 kilometers) of the

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Fukushima Nuclear Power Plant evacuate the area or to take shelter indoors if safe evacuation is not practical.

- We want to underscore that there are numerous factors in the aftermath of the earthquake and Tsunami, including weather, wind direction and speed, and the nature of the reactor problem that affect the risk of radioactive contamination within this 50 mile radius or the possibility of lower-level radioactive materials reaching greater distances.

- To support our citizens there, the Embassy is working around the clock, we have our consular services available 24 hours a day to determine the whereabouts and well-being of all U.S. citizens in Japan. U.S. citizens in need of emergency assistance should send an e-mail to JapanEmergencyUSC@state.gov with detailed information about their location and contact information, and monitor the U.S. Department of State website at travel.state.gov.

As I said earlier, we have offered our Japanese friends disaster response experts, search and rescue teams, technical advisers with nuclear expertise and logistical support from the United States military.

- Secretary Chu announced that DOE offered and Japan accepted an Aerial Measuring System capability, including detectors and analytical equipment used to provide assessments of contamination on the ground. In total, the DOE team includes 34 people.

- USAID set up a Response Management Team in DC and sent a Disaster Assistance Response Team to Tokyo, which includes people with nuclear expertise from the Departments of Energy and Health and Human Services as well the Nuclear Regulatory Commission (NRC). The NRC members are experts in boiling water nuclear reactors and are available to assist their Japanese counterparts.

- Two Urban Search and Rescue Teams (LA County and Fairfax County teams) which total 144 members plus 12 search and rescue canines and up to 45 metric tons of rescue equipment have begun searching for survivors.

- The Department of Defense has the USS Reagan on station off the coast of Japan and is currently using an air facility in Misawa as a forward operating base.

- The American Red Cross (ARC) International Services team is supporting the Japanese Red Cross Society (JRCS) to assess the impact, determine response efforts, and assist the people of Japan.

- USAID is hosting a daily conference call with Congressional staff, including participation from DoD, DoS, NRC, DoE, and HHS. The U.S. officials will continue to provide a brief overview of each agency's efforts in the response to Japan and respond to questions from the Congressional staff regarding humanitarian assistance, military assistance, and the nuclear plant situation.

- Currently nearly 5300 US military members are supporting the disaster relief efforts.

There are 8 ships, including the aircraft carrier USS Ronald Reagan, transport aircraft and more than 100 military helos are being repositioned to northern Japan to support the efforts.

- The US military has flown reconnaissance flights and provided the Japanese government with images of the areas affected by the earthquake and tsunami. Search and rescue flights and missions along the coast continue, relief operations including delivery of food, water and other relief supplies also continue.

- Yokota Air Base is serving as a humanitarian relief operations staging area and Misawa Air Base is serving as both a logistical hub for humanitarian relief and rescue workers as well as an operating base for U.S., Japanese and other international helos and aircraft.

Here at a home, the government is doing a number of things as well.

- The US Government will be studying every aspect of the Japanese disaster and the Japanese government's response, with the goal of learning as much as possible from that review.

- As the Nuclear Regulatory Commission has said, we do not expect to see radiation at harmful levels reaching the U.S. from damaged Japanese nuclear power plants. As part of the federal government's continuing effort to make our activities and science transparent and available to the public, the Environmental Protection Agency (EPA) will continue to keep all RadNet data available in the current online database. In addition, EPA plans to work with its federal partners to deploy additional monitoring capabilities to parts of the western U.S. and U.S. territories.

- As always, EPA is utilizing this existing nationwide radiation monitoring system, RadNet, which continuously monitors the nation's air and regularly monitors drinking water, milk and precipitation for environmental radiation. The RadNet online searchable database contains historical data of environmental radiation monitoring data from all fifty states and U.S. territories.

- The FDA and USDA continues to ensure all our imported food remains safe as they do everyday

- If there were to be a nuclear accident here, we are prepared to respond and FEMA and the Department of Homeland Security exercise these preparedness plans with the rest of the government and state and local officials as well. Release of radioactive materials can be accidental or intentional and we have a detailed plan to respond regardless of the cause. The Nuclear/Radiological Incident Annex to the National Response Framework outlines which department or agency would have the lead for the Federal response depending on the source and type of release. For example, the Nuclear Regulatory Commission (NRC) would coordinate a response to a release at nuclear power facilities licensed by the NRC. The Department of Energy would coordinate a response to a release involving nuclear weapons in DOE custody. The Department of Homeland Security would coordinate a response to a deliberate attack using improvised nuclear devices or radiological dispersal devices.

- Given the range of potential causes, from an earthquake to a terrorist attack, the plan provides the flexibility and agility we need to respond aggressively and effectively. In addition, state and local officials and nuclear facilities have detailed emergency plans that include specific protective actions, evacuation routes, and methods to alert the public of actions to take in the event of an emergency. There is a robust and active nuclear power plant accident exercise program that includes Federal, State, and local involvement to test plans and keep them current, and just last year we conducted such an exercise. Federal protective action guides are used at all nuclear power plants and are widely accepted and used in planning and exercises, and we will continue our efforts to plan and prepare for the safety and security of the American people.

From: Janbergs, Holly
To: Harrington, Holly
Subject: House Hearing Update 2 (Chu Qs)
Date: Wednesday, March 16, 2011 12:42:59 PM

First set of relevant Qs

Whitfield: IAEA's radiation scale, Japan vs. TMI – thoughts?
Chu: Events unfolding in Japan seem more serious than TMI. Conflicted reports make definitive statements difficult
Whitfield: Gov't entered into contracts re: Yucca, what can you tell me about the lawsuits there?
Chu: Will follow up and give exact number. It's an ongoing legal process

Rush: Can you assure the committee and American public that what's happening in Japan cannot happen here?
Chu: We'll look closely for lessons learned, but we don't believe there's any danger.

Upton: Is there anything Japan's asked for we haven't done?
Chu: Not to my knowledge

Waxman: I understand there are differences between Chernobyl, but could this happen here?
Chu: Yes, Chernobyl a different design. In Japan, we'll look for what went wrong, see if we can improve our systems.
Waxman: Do you think Congress should investigate?
Chu: I think investigation will happen naturally
Waxman: Naturally, but I think Congress has a responsibility for oversight, and we write the laws.

Waxman: Would nuclear power be competitive without government help (subsidies, loans, etc)
Chu: At the moment nuclear and renewables require subsidies to be competitive but we're trying to approach that problem

Shimkus: One of risks in Japan was decommissioned or offline plants had spent fuel storage pool that went dry, yes?
Chu: There've been conflicting reports
Shimkus: 11 pools within 40 mi of Chicago; wouldn't it make sense to have a central location?
Chu: Difference between pools as short term storage and Yucca as long term
Shimkus: Folks living near pools think it's pretty long term

Green: To jumpstart nuclear energy, we need loan guarantees. You mentioned $36 billion, how many projects would that fund?
Chu: 6-8 projects, and if that can go forward there might be more confidence in private sector afterward
Green: In SOTU address Obama asked for 80% clean energy by 2035, if we stop going ahead with nuclear is that a possibility?
Chu: It would make things harder. I think a fraction needs to come from nuclear

Barton: Does Obama still support nuclear power?
Chu: he hasn't changed position on budget asking for loan guarantees, etc

Inslee: Republican budget means cuts in most places but nuclear, but we need diverse energy portfolio
Chu: We need research everywhere, just as we'd like to support engineering for small modular reactors we need a balanced approach for renewables
Inslee: Office of Civilian Radioactive Waste Mgmt has been shut down. My state paid $300 mil for Yucca – we need a solution
Chu: Blue Ribbon Commission will have answers in June, we'll go forward from there

Matsui: What happens if there's a meltdown?
Chu: We don't want to speculate on exactly what'll happen, we'll take things as they come

Gardner: What's your level of communication with Japan?
Chu: In constant contact with Japan, both their officials and our presence on ground
Gardner: At this pt are you satisfied with their response?
Chu: We've gotten conflicting reports of what's going on, but as a country they take things very seriously, I don't want to say anything more except that we'll stand by and help as best we can.

Pitts: You said nuclear power should continue to be part of energy policy
Chu: Yes
Pitts: You eliminated office of Civilian Radioactive Waste Mgmt, admin has shut down Yucca… in light of situation in Japan does any of the current energy policy warrant reconsideration?
Chu: We shouldn't conflate what's happening in Japan with need for long-term repository; spent fuel pool storage is different
Pitts: At present how is admin fulfilling its obligation to deal with spent fuel?
Chu: Don't want to preempt what Blue Ribbon Commission is saying
Pitts: In light of events in Japan do you have any conclusions about how safe nuclear power is in US?
Chu: We will look at events in Japan and determine any lessons learned from impacts of multiple cascading events
Pitts: What is being done to monitor radiation?
Chu: DOE has airlifted equipment to Japan to help monitor and made that available, we have folks testing in air and ground over there; trying to maintain up to date info on radiation levels

Markey: As "banker-in-chief" to nuclear industry, from a financial risk perspective, do you think events in Japan make it likely folks will want to assume risks of investing in nuclear?
Chu: Events in Japan will cause people to reevaluate a lot and that's always good when it involves a commitment to maximize safety
Markey: Are you going to assess the risk premium you charge utilities?
Chu: A lot of factors get folded into the premium for nuclear plants
Markey: Should OMB reexamine the risk premium?
Chu: They'll probably include Japan in their consideration
Markey: I sent a letter a few days before earthquake discussing AP1000 design when I learned an NRC engineer John Ma said it may be too brittle to handle an earthquake and

may shatter like an egg, also had an unrealistic earthquake simulation. Isn't it risky to make loan guarantees to a design like this?
Chu: One condition of a loan is that it's dependent on NRC approval of the license, and that is still pending
Markey: Do you think we should hold off on new designs until we've gotten lessons learned from Japan?
Chu: I think no matter what happens we'll take lessons learned and apply them to both our current fleet and any actions in the future
Markey: Re: the AP1000 at Vogtle, taxpayers are on the hook for $8.3 billion of that project, what happens if there is a default?
Chu: Our loan guarantee program tries to work specifics into the contract to ensure that doesn't happen, so there are assets in Southern Nuclear that…
Markey: Would we end up owning Southern Nuclear like we had to take over other companies in the last few years?
Chu: I'll have to get you details on that
Markey: Taxpayers must be protected

DeGette: Multiple failsafe systems in Japan, even technologically advanced ones, can't really prevent/prepare for everything
Chu: We're developing tools to get a better handle on multiple cascading effects, there's always an eye to increasing safety
DeGette: One of the questions we really need to explore is whether we have the kind of modeling we need to develop nuclear power safely in this country.

Bilbray: This reactor is not state-of-the-art, technology has changed in the last forty years. There are big differences to our reactors here in CA, when we talk about tsunamis – at San Onofre our surge wall is 3x what it was there, and at Diablo Canyon it's 8x

Beth Janbergs
Public Affairs Assistant
301-415-8211

From: Harrington, Holly
To: Brenner, Eliot
Subject: FW: permission to post these FAQs
Date: Wednesday, March 16, 2011 1:12:00 PM

No answer on these? Can I make them into a short blog post? Anything would help . . .

From: Harrington, Holly
Sent: Wednesday, March 16, 2011 12:08 PM
To: Brenner, Eliot
Subject: permission to post these FAQs

These focus only on questions of U.S. nuclear power plant safety (not current situation). Would be very helpful to us if we could put these up. Media calls increasing exponentially

1. **Can the Japanese nuclear crisis happen here in the United States?**

The events that have occurred in Japan are the result of a combination of highly unlikely natural disasters. These include the fifth largest earthquake in recorded history and the resulting devastating tsunami. It is highly unlikely that a similar event could occur in the United States.

2. I live near a nuclear power plant similar to the ones having trouble in Japan. How can we now be confident that this plant won't experience a similar problem?

U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. 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 is confident that the robust design of these plants makes it highly unlikely that a similar event could occur in the United States.

3. Has this crisis changed your opinion about the safety of U.S. nuclear power plants?

The NRC remains confident that the design of U.S. nuclear power plants ensures the continued protection of public health and safety and the environment. However, the NRC is always looking to learn information that can be applied to U.S. reactors and we will analyze the information that comes from this incident.

4. With all this happening, how can the NRC continue to approve new nuclear power plants?

LL/334

It is premature to speculate what, if any, effect the events in Japan will have on the licensing of new nuclear power plants.

5. What is the NRC doing in response to the situation in Japan?

Since the beginning of the event, the NRC has continuously manned its Operations Center in Rockville, MD in order to gather and examine all available information as part of the effort to analyze the event and understand its implications both for Japan and the United States. A team of 11 officials from the NRC with expertise in boiling water nuclear reactors have deployed to Japan as part of a U.S. International Agency for International Development (USAID) team. The NRC has spoken with its counterpart agency in Japan, offering the assistance of U.S. technical experts. The NRC is coordinating its actions with other Federal agencies as part of the U.S. government response.

6. What other U.S. agencies are involved, and what are they doing?

The entire federal family is responding to this event. The NRC is closely coordinating its efforts with the White House, DOE, DOD, USAID, and others. The U.S. government is providing whatever support requested by the Japanese government.

7. What else can go wrong?

The NRC is continuously monitoring the developments at the nuclear power plants in Japan. Circumstances are constantly evolving and it would be inappropriate to speculate on how this situation might develop over the coming days.

8. What is the worst-case scenario?

In a nuclear emergency, the most important action is to ensure the core is covered with water to provide cooling to remove any heat from the fuel rods. Without adequate cooling, the fuel rods will melt. Should the final containment structure fail, radiation from these melting fuel rods would be released to the atmosphere and additional protective measures may be necessary depending on factors such as prevailing wind patterns.

From: Janbergs, Holly
To: Harrington, Holly
Subject: House Hearing Update 3
Date: Wednesday, March 16, 2011 2:08:34 PM

Chairman Jaczko's opening remarks focus on Japan; he submitted comments on budget for the record.
-covers NRC response, safety at reactors here, our radiation monitoring and how we'll use lessons learned, our intent to continue helping with Japan
-update on current status of reactors: monitoring four reactors at Fukushima No. 1, three have suffered some degree of core damage, seawater being injected with reported stable cooling, primary containment described as functional; unit 2 core cooling not stable, but we currently believe primary containment is continuing to function; unit 2 spent fuel pool level is decreasing; unit 3 we believe spent fuel pool integrity has been compromised; fourth reactor which was shut down at time of earthquake is also under concern – hydrogen explosion due to uncovering at spent fuel pool; we believe no water at spent fuel pool atm, radiation levels high which could impact ability to take corrective measures; IAEA report on other two reactors is that spent fuel pools water level down slightly
-NRC made recommendation that we would evacuate to a larger distance in US, up to approx 50 miles; our ambassador has issued a statement to American citizens in Japan saying as much
-we continue to monitor situation with our limited availability

Beth Janbergs
Public Affairs Assistant
301-415-8211

111/335

From: Shoop, Undine
To: Harrington, Holly; Couret, Ivonne; Burnell, Scott; Brenner, Eliot
Subject: blog question on dose
Date: Wednesday, March 16, 2011 2:14:12 PM

One of my staff pointed out a comment on the blog related to dose, specifically that it would be helpful if we would use mSv in addition to rem when we are discussing dose since most of the world uses the international standard for units (SI) including the IAEA and TEPCO press releases. The conversion is:
1 mSv = .1 rem

Undine Shoop
Chief, Health Physics and Human Performance Branch
Division of Inspection and Regional Support
Office of Nuclear Reactor Regulation
301-415-2063

LLL/336

From: Janbergs, Holly
To: Harrington, Holly
Subject: House Hearing Update 4
Date: Wednesday, March 16, 2011 2:14:20 PM

Whitfield: Markey referred to John Ma and his concerns over the AP1000 design; I'm curious if you have had the opportunity to review his concerns?
Jaczko: We have done a very thorough review of the AP1000 design relative to a large number of safety issues. We've had a discussion among NRC staff including concerns of one of our staff that you indicated; we believe that design can be acceptable going forward. It's in process of receiving public comment.
Whitfield: Other countries have more generation from nuclear; in US it takes ~10 yrs to receive permit for nuclear plant.
Jaczko: Atm it's closer to 5 years; I liken it to college... everyone intends to finish in 4, but not everyone does. Current pace is relatively effective
Whitfield: These applications are evaluated for seismic and tsunami
Jaczko: Yes, wide range of natural disasters depending on geographic location
Whitfield: With sodium-cooled reactors there is not possibility of a meltdown; comments?
Jaczko: We don't currently have any specific applications for sodium-cooled design. Different type of technology than what is currently operating, so presents its own challenges re: safety. We haven't gone through review of one
Whitfield: That technology was developed in US, some countries actually have some?
Jaczko: Other countries, yes

Beth Janbergs
Public Affairs Assistant
301-415-8211

LLL/337

From: McIntyre, David
To: Akstulewicz, Brenda; Harrington, Holly
Subject: bad link in press release
Date: Wednesday, March 16, 2011 2:10:17 PM

The link in the PR to the calculations isn't working.

LLL/338

From: Janbergs, Holly
To: Harrington, Holly
Subject: House Hearing Update 5
Date: Wednesday, March 16, 2011 2:24:41 PM

Rush: Should IL be worried about its plants? What assurances can we give?
Jaczko: Every day focus to keep plants safe; all are reviewed against significant standard for seismic activity based on historical record and analysis of effects.
Rush: But in Japan it was earthquake + tsunami. What about a tornado?
Jaczko: We look at all natural phenomena
Rush: #1 threat to facilities here is terrorist activities, how is NRC handling that?
Jaczko: Robust program requiring utilities to have ability to protect against terrorist attacks; force-on-force exercises every 3 years. We also conduct normal inspections. Post 9/11 we require all power plants to look at impacts and effects from possible attack etc

Shimkus: When did licensing board return decision re: Yucca Mt?
Jaczko: End of June
Shimkus: Haven't all commissioners already file votes on that?
Jackzo: Preliminary views among us which we use to inform final decision-making. Not come to final decision at this pt
Shimkus: No final votes?
Jaczko: No final decision yet. Unlike here, our votes are more like prepared statements/remarks from Commission; we circulate them and try to find majority position
Shimkus: Oct 29 2010?
Jaczko: We circulated written statements. Votes, but not final decision
Shimkus: You have written statements... when do you plan to schedule a Commission meeting?
Jaczko: When we have a majority position. The terminology is maybe confusing
Shimkus: What about a majority decision?
Jaczko: There is no decision by the Commission
Shimkus: Was this your decision or everyone's?
Jaczko: Mine based on budget
Shimkus: What was your legal authority?
Jaczko: As Chairman of Commission, it was consistent with my legal authority
Shimkus: I don't think so
Jaczko: I respectfully disagree with that
Shimkus: You wouldn't do anything illegal?
Jaczko: No
Shimkus: Federal position by law is that Yucca should be open, there's no legal authority to close Yucca. Only legal authority that's been rendered is administration to pull funding. But by law there's no authority to close Yucca
Jaczko: Our actions are consistent with appropriate appropriations law
Shimkus: We're not through with this debate on legal authority, so I hope you're well-prepared. Courts can't rule until full Commission makes a decision; if the Court runs out of patience and does rule, will you abide by it?
Jaczko: Agency will abide by Courts/Congress

Beth Janbergs
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LLL339

From: Janbergs, Holly
To: Harrington, Holly
Subject: House Hearing Update 6
Date: Wednesday, March 16, 2011 2:35:50 PM

Green: Can you talk about review process for new plants like Texas and how long NRC and OMB process takes?
Jaczko: South Texas Project was one of first applications we received for new license. We're continuing to do review, we're nearing significant milestones for design reviews on that type of reactor. It's out for public comment. If we resolve comments over summer we would move forward with completing final reviews necessary, maybe within 12 mos. Our focus first and foremost is on safety.
Green: Timeframe it was filed?
Jaczko: 2007? Within several mos we had to suspend review because applicant made a change in vendor they were using to support design, so that paused progress for about a year.
Green: Agency looks at that plant and applications for safety?
Jaczko: For all natural phenomena
Green: Have staff provide technological advances on current & proposed plants in US compared to what's happening in Japan

Upton: Tell us what functions are of 11 folks you sent to Japan?
Jaczko: The 11 individuals sent to Japan are providing variety of services. Organizing look at reactors, provide coordinated team for assistance to embassy…
Upton: Do they have something like Ops Cr in Japan?
Jaczko: My understanding is they do, I am not familiar with it.
Upton: In Tokyo?
Jaczko: Our folks are in Tokyo
Upton: Where was hydrogen explosion in 4th reactor?
Jaczko: Don't have specific information, but we believe it's because spent fuel in that reactor has lost its cooling and was releasing some degree of hydrogen.
Upton: Today US time?
Jaczko: Several days earlier, we can get you specifics as we know it.
[Budget queries; video blanked for a minute]

Beth Janbergs
Public Affairs Assistant
301-415-8211

LLL/340

From: Janbergs, Holly
To: Harrington, Holly
Subject: House Hearing Update 7
Date: Wednesday, March 16, 2011 2:43:44 PM

Waxman: What's the significance of a report of a crack in containment?
Jaczko: The crack I was referring to is in a spent fuel pool in one of the other units, meaning a possibility of water draining, which may lead to difficulty maintaining water levels.
Waxman: What is the best case and worst case for Japan?
Jaczko: Certainly efforts to continue to provide cooling for reactors and spent fuel pools. I don't want to speculate on what could happen, it's a very dynamic situation and there are a lot of efforts being undertaken. The NRC is playing one small part of US gov't response to do what we can.

-My reports are going to be a little slower, CSPAN's online streaming keeps messing up so I'm going to go watch the rest in the elevator lobby.

Beth Janbergs
Public Affairs Assistant
301-415-8211

LLL/341

From: Andy.Adora@epamail.epa.gov
To: McIntyre, David
Cc: Harrington, Holly
Subject: Re: EPA/NRC/CNN
Date: Wednesday, March 16, 2011 11:02:05 AM

Excellent. We'll circle back with CNN and help them get their act together. They are crazy.
BTW our statement is linked on our front page under "News&Announcements" and "Radiation" and "Japan" are under our "Popular Topics" on the front page.
Either way you can send this link to reporters: epa.gov/radiation

Thanks! Get some rest David!

Adora Andy
Deputy Associate Administrator
U.S. Environmental Protection Agency
Office of External Affairs and Environmental Education
202-564-2715
andy.adora@epa.gov

From: "McIntyre, David" <David.McIntyre@nrc.gov>
To: Adora Andy/DC/USEPA/US@EPA, "Harrington, Holly" <Holly.Harrington@nrc.gov>
Date: 03/16/2011 10:31 AM
Subject: EPA/NRC/CNN

I'm not in the office now (I go on at 2 pm - midnight today) but I suspect this is a garble of "EPA is in charge on monitoring air in US" and that your RadNet data is online. It is quite possible the reporter is fishing.

We handled press calls in the 100s yesterday, as I'm sure you were busy too. Our only talking point on this is that EPA is the lead agency on monitoring radiation in the US, and we are now prepared to refer folks (press and public) to your statement.

I'll alert my colleagues to this by cc here.

Holly: Adora is my EPA contact from later. Note apparently garbled message below.

From: Andy.Adora@epamail.epa.gov [Andy.Adora@epamail.epa.gov]
Sent: Wednesday, March 16, 2011 9:33 AM
To: McIntyre, David
Cc: Johnson.Alisha@epamail.epa.gov
Subject: RE: ACTION: STATEMENT

Hey David,
We got this from CNN and it's a little disturbing because CNN is saying that someone at NRC sent them our way regarding tracking a "radio active plume." Before we get back to CNN and tell them they're crazy, are you at all aware of this? Can you tell me if they have your 3-13 statement

LLL/342

and might just be fishing? What do you think?
Thanks my friend,
Adora

----- Forwarded by Alisha Johnson/DC/USEPA/US on 03/16/2011 09:14 AM -----

|---------->
| From: |
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|"Rizzo, Jennifer" <Jennifer.Rizzo@turner.com>
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| To: |
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|Press@EPA
|

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|---------->
| Date: |
|---------->

>----------|

|03/16/2011 07:36 AM
|

>----------|

|---------->
| Subject: |
|---------->

>----------|

|CNN Request: Japan Radiation Plume
|

>----------|

Good morning-- I was told by the NRC that the EPA was putting something out tracking the radioactive plume in Japan. Is it up yet because I don't see it on the site.

Thanks,
Jennifer Rizzo
National Security Producer
202-772-2608

From: Adora Andy/DC/USEPA/US
To: "McIntyre, David" <David.McIntyre@nrc.gov>
Cc: Alisha Johnson/DC/USEPA/US@EPA, "Brenner, Eliot" <Eliot.Brenner@nrc.gov>
Date: 03/15/2011 06:03 PM
Subject: RE: ACTION: STATEMENT

Final statement, I'm sending to reporters who are asking now. Should be on our website in the next 20-30. Thanks!

EPA STATEMENT:
As the U.S. Nuclear Regulatory Commission has said, we do not expect to see radiation at harmful levels reaching the U.S. from damaged Japanese nuclear power plants. As part of the federal government's continuing effort to make our activities and science transparent and available to the public, the Environmental Protection Agency (EPA) will continue to keep all RadNet data available in the current online database. In addition, EPA plans to work with its federal partners to deploy additional monitoring capabilities to parts of the western U.S. and U.S. territories.

As always, EPA is utilizing this existing nationwide radiation monitoring system, RadNet, which continuously monitors the nation's air and regularly monitors drinking water, milk and precipitation for environmental radiation. The RadNet online searchable database contains historical data of environmental radiation monitoring data from all fifty states and U.S. territories.

###
NOTE: RadNet air monitoring data can be always be viewed on EPA's Central Data Exchange (CDX) website at www.epa.gov/cdx.

Adora Andy
Deputy Associate Administrator
U.S. Environmental Protection Agency
Office of External Affairs and Environmental Education
202-564-2715
andy.adora@epa.gov

From: Mitlyng, Viktoria
To: Burnell, Scott; McIntyre, David
Cc: Harrington, Holly
Subject: FW: AFP questions
Date: Wednesday, March 16, 2011 11:17:38 AM

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

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

Thank you.

Vika

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

Hi Ms Mitlyng,

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

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

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

Thanks and regards,

Paul Handley

LL/343

AFP
202 4140682

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

Paul, here is my contact information.

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

From:	Burnell, Scott
To:	Screnci, Diane; Sheehan, Neil; Hannah, Roger; Ledford, Joey; Chandrathil, Prema; Mitlyng, Viktoria; Uselding, Lara; Dricks, Victor; Harrington, Holly; McIntyre, David; Couret, Ivonne; Landau, Mindy; Brenner, Eliot
Subject:	FW: NRC response to MSNBC
Date:	Wednesday, March 16, 2011 12:09:53 PM

Staff's response, feel free to use it in responding to follow-ups on MSNBC's jaw-flapping.

From: Munson, Clifford
Sent: Wednesday, March 16, 2011 12:06 PM
To: Burnell, Scott
Subject: NRC response to MSNBC

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 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.

LLL/344

From: Burnell, Scott
To: Mitlyng, Viktoria; Harrington, Holly; McIntyre, David
Cc: Chandrathil, Prema
Subject: RE: UPDATE: NRC IS RESPONDING TO JAPANESE EVENTS
Date: Wednesday, March 16, 2011 12:10:34 PM

I keep forgetting it's agency-wide, not just Rockville. Yes, you can filter at the Regional level. My apologies to Sartorius

---

From: Mitlyng, Viktoria
Sent: Wednesday, March 16, 2011 12:03 PM
To: Harrington, Holly; Burnell, Scott; McIntyre, David
Cc: Chandrathil, Prema
Subject: FW: UPDATE: NRC IS RESPONDING TO JAPANESE EVENTS

All,

This most recent Op Center Bulletin states the following: **ALL CALLS from media or the general public on this topic must be referred to the 301-415-8200 number. Do you want all regional calls to be routed through to HQ? If not, we need to clarify to the regions. The questions came from our DRA. Thank you. Vika**

From: Pederson, Cynthia
Sent: Wednesday, March 16, 2011 10:53 AM
To: Chandrathil, Prema; Mitlyng, Viktoria
Subject: FW: UPDATE: NRC IS RESPONDING TO JAPANESE EVENTS

From: Satorius, Mark
Sent: Wednesday, March 16, 2011 10:28 AM
To: Pederson, Cynthia
Subject: FW: UPDATE: NRC IS RESPONDING TO JAPANESE EVENTS

last email from me for the rest of the trip, i promise. i know you are aware that this issue of whom calls should be referred to caused great ankst w/ our opa folks. this message suggests another protocol change that may need clarification.

bye!

From: Operations Center Bulletin
Sent: Wednesday, March 16, 2011 10:39 AM
To: Operations Center Bulletin
Subject: UPDATE: NRC IS RESPONDING TO JAPANESE EVENTS

THIS IS NOT A DRILL

The Office of Public Affairs is expecting a large volume of calls from media and the general public regarding the latest statements from the State Department and the NRC regarding the situation in Japan. ALL CALLS from media or the general public on this topic must be referred to the 301-415-8200 number.

The NRC is coordinating its actions with other Federal agencies as part of the U.S. government response to the events in Japan. 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's Headquarters Operations Center in Rockville, MD has been stood up since the beginning of the emergency in Japan and is operating on a 24-hour basis.

NRC Incident Responders at Headquarters have spoken with the agency's counterpart in Japan and offered the assistance of U.S. technical experts. NRC representatives with expertise on boiling water nuclear reactors have deployed to Japan as part of a U.S. International Agency for International Development (USAID) team. USAID is the Federal government agency primarily responsible for providing assistance to countries recovering from disasters.

U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. 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 in account the most severe natural phenomena historically estimated for the site and surrounding area.

The NRC will **not** provide information on the status of Japan's nuclear power plants. For the latest information on NRC actions see the NRC's web site at www.nrc.gov or blog at http://public-blog.nrc-gateway.gov.

Two important reminders:

It is possible that some of us will be requested by colleagues in another country to provide technical advice and assistance during this emergency. It is essential that all such communications be handled through the NRC Operations Center. Any assistance to a foreign government or entity must be coordinated through the NRC Operations Center and the U.S. Department of State (DOS). If you receive such a request, contact the NRC Operations Officer (301-816-5100 or via the NRC Operator) immediately.

If you receive information regarding this or any emergency (foreign or domestic) and you are not certain that the NRC's Incident Response Operations Officer is already aware of that information, you should contact the NRC Operations Officer (301-816-5100 or via the NRC Operator) and provide that information.

Other Sources of Information:

USAID – www.usaid.gov
U.S. Department of State – www.state.gov
FEMA – www.fema.gov
White House – www.whitehouse.gov
Nuclear Energy Institute – www.nei.org
International Atomic Energy Agency – www.iaea.org/press

No response to this message is required.

THIS IS NOT A DRILL

From: Burnell, Scott
To: McIntyre, David; Taylor, Robert
Subject: Seismic "for the record"
Date: Wednesday, March 16, 2011 7:13:04 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

LLL/346

From: Michael Widomski
To: Harrington, Holly; McIntyre, David; robert.taylor@dhs.gov
Subject: For Consideration Only...for your Commission Meeting on Monday.
Date: Wednesday, March 16, 2011 7:15:28 PM

Thoughts you may want to consider for the Commission Meeting in which your boss needs to address communication challenges (in no particular order of importance).

- In today's instantaneous social media environment, the need for rapid response to misinformation being driven by on-line sources requires a united front with our federal and state partners.

- Engaging with all levels of government working on response through designated operations centers improves our success of properly communicating critical and accurate information.

- In rapidly changing events related to our mission, NRC could and should tap into the resources of our federal partners in order to augment our staff and provide the most accurate and transparent information to our external stakeholders as quickly as possible.

- In a rapidly changing event, it is extremely important for departments and agencies to have a clear understanding of responsibilities to ensure proper communication of critical messages. Coordination calls such as the National Incident Communication Conference Line (NICCL) engaging all of our federal partners could and should be used to the greatest extent.

- Media inquiries to NRC's Office of Public Affairs totaled approximately XXX over the past week. Being able to accurately and effectively respond to this large number of inquiries is a challenge.

- Standard operating procedures for the rapid sign off on external products (releases, statements, talking points, fact sheets, ect.) by designated senior leadership always aids in getting quick and accurate information out to our external partners.

LLL/347

From: McIntyre, David
To: Brenner, Eliot
Subject: 60 MINUTES ON GROUND IN JAPAN
Date: Wednesday, March 16, 2011 7:37:00 PM
Importance: High

Eliot – I just spoke to a 60 Minutes producer in Sendai w/Scott Pelley. They are desperate to interview Chuck Casto. They've reached him by email, and he responded a little while ago that he might be available later today, but they should get approval from OPA first. OK to signal him our approval?

Dave

LLL/348

From: McIntyre, David
To: Sheehan, Neil
Subject: EPZ talking point
Date: Wednesday, March 16, 2011 11:15:00 PM

The 10-mile EPZ reflects the area expected to be affected by design basis accidents at nuclear power plants, and we are confident that it would be adequate even for severe accidents. However, the 10-mile zone was always considered a base for emergency response that could be expanded if the situation warranted. The situation in Japan, with four reactors experiencing exceptional difficulties simultaneously, creates the need to expand the EPZ beyond the normal 10-mile radius.

We have said from the beginning of this crisis that the NRC would analyze this situation for any lessons that can be derived to improve our oversight of U.S. nuclear power plants. Emergency protection planning will be part of that review.

LLL/349

From: McIntyre, David
To: Schogol, Jeffrey
Subject: RE: NRC says no more water in spent fuel pool at Reactor 4
Date: Wednesday, March 16, 2011 4:36:00 PM

I believe he said it in testimony before the House Energy committee.

From: Schogol, Jeffrey [mailto:schogolj@stripes.osd.mil]
Sent: Wednesday, March 16, 2011 4:32 PM
To: McIntyre, David
Subject: RE: NRC says no more water in spent fuel pool at Reactor 4

Thank you.

Where did he say it?

And can NRC say how he knows this?

Jeff Schogol

From: McIntyre, David [mailto:David.McIntyre@nrc.gov]
Sent: Wednesday, March 16, 2011 4:31 PM
To: Schogol, Jeffrey; OPA Resource
Subject: RE: NRC says no more water in spent fuel pool at Reactor 4

I don't believe he's talking from a script. If you have access to a transcript service like FNS, they will have it.

From: Schogol, Jeffrey [mailto:schogolj@stripes.osd.mil]
Sent: Wednesday, March 16, 2011 4:20 PM
To: McIntyre, David; OPA Resource
Subject: RE: NRC says no more water in spent fuel pool at Reactor 4

This is Jeff Schogol with Stars and Stripes.

AP is reporting that Mr. Jackzo has said there is no more water in the spent fuel pool at Reactor 4 at Fukushima.

Can you forward me his comments?

Thank you.

Jeff Schogol

LLL/360

From:	McIntyre, David
To:	Sheehan, Neil
Cc:	Harrington, Holly; Burnell, Scott
Subject:	Q&A"s from PMT
Date:	Wednesday, March 16, 2011 11:18:00 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

LLL/351

Q&A's for PMT Press Release

This data is based on system condition estimates for a hypothetical, four reactor site. Model results are projections only and may **not** be representative of an actual release. This uses modeled forecast meteorological conditions and is subject to change.

- What does "system condition estimate" mean?
    - NRC made best possible estimates of reactor and spent fuel pool conditions. Such estimates are necessary because of the highly uncertain status of the units and their prognosis.
- What does "hypothetical, four reactor site" mean?
    - Although four reactor units are involved in the radioactivity releases, the NRC combined the accident assumptions for each reactor to create a hypothetical reactor in order to determine the combined release for the single site.
- Why were "hypothetical" sites/reactors used?
    - Although assessments for each unit could be advantageous, available data regarding the units are highly uncertain and assumptions had to be made to provide the inputs to the assessments. Since the NRC does not oversee the design, construction, and operation of Japanese reactors, we do not have access to exact plant conditions, fuel inventory, or fuel burnup.
- What is meant by "Model results are projections only and may not be representative of an actual release"?
    - NRC projections are from computer models using best estimates of site and weather conditions available at the time. As conditions change and information is updated these projections may change.
- What does "modeled forecast meteorological conditions" mean?
    - "Modeled forecast meteorological conditions" is a computer generated weather forecast prepared by the National Weather Service (NWS) and enhanced by the National Atmospheric Release Advisory Center (NARAC) to improve data resolution. Forecast data is needed to assess where the radioactive material is carried to and the amount of material that reaches that location.
- Why is forecast meteorological data being used?
    - Actual meteorological data is not available for the Fukushima area. A radiological assessment typically uses meteorological data observed since the release started and forecast data to allow projection of the plume characteristics and location into the future. Since actual meteorological data is not available, forecasts are being used.
- What is a PAG?
    - The Environmental Protection Agency (EPA) developed Protective Action Guides (PAGs) to help state and local authorities make radiation protection decisions

during emergencies. The PAGs are dose rates at which a protective action may be warranted.

- What happens when a PAG is exceeded?
  - When a PAG is exceeded, the local decision makers will determine what measures are to be implemented to protect the public, and the local emergency response organizations will implement the measures.
- Please define:
  - **EDE**: effective dose equivalent: external (radiation received from sources outside of the body) absorbed by an individual.
  - **TEDE**: total effective dose equivalent: sum of the external dose and internal (radiation received from inside of the body) absorbed by an individual.
  - **CEDE**: committed effective dose equivalent: the total internal dose calculated over 50 years and assigned to the year it occurred. Due to inhalation or ingestion of radioactive materials.
  - **Cloudshine:** Radiation emitted by radioactive material suspended in an overhead plume.
  - **Skyshine**: upwards directed radiation reflected by the atmosphere or clouds back to the ground.
  - **Groundshine**: radiation emitted from radioactive material deposited on the ground.

From: Landau, Mindy
To: McIntyre, David
Subject: FW: Interview Request for TONIGHT - Awareness
Date: Wednesday, March 16, 2011 4:51:36 PM

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

K. Agle
Fox news
k.agle@foxnews.com
Wants someone to interview tonight

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

LL/352

From: Sanger, David
To: McIntyre, David
Subject: RE: Your plume map
Date: Wednesday, March 16, 2011 5:13:54 PM

Dave,

Thanks for your note. We've asked the same question and the answer is that since the makers of the map don't know the level of radioactive output from the plant, this merely shows a relative amount, off an arbitrary "1". Thus what you are seeing on the west coast looks to be around one one-thousandth to one one-millionth of what you see from the point of origin, based on their scale. (The map is designed to alert the sensor operators about what to look for. It doesn't account, of course, for rain, etc.)

We're slowing down to make this clear to our readers, before posting and publishing this.

Fyi, map was created by the comp. test ban treaty office in Vienna.

Cheers,
David

From: McIntyre, David [mailto:David.McIntyre@nrc.gov]
Sent: Wednesday, March 16, 2011 5:01 PM
To: Sanger, David
Cc: Brenner, Eliot; Harrington, Holly
Subject: Your plume map

David –
Dave McIntyre from NRC Public Affairs here. We are trying to assess your plume map, but we need to know the units on the scale (millirem? Or microseiverts? Eg) as well as the source term used at the point of origin.

Can you please relay? We may have additional questions later of course.

Thanks,
Dave McIntyre
NRC Public Affairs

111/353

From: McIntyre, David
To: Brenner, Eliot
Cc: Coggins, Angela
Subject: here in OPS ...
Date: Wednesday, March 16, 2011 5:54:00 PM

... I'm working w/Angela on the NYT map and I think something else that escapes me at the moment, so you can reach out to either or both of us.

LL/354

From: McIntyre, David
To: Harrington, Holly; Brenner, Eliot
Subject: plume maps
Date: Wednesday, March 16, 2011 6:26:00 PM

Rob is working on a talking point about all the plume projections we're seeing. These are more sophisticated than the bogus thing we saw the other day, (what day was that??) and potentially scary, though they are all conjectural since they don't have the source term data to plug into the model. Michael is helping him with it.

From: McIntyre, David
To: McNamara, Nancy; LIA04 Hoc; Deavers, Ron; Bonaccorso, Amy
Cc: OST05 Hoc; Screnci, Diane; Burnell, Scott
Subject: RE: News Article
Date: Wednesday, March 16, 2011 6:32:00 PM

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 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 p ro-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

LLL/3560

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 r egarding 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, V irginia 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.

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

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 a t 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.

3. Limerick 2, Limerick, Pa.: 1 in 18,868 chance each year. Old estimate: 1 in 45,455. Change in risk: 141 percent.

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

5. Sequoyah 2, Soddy-Daisy, Tenn.: 1 in 19,608 chance each year. Old estimate: 1 in 102,041. Change in risk: 420 percent.

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.

10. North Anna 2, Louisa, Va.: 1 in 22,727

chance each year. Old estimate: 1 in 31,250. Change in risk: 38 percent.

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

12. Oconee 2, Seneca, S.C.: 1 in 23,256 chance each year. Old estimate: 1 in 100,000. Change in risk: 330 percent.

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, Jenkensville, 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.

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.

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

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

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.

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

 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.

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

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

 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.

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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.)

From: Hayden, Elizabeth
To: Brenner, Eliot; Harrington, Holly; Burnell, Scott; McIntyre, David; Couret, Ivonne
Subject: CNN W/jaczko
Date: Wednesday, March 16, 2011 6:53:06 PM

Just saw Chairman on CNN. Reports point out we are now 180 degrees from our press release on our agreement w/Japan's evacuation recommendations. US Military out 50 miles while Japan public only out to 20 miles.

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
Cc:	Janbergs, Holly
Subject:	Bethany"s Quick Review of Testimony
Date:	Wednesday, March 16, 2011 6:58:00 PM

Bethany spent most of the day watching the testimony today. I understand we'll be getting full transcript soon (not sure by what process), but I asked Bethany to compile what appeared to be the major questions/comments posed to the Chairman:

Sen. Boxer: You're doing nothing new. Other countries are responding to the situation, but I don't see anything proactive being done in the U.S. I have two plants in California that were built based on 1970s assumptions. It's 2011. I know there's at least one new report on seismic activity we haven't seen action on. My fellow senator and I want to see more leadership from the NRC than we've gotten.

Reps. Whitfield/Markey/Doyle: Have you had an opportunity to review John Ma's concerns on the AP1000 design? What was the process that took place following his objections?

Rep. Shimkus: I don't believe your actions on Yucca Mountain were consistent with your legal authority. Federal position by law is that Yucca should be open, and there is no legal authority to close the repository. The only decision that's been rendered is that of the administration to pull funding. I hope you're well-prepared to have a further debate on the legal authority of the NRC in this regard.

Rep. Markey: Does the NRC recommend use of KI in emergency situations in the United States? It should be your position to recommend it, as State and local government officials don't have the expertise to do so.

Rep. Markey: We need to re-examine the idea of "maximum credible earthquake."

Rep. Dingell: You have an unholy mess on your hands with the Yucca Mountain situation. Are there any long-term plans to handle the repository matter anywhere in the government?

Reps. Rush/Cassidy/Dingell: Do our plants' safety standards adequately address the types of problems we've seen in Japan, where there were multiple cascading events?

Reps. Cassidy: Do our plants' safety standards adequately address the problems that can occur with loss of site power?

LLL/358

From: Burnell, Scott
To: McIntyre, David; Taylor, Robert
Subject: FW: Dave Schechiter - CNN Atlanta
Date: Wednesday, March 16, 2011 7:00:41 PM

Dunno if it's GSI-199

From: Ghneim, Munira
Sent: Wednesday, March 16, 2011 5:18 PM
To: Burnell, Scott
Cc: Harrington, Holly; Akstulewicz, Brenda
Subject: Dave Schechiter - CNN Atlanta

Good Evening,

Dave Schechiter would like some to answer his inquiry regarding the Nuclear Power Station guidelines. Dave may be reached at 404-827-2914.

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

LLL 1359

From: McIntyre, David
To: Burnell, Scott; Taylor, Robert; Chandrathil, Prema
Subject: RE: radioactive releases
Date: Wednesday, March 16, 2011 7:01:00 PM

NOAA is supplying metero ... meatyo ... weather data. EPA is lead agency on ground/air monitoring in US. NARAC, whatever that is, is a DOE center at Livermore that is involved in modeling. DOE of course is helping in Japan.

From: Burnell, Scott
Sent: Wednesday, March 16, 2011 6:58 PM
To: McIntyre, David; Taylor, Robert
Subject: FW: radioactive releases

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

111/3660

From: McIntyre, David
To: Burnell, Scott; Taylor, Robert; Chandrathil, Prema
Subject: RE: radioactive releases
Date: Wednesday, March 16, 2011 7:02:00 PM

Should also mention DHS (CBP) is monitoring ports and airports for contamination on incoming traffic, including commercial airliners.

From: Burnell, Scott
Sent: Wednesday, March 16, 2011 6:58 PM
To: McIntyre, David; Taylor, Robert
Subject: FW: radioactive releases

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

From: McIntyre, David
To: Harrington, Holly; Brenner, Eliot; Akstulewicz, Brenda
Subject: Ops Center
Date: Wednesday, March 16, 2011 2:08:00 PM

I have now relieved Scott in the OPS CTR, though he refuses to leave.

Please cc me on any relevant emails from now on.

From: Landau, Mindy
To: McIntyre, David
Subject: FW: Media Calls/Awareness
Date: Wednesday, March 16, 2011 4:43:59 PM

From: Akstulewicz, Brenda
Sent: Wednesday, March 16, 2011 4:40 PM
To: Landau, Mindy
Subject: Media Calls

Kendall Heath
ABC
203-247-6567
kendall.heath@abc.com
Wants the chairman to appear on This Week w/Christiane amanpour
Tape Saturday or live Sunday

Alice Kelley
ZDF German TV
202-285-5367
wants to come tape and interview someone from the commission
Kelley.a@zdf.de

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

LLL/362

From: Bonaccorso, Amy
To: McIntyre, David
Cc: Deavers, Ron
Subject: RE: Questions NRC RI Is Receiving - RESPONSE NEEDED ASAP
Date: Wednesday, March 16, 2011 4:30:42 PM

Dave:

Thanks for the help with this. I like the response.

Unless someone has an issue with it – I'm assuming this response will close this one out – since Nancy is cc'ed and she originally sent the Q out.

Thanks again,

Amy

From: McIntyre, David
Sent: Wednesday, March 16, 2011 4:22 PM
To: Bonaccorso, Amy
Cc: Deavers, Ron; Turtil, Richard; Screnci, Diane; Uselding, Lara; Hannah, Roger; Harrington, Holly; Brenner, Eliot; McNamara, Nancy; Mitlyng, Viktoria
Subject: RE: Questions NRC RI Is Receiving - RESPONSE NEEDED ASAP

Suggest this:

The 10-mile EPZ reflects the area expected to be affected by design basis accidents at nuclear power plants, and we are confident that it would be adequate even for severe accidents. However, the 10-mile zone was always considered a base for emergency response that could be expanded if the situation warranted. The situation in Japan, with four reactors experiencing exceptional difficulties simultaneously, creates the need to expand the EPZ beyond the normal 10-mile radius.

We have said from the beginning of this crisis that the NRC would analyze this situation for any lessons that can be derived to improve our oversight of U.S. nuclear power plants. Emergency protection planning will be part of that review.

Dave Mc, OPA

From: Bonaccorso, Amy
Sent: Wednesday, March 16, 2011 4:04 PM
To: McIntyre, David
Cc: Deavers, Ron
Subject: FW: Questions NRC RI Is Receiving - RESPONSE NEEDED ASAP
Importance: High

Dave:

Holly told me I should forward this to you.

LLL 3603

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 Turtil
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 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: McIntyre, David
To: Bonaccorso, Amy
Cc: Deavers, Ron
Subject: RE: Questions NRC RI Is Receiving - RESPONSE NEEDED ASAP
Date: Wednesday, March 16, 2011 4:31:00 PM

I also gave it to the LT.

From: Bonaccorso, Amy
Sent: Wednesday, March 16, 2011 4:31 PM
To: McIntyre, David
Cc: Deavers, Ron
Subject: RE: Questions NRC RI Is Receiving - RESPONSE NEEDED ASAP

Dave:

Thanks for the help with this. I like the response.

Unless someone has an issue with it – I'm assuming this response will close this one out – since Nancy is cc'ed and she originally sent the Q out.

Thanks again,

Amy

From: McIntyre, David
Sent: Wednesday, March 16, 2011 4:22 PM
To: Bonaccorso, Amy
Cc: Deavers, Ron; Turtil, Richard; Screnci, Diane; Uselding, Lara; Hannah, Roger; Harrington, Holly; Brenner, Eliot; McNamara, Nancy; Mitlyng, Viktoria
Subject: RE: Questions NRC RI Is Receiving - RESPONSE NEEDED ASAP

Suggest this:

The 10-mile EPZ reflects the area expected to be affected by design basis accidents at nuclear power plants, and we are confident that it would be adequate even for severe accidents. However, the 10-mile zone was always considered a base for emergency response that could be expanded if the situation warranted. The situation in Japan, with four reactors experiencing exceptional difficulties simultaneously, creates the need to expand the EPZ beyond the normal 10-mile radius.

We have said from the beginning of this crisis that the NRC would analyze this situation for any lessons that can be derived to improve our oversight of U.S. nuclear power plants. Emergency protection planning will be part of that review.

Dave Mc, OPA

From: Bonaccorso, Amy
Sent: Wednesday, March 16, 2011 4:04 PM
To: McIntyre, David
Cc: Deavers, Ron

Subject: FW: Questions NRC RI Is Receiving - RESPONSE NEEDED ASAP
Importance: High

Dave:

Holly told me I should forward this to you.

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 Turtil
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 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: McIntyre, David
To: Landau, Mindy
Subject: RE: Interview - tonight! (For awareness)
Date: Wednesday, March 16, 2011 4:01:00 PM

Good. Makes it easier on us! He wants the Chairman and only the Chairman on the tube …

From: Landau, Mindy
Sent: Wednesday, March 16, 2011 3:58 PM
To: McIntyre, David
Subject: RE: Interview - tonight! (For awareness)

I was told we are not entertaining any interview requests at this time. (Per Eliot)

From: McIntyre, David
Sent: Wednesday, March 16, 2011 3:56 PM
To: Landau, Mindy
Subject: RE: Interview - tonight! (For awareness)

Are we going to do this?

From: Landau, Mindy
Sent: Wednesday, March 16, 2011 3:35 PM
To: McIntyre, David
Subject: FW: Interview - tonight! (For awareness)

From: Akstulewicz, Brenda
Sent: Wednesday, March 16, 2011 3:32 PM
To: Landau, Mindy
Subject: Interview - tonight!

Andrew Dallos
Rachel Maddow Show
212-664-1291
Andrew.dallos@nbcuni.com
Someone to interview tonight.

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

LLL/3604

From: McIntyre, David
To: Harrington, Holly
Subject: RE: DOE Monitoring Teams status
Date: Wednesday, March 16, 2011 8:01:00 PM

DOE is ok with this IF we omit the sentence about the timing of the first flight.

From: Harrington, Holly
Sent: Wednesday, March 16, 2011 7:26 PM
To: McIntyre, David
Subject: RE: DOE Monitoring Teams status

no

From: McIntyre, David
Sent: Wednesday, March 16, 2011 7:24 PM
To: Harrington, Holly
Subject: RE: DOE Monitoring Teams status

Did Mike get DOE OK on this?

From: Harrington, Holly
Sent: Wednesday, March 16, 2011 7:21 PM
To: McIntyre, David
Subject: FW: DOE Monitoring Teams status

From: Harrington, Holly
Sent: Wednesday, March 16, 2011 6:12 PM
To: 'RMTPACTSU_ELNRC'
Subject: RE: DOE Monitoring Teams status

Fine. The verbiage would be helpful

From: RMTPACTSU_ELNRC [mailto:RMTPACTSU_ELNRC@ofda.gov]
Sent: Wednesday, March 16, 2011 6:04 PM
To: RMTPACTSU_DOE
Cc: Harrington, Holly
Subject: RE: DOE Monitoring Teams status

Per your edits, I need approval:

The Aerial Measuring System, a DOE asset, has developed a plan for measuring aerial and ground contamination between Tokyo and Fukushima using aircraft. The first flight is scheduled for 8 a.m. Japan time on Thursday. They will be supported by a two-person team at the US Embassy in Tokyo.

Thanks!
Michael I. Dudek

LLL/365

From: Harrington, Holly [mailto:Holly.Harrington@nrc.gov]
Sent: Wednesday, March 16, 2011 5:39 PM
To: RMTPACTSU_ELNRC
Subject: RE: DOE Monitoring Teams status

We'd like to add this as a talking point:

The Aerial Measuring System, a DOE asset, has developed a plan for operations. The first flight is scheduled for 8 a.m. Japan time on Thursday. They plan to monitor aerial radiation in flight between Tokyo and Fukushima with a two-person team supported by the US Embassy in Tokyo.

From: RMTPACTSU_ELNRC [mailto:RMTPACTSU_ELNRC@ofda.gov]
Sent: Wednesday, March 16, 2011 5:19 PM
To: Harrington, Holly; McIntyre, David; Burnell, Scott
Subject: RE: DOE Monitoring Teams status

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.

From: McIntyre, David
To: Harrington, Holly
Subject: FW: NY Times call
Date: Wednesday, March 16, 2011 2:31:00 PM

Sounds like a generic EP question. Mindy keeps sending me these, is everyone swamped over there?

From: Landau, Mindy
Sent: Wednesday, March 16, 2011 2:26 PM
To: McIntyre, David
Subject: NY Times call

Gardiner Harris
NY Times
202-862-0443
Gardiner@nytimes.com
Re: Plans in place to handle nuclear accident in U.S.

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

LL/3606

From: Landau, Mindy
To: McIntyre, David
Subject: Dan you handle?
Date: Wednesday, March 16, 2011 2:14:03 PM

Kerri Helprin
ABC News NY
212-456-0387
Re: Washington Post Article

Joaquin Sapien
Pro Pubica
917-512-0226
Re: Spent Fuel Storage

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

LLL/367

From: Landau, Mindy
To: McIntyre, David
Subject: FW: Media
Date: Wednesday, March 16, 2011 12:24:17 PM

Dave – if you're here, can you handle these?

From: Royer, Deanna
Sent: Wednesday, March 16, 2011 12:21 PM
To: Landau, Mindy
Subject: Media

John Shumway
KDKA
412-559-3429
Re: Interview regarding U.S. Sites

Michael Grabell
917-512-0217
ProPublic
Interview
I apologize I didn't get a subject

Laura Strickler
CBS
202-457-1597
Re: Our confidence in the measures Japan is taking

Deanna Royer
Contract Secretary
Division of New Reactor Licensing
(301) 415-7158
Deanna.Royer@nrc.gov

LLL/368

From: McIntyre, David
To: Easton, Earl
Cc: Couret, Ivonne
Subject: FW: Discover magazine inquiry
Date: Wednesday, March 16, 2011 11:59:00 AM

Earl, would you be available for this?

thanks,
Dave

From: Andrew Grant [agrant@discovermagazine.com]
Sent: Wednesday, March 16, 2011 11:29 AM
To: McIntyre, David; Couret, Ivonne
Subject: Re: Discover magazine inquiry

Hi Dave,

Thanks so much for your reply. This article is part of a monthly feature in which we present a cutaway diagram of a scientific tool and explain how it works. If possible, I'd love to speak with a technical staff member to go over the features of dry casks and why they're so crucial for nuclear fuel storage in the US.

Thanks again for your help.

Best,
Andrew

On 3/15/11 6:52 PM, "McIntyre, David" <David.McIntyre@nrc.gov> wrote:

> Hi Andrew -
> I'd be happy to help you. Can you tell me your specific questions? I may be
> able to answer them; if not, I can reach out to our technical staff.
>
> Dave McIntyre
> NRC Public Affairs
>
>
> -----Original Message-----
> From: Andrew Grant [mailto:agrant@discovermagazine.com]
> Sent: Tuesday, March 15, 2011 5:27 PM
> To: OPA Resource
> Subject: Discover magazine inquiry
>
> To Whom It May Concern,
>
> My name is Andrew Grant and I am a reporter for Discover magazine. I am
> writing an article explaining dry cask storage, and I was hoping an expert
> at NRC could speak with me and go through the most important features of the
> containers. Please let me know if we can arrange a brief phone interview
> this week -- my deadline is Friday.
>
> Thank you so much for your help!
>
> Sincerely,

LLY3669

> Andrew Grant
>
>
> ---
> Andrew Grant
> Reporter
> DISCOVER Magazine
> agrant@discovermagazine.com
> 212-624-4802
>
>
>

From: Burnell, Scott
To: McIntyre, David; Taylor, Robert
Subject: FW: Eric Tyson -King Features -Reporter
Date: Wednesday, March 16, 2011 6:45:50 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

111370

From: Landau, Mindy
To: McIntyre, David
Subject: FW: Brian Drew -WTOP Radio - Awareness
Date: Wednesday, March 16, 2011 4:53:41 PM

From: Ghneim, Munira
Sent: Wednesday, March 16, 2011 4:52 PM
To: Landau, Mindy
Cc: Harrington, Holly; Akstulewicz, Brenda
Subject: Brian Drew -WTOP Radio

Good Afternoon,

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

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

111371

From: McIntyre, David
To: Janbergs, Holly
Cc: Brenner, Eliot
Subject: RE: Request for Jaczko on Anderson Cooper tonight
Date: Wednesday, March 16, 2011 7:03:00 PM

I'll let Eliot know ...

From: Janbergs, Holly
Sent: Wednesday, March 16, 2011 7:03 PM
To: McIntyre, David
Subject: Request for Jaczko on Anderson Cooper tonight

Kerry Rubin from Anderson Cooper's show on CNN is interested in having the Chairman on his show tonight. It would be a live interview around 10. Anderson Cooper is currently in Tokyo and she would like me to remind everyone that this show is aired internationally unlike Wolf Blitzer.

She can be reached on her cell at 917-763-6395 or you can try her colleague Ben Finley at 212-275-8209

Beth Janbergs
Public Affairs Assistant
301-415-8211

From: Burnell, Scott
To: McIntyre, David; Taylor, Robert
Subject: FW: Tiffany Demaster - Spectrum Newspaper
Date: Wednesday, March 16, 2011 7:13:49 PM

From: Ghneim, Munira
Sent: Wednesday, March 16, 2011 5:20 PM
To: Burnell, Scott
Cc: Harrington, Holly; Akstulewicz, Brenda
Subject: Tiffany Demaster - Spectrum Newspaper

Good Evening,

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

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

111/373

From: Burnell, Scott
To: McIntyre, David; Taylor, Robert
Subject: FW: Mark Benjamin -Time Magazine
Date: Wednesday, March 16, 2011 7:14:30 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

111/374

From: Burnell, Scott
To: McIntyre, David; Couret, Ivonne; Landau, Mindy
Subject: RE: from Wall Street Journal
Date: Wednesday, March 16, 2011 10:25:00 AM

For the office today...

-----Original Message-----
From: McIntyre, David
Sent: Wednesday, March 16, 2011 10:23 AM
To: Burnell, Scott
Subject: FW: from Wall Street Journal

Can you pls add this to your queue as I won't be there for several more hours?

From: Searcey, Dionne [Dionne.Searcey@wsj.com]
Sent: Wednesday, March 16, 2011 9:57 AM
To: McIntyre, David
Subject: from Wall Street Journal

Hi Mr. McIntyre. I'm working on a story about liability issues associated with private nuclear reactors and had a couple questions about the Prince-Anderson Act. Could you give me a call? I'm on deadline today.

Thanks.
Dionne Searcey 212-416-4457
The Wall Street Journal

LLL 375

From:	Landau, Mindy
To:	McIntyre, David
Subject:	Awareness - Cara Coplin - CNN - Interview with the Chairman
Date:	Wednesday, March 16, 2011 4:39:42 PM

From: Ghneim, Munira
Sent: Wednesday, March 16, 2011 4:39 PM
To: Landau, Mindy
Cc: Harrington, Holly; Akstulewicz, Brenda
Subject: Cara Coplin - CNN - Interview with the Chairman

Good Afternoon,

Cara Coplin from CNN would like to set up an interview with the Chairman. Cara may be reached at 646-734-2151.

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

LL4376

From: McIntyre, David
To: Landau, Mindy; Harrington, Holly
Subject: RE: Justin Smith - Interview with Chairman
Date: Wednesday, March 16, 2011 4:39:00 PM

I would think not. Gee, that's what wire services are for!

From: Landau, Mindy
Sent: Wednesday, March 16, 2011 4:38 PM
To: Harrington, Holly
Cc: McIntyre, David
Subject: FW: Justin Smith - Interview with Chairman

Do you think I need to call Australia to tell this guy no? There's no email address....

From: Ghneim, Munira
Sent: Wednesday, March 16, 2011 4:37 PM
To: Landau, Mindy
Cc: Harrington, Holly; Akstulewicz, Brenda
Subject: Justin Smith - Interview with Chairman

Good Afternoon,

Justin Smith from Radio 3 AW Melvin would like to set up an interview regarding nuclear safety. Justin may be reached at 61-405-449-031.

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

111/377

From: Chandrathil, Prema
To: Harrington, Holly; Burnell, Scott
Cc: Mitlyng, Viktoria
Subject: radioactive releases
Date: Wednesday, March 16, 2011 5:03:17 PM

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

LL/378

From: Harrington, Holly
To: Chandrathil, Prema; Burnell, Scott
Cc: Mitlyng, Viktoria
Subject: RE: radioactive releases
Date: Wednesday, March 16, 2011 5:46:00 PM

Epa and doe that I know of

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

LLL/379

From: Shoop, Undine
To: Harrington, Holly; Couret, Ivonne; Burnell, Scott; Brenner, Eliot
Subject: RE: blog question on dose
Date: Wednesday, March 16, 2011 5:13:34 PM
Attachments: Response to question originally posted to the NRC blog.docx

Holly,

After reading previous moderator replies on the blog, I have revised my write up for you so it is hopefully closer to what you would actually post.

Undine

From: Harrington, Holly
Sent: Wednesday, March 16, 2011 3:24 PM
To: Shoop, Undine; Couret, Ivonne; Burnell, Scott; Brenner, Eliot
Subject: RE: blog question on dose

Can you write me up something that directly responds to blog comment. This is good

---

From: Shoop, Undine
Sent: Wednesday, March 16, 2011 2:14 PM
To: Harrington, Holly; Couret, Ivonne; Burnell, Scott; Brenner, Eliot
Subject: blog question on dose

One of my staff pointed out a comment on the blog related to dose, specifically that it would be helpful if we would use mSv in addition to rem when we are discussing dose since most of the world uses the international standard for units (SI) including the IAEA and TEPCO press releases. The conversion is:
1 mSv = .1 rem

Undine Shoop
Chief, Health Physics and Human Performance Branch
Division of Inspection and Regional Support
Office of Nuclear Reactor Regulation
301-415-2063

111/380

This question was originally posted to the NRC blog on March 16:

"The values being reported in the media are in micro or millisieverts... Can you please describe average annual does in those values versus R and mR? And it would be helpful if future dose discussion could be in mSeiverts, too."

Most of the world uses the international standard for units (SI) which is why Japanese and IAEA press releases use Seiverts to report the dose to the public. The US does not use the SI system and instead uses rem as the measure of dose to the public. To compare the dose units, 100 mrem is equal to 1 mSv (this is similar to 1 yard equaling .914 meter (SI unit)). Therefore, the average annual dose that a person in the US receives is 620 mrem which is equal to 6.2 mSv.

From: Janbergs, Holly
To: Harrington, Holly
Subject: House Hearing Update 8
Date: Wednesday, March 16, 2011 3:53:17 PM

Barton: max safety requirements for quakes? Can we handle something like in Japan?
Jaczko: historical data w/I 200 miles. We measure shaking of plant, actual impact depends on location in relation to plant (demonstration with fist and table and glass, shaking)

Capps: need best & brightest minds to work together to help safety
Jaczko: NRC hosted a workshop last year to bring together technical experts. They can provide us with information but we have to make decisions
Capps: both CA's reactors have recently been cited by NRC re: failure to have proper backup power.
Jaczko: I'll keep your suggestions in mind
Capps: there's only one way out of Obispo – NRC ruled there wouldn't be "bizarre concentration of events" but we just witnessed that in Japan
Jaczko: I'll revisit that report

McKinley: NRC still has authority to grant permits for new applications?
Jaczko: Yes
McKinley: Do you have r&d money for alternate uses for spent fuel rods?
Jaczko: we have resources for safety & security of spent fuel rods and small amount for reusing spent fuel
McKinley: Are consumers still paying for Yucca?
Jaczko: Yes, but that's not an area NRC has authority over
McKinley: One of our naval vessels sailed through a cloud of radiation
Jaczko: Reactor was venting steam to reduce pressures in containment vessel
McKinley: Could that have been avoided
Jaczko: My understanding is that they were doing search & rescue and that's how they got contamination – also doses were not significant

Markey: Other gov'ts are suggesting interim safety measures while studies are being done; what about NRC?
Jaczko: We work every day to ensure safety
Markey: How about interim advisories like after 9/11?
Jackzo: We intend to send a regulatory information summary
Markey: Dr Ma's recommendation for AP1000 seem more reasonable now in light of events in Japan?
Jaczko: We'll do a thorough review on info from Japan
Markey: Should dist of KI be implemented as precaution as my law asks?
Jaczko: Particular protective actions are responsibility of state & locals
Markey: But you're the experts
Jaczko: Current policy is that we consider the use of KI
Markey: Do you recommend?
Jaczko: State & locals make that choice
Markey: They don't have the expertise.
Markey: San Onofre rated to withstand 7.0 earthquake; should we upgrade? IAEA told Japan 2 years ago its reactors should be able to withstand more
Jaczko: Plants are designed for ground motion & shaking based on historical data. It's an

LLL/381

appropriate standard but we'll look at lessons learned
Markey: let's reexamine the idea of a maximum credible earthquake

Cassidy: Industry, gov't, and academics all need to be working together to review this
Jaczko: We'll give a systematic and methodical review. And in normal times we already reach out to stakeholders
Cassidy: River Bend specifics?
Jaczko: Plants are built to withstand natural phenomena, each reactor has at least 2 diesel gens or some kind of electrical power supply
Cassidy: New nuke plants required to withstand planes?
Jaczko: Yes
Cassidy: If a meltdown occurs how effective is a containment structure?
Jaczko: it's meant to contain

Dingell: Review?
Jaczko: Once we have full info we'll do a review
Dingell: (asks for submission of info on plans post review, lessons learned, process by which nrc uses new information)
Dingell: Do NRC's licensing standards include protections against earthquake and tsunami?
Jaczko: All natural phenomena
Dingell: Submit kinds of disasters NRC takes into account
Dingell: You have an unholy mess on your hands in terms of Yucca. Any longterm plans?
Jaczko: Longer timeframe for dry cask storage
Dingell: No plans for how to deal anywhere in gov't?
Jaczko: Not an area NRC directly works; Chu has blue ribbon commission

Burgess: An email has been circulated discussing high levels of radiation
Jaczko: Not familiar with that email but there have been times when readings were elevated
Burgess: What levels?
Jaczko: We have seen lethal levels
Burgess: Are there any addendums to your current budget request in light of situation in Japan?
Jaczko: I don't have an answer yet
Burgess: In a perfect world what percentage of power supply is nuclear?
Jaczko: Not up to us to decide, we just guarantee safety
Burgess: How many plants could you handle?
Jaczko: We can handle all additional planned units
Burgess: What's your ideal situation on nuclear waste?
Jaczko: trying to keep everything safe keeps me up at night already; somebody else can deal with general policy questions

Doyle: (qs about process of hearing Dr Ma's complaints)
Doyle: His concerns were put forward and reviewers overruled his concerns, as did ACRS… what was the process?
Jaczko: I feel very strongly that we create an environment at this agency where concerns can be vetted and in this case I believe they were

Terry: Any discussions to alter licensing plans because of this?

Jaczko: We're following our current timeline and continuing reviews
Terry: How many licenses in pipeline?
Jaczko: 12 applications for ~20 reactors, 2 ESPs
Terry: Review of SMRs? What's your opinion?
Jaczko: 3 different types

Whitfield asks more about SMRs, Rush asks if we can furnish w/ any emergency response we've done in the US recently

Beth Janbergs
Public Affairs Assistant
301-415-8211

From: Janbergs, Holly
To: Harrington, Holly
Subject: Senate Hearing Qs
Date: Wednesday, March 16, 2011 5:45:37 PM

Missed the first few minutes while typing up qs from House hearing, so I missed Boxer's apparently brutal first round of questions to Borchardt.

Inhofe: Do you agree with Chu's statements on safety of plants?
Jaczko: We work every day to keep plants safe and secure, but we'll input any lessons learned
Inhofe: Did you coordinate with him on statements?
Jaczko: We're an independent body but we're working with gov't on assisting Japan
Inhofe: Assistance?
Jaczko: 11 experts, working with regulators, make suggestions & recommendations on equipment and strategies, etc

Sanders: (list of issues in Japan, discussion of US Mark I reactors, quotes NYT GE article about warnings on design)
Sanders: Will NRC reevaluate its recommendation on VY's extension?
Jaczko: Modifications will be based on what we learn; if we find info that says changes needed, we'll input it
Sanders: (NYT quote again about warnings)
Jaczko: Yes, there have been concerns, but we think we've made changes to improve. There are two specific ones to that design to deal with some problems. We believe we have a good system & program in place
Sanders: I'm sure you do but VT is not reassured

Lautenberg: NYT article discusses warnings – how did these Mark I plants manage to get built?
Jaczko: I believe some came into service after 1972. But they're not exactly the same; like planes that may be vintage but still fly because systems have been upgraded & modifications made.
Lautenberg: Airplanes are not a fair analogy, and you show poor judgment in using that. This situation is scaring everyone; what can be done to assure safety? Would you license a new plant based on this design?
Jaczko: I don't want to speculate on a specific design, it's a process
Lautenberg: Do you think a licensee would want to?
Jaczko: We don't have detailed info on what happened in Japan yet, so I don't know
Lautenberg: In Japan they have a lot of experience with their plants; are you saying these upgrades you mentioned weren't done?
Jaczko: I don't know what upgrades they do in Japan
Lautenberg: They thought they could handle it and that wasn't the case. How can we know?
Jaczko: We have systematic program to monitor safety & systems of plants, we do analysis to look at accidents, we plan for things. After 9/11 changes were made to deal with attacks but those end up supporting accident scenarios too

Carper: NRC encourages safety culture but we want to see it at all plants.
Carper: How can we put lessons learned to work?

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Jaczko: At this pt no detailed plan yet, important to approach it systematically & methodically – use good facts so we can make good decisions
Carper: A lot of folks weren't alive for Chernobyl & TMI; could you explain differences?
Jaczko: This is serious situation that will continue for some time, we don't know how it will unfold yet. TMI had mechanical probs & human error, core had some melting contained w/I structure. Chernobyl was different event, large release of radioactive material in very short span of time + explosion. (analogy) difference between popping a balloon and having a balloon leak over long period of time
Carper: How many people died from Chernobyl?
Jaczko: Unsure of numbers; for tmi no direct fatalities
Carper: How many lives have been lost from nuke plants?
Jaczko: none from plants. Sometimes radiation contamination occurs in supporting industries.
Carper: that's a good record, but we can still do better

Gillibrand: Nation faces other risk than physical – cyberterrorism, etc
Jaczko: We have program in place to deal with cyber security. Most systems don't involve digital systems, but licensees still have to come up with plans to deal with cyber issues
Gillibrand: What kind of modifications will be made?
Jaczko: security-wise, I can't get specific
Gillibrand: We should increase redundancies for outages
Jaczko: Robust security requirements, conduct exercises to protect plants from external threats, all plants post-9/11 implemented procedures & equipment to mitigate fires & explosions – industry also prestages other equipment they might need
Gillibrand: (cites msnbc piece on report published re: NRC only having detailed seismic data on plant fragility for 1/3 of plants)
Jaczko: Unfamiliar with that piece, but we've been working on updated analysis for central & eastern plants. We're always looking for new info and then make a determination if immediate action needs to be taken – in this case no
Gillibrand: Can you retrofit or enhance old plants to make them safer in light of reviews?
Jaczko: If necessary that's what we'll do
Gillibrand: How long would that take?
Jaczko: I don't want to speculate, but there are no immediate safety concerns

Boxer: Please don't compare what happened in Japan to airplanes
Jaczko: I was likening the way models are retrofitted, that's all
Boxer: You said dealing with a situation like what happened in Japan is straightforward – it just involves cooling the plant. So what went wrong?
Jaczko: I don't want to speculate
Boxer: Either you are criticizing Japan or you're leaving a lot of questions for US unanswered.
Boxer: Tell me about seriousness of seismic activity and how many plants are in each zone
Jaczko: We'll give you that info
Boxer: LA Times said a CA tsunami could come without warning. I'm very concerned. This Japanese plant was built to withstand some things and got worse events. Given the stakes, this is worrying. 7 million people live close to San Onofre; ½ million near Diablo Canyon. You've suggested Americans move 50 miles from Fukushima. Feinstein and I want an immediate look at our plants. Go back and read the 2008 report that there could be new issues at San Onofre, and get back to me.

Boxer: You're doing nothing new. All the other countries are doing things, but I don't hear anything proactive. Why shouldn't I be worried?
Jaczko: We're going to be looking at what happens in Japan, we're not doing nothing
Boxer: Isn't this a warning that we should be humbled. Is not issuing new license too much to ask? I need reassurance
Jaczko: We're going to move forward w/ review. I don't know Japanese review system. We have a lot of safeguards to deal with unknown unknowns
Boxer: I have 2 plants in CA built w/ 1970s assumptions. It's 2011. I'm telling you there's at least 1 new report we haven't seen action on. Feinstein and I are gonna follow up on this; we want more leadership than we've gotten

Lautenberg: Should we restudy evacuation routes? What's a safe distance for families? Have we found changes in climate?
Jaczko: Those are all issues we want to consider. We'll have to see what happened in Japan and what worked. I've never seen this agency shy away from making a change. Even just local changes in weather patterns can affect plants, and we make those changes. What you express are things I worry about and try to make sure there are programs to deal with that are well grounded in scientific fact.
Lautenberg: How close were our warships that noted elevated rad ratings?
Jaczko: My understanding is 100 mi away, they received low-level radiation not unexpected and consistent with cooling process.
Lautenberg: Does that tell us something about kind of risk
Jaczko: I'm aware of rad detection at levels not harmful to public health & safety

(Boxer asks for rad monitoring info in Japan, Jaczko says he will provide)

Beth Janbergs
Public Affairs Assistant
301-415-8211

From:	Einziger, Robert
To:	RST01 Hoc
Cc:	Ruland, William; Dudes, Laura; McIntyre, David; Einziger, Robert; Haney, Catherine; Dorman, Dan; Gordon, Matthew; Rahimi, Meraj; Ordaz, Vonna; Pstrak, David
Subject:	RE: N2 on dry spent fuel
Date:	Thursday, March 17, 2011 3:57:22 PM
Attachments:	Proposal to handle dried Spent fuel pool.docx

In addition to the information in the attachment, my colleague Matt Gordon informed me that enough liquid N2 to fill a pool 40' x 40' x 100' (probably on the order of the size of the SNF pool in Japan) could be contained in a container about 6' x6' x6'. A tank this size should be easily attained from any Liquid gas supplier. The tank could be lowered by helicopter into the pool away from the fuel then opened. If you could get liquid Argon, you might not even have to get it directly into the pool but rather suspend the tank over the pool and open the valve remotely.

From: RST01 Hoc
Sent: Thursday, March 17, 2011 3:45 PM
To: Einziger, Robert
Cc: Ruland, William
Subject: N2 on dry spent fuel

Bill Ruland wanted me to request your input on putting liquid N2 into a dry spent fuel pool. You may have sent it previously. Please send again to this operations center address

Frank Collins
RST Coordinator

Proposal to handle dried spent fuel pool

RE Einziger, Ph.D.
SFST/MNSS/NRC

Credential: I have over 30 yrs experience at National Laboratories studying the behavior of Spent Fuel rods in an Oxidizing Atmosphere.

The spent fuel consists of UO2 fuel inside a Zircaloy-2 cladding covered with a Zirconium oxide layer and a layer of CRUD. If the pool goes dry, the rods will heat up until the rate of heat production is balanced by the rate of heat removal by conduction, convection, and radiation. As the rod is heating up the gas inside the rod will be stressing the cladding, that has a lower yield strength and thus the cladding will expand. The expansion will cause the CRUD to flake off and break up to particulate in the 1-10 micron range as it hits the pool floor. This CRUD, with a main radioactive component as Co-60 may become airborne

Somewhere between 600 and 1000C the Zircaloy cladding that has a high concentration of zirconium hydrides on the outer surface may catch on fire. Zirconium hydride is pyrophoric but the ignition temperature is not an intrinsic properties but is dependent onn many features including the surface to volume ratio of the cladding.. Concurrently the pressure in the rod will continue to rise until ~750C when the rod will burst, ejecting fission gases and volatiles in the gap including Cs and I compounds. Some fuel particulate will also be ejected.

As these temperatures the exposed fuel will rapidly oxidize to U3O8 with a ~32% volume expansion. This expansion will split the cladding from end to end in a relatively short time. The fuel , now in grain size articulate (~10-15 micron) will stay in the cladding as a compact until it experiences a mild physical force at which time it will fall to the bottom of the pool.

Of primary important is to prevent the oxidation of the UO2 fuel that contains the preponderance of the radionuclides. Unless you can cover the fuel completely with water the fuel will oxide. When water is sprayed on the fuel, steam is formed which further oxidizes the fuel. A better choice would be to put liquid Argon in the pool if it is available. In not then use liquid N2. The benefits of these gases are that they have a large, (`1000 times) volume expansion when they vaporize thus a small volume has to be put in the pool then the volume of water and more importantly, both will displace the oxygen and prevent the further oxidation of the fuel. (note that this is more effective for the Argon than the N2). Once the oxygen is displaced, both the fire, if it occurs, and fuel oxidation will stop. At this point it would be best to fill the pool with sand and glass formers and let the fuel melt into a glass. Since the assemblies are ~ 50% dense, and the pool is about ½ to 2/3 full (at least it was when I was there in November). The glass layer would be about 3-5 feet high. The molten glass could then be quenched to solidify it. One has to be aware though, if the fuel is allowed to melt into a glass, most of the fission gases, and volatiles trapped in the fuel pellets would escape.

Any success of this plan would be dependent on the availability of liquid gases in Japan, and ability to deliver them. That is out of my range of expertise.

Just a suggestion.

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 4:01:35 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

111/384

From: McIntyre, David
To: Sciutto, Jim E.
Subject: RE: NPP emergency exercises
Date: Thursday, March 17, 2011 4:06:00 PM

That is the only one I've heard of from my regional folks. No media is typically not allowed, though that is up to the licensee (Exelon in this case). Sometimes I think they might allow local reporters sometimes for a "Look how we're working to protect our neighborhood" story. If I hear of any sooner, I'll let you know.

From: Sciutto, Jim E. [mailto:Jim.E.Sciutto@abc.com]
Sent: Thursday, March 17, 2011 3:53 PM
To: McIntyre, David
Subject: RE: NPP emergency exercises

Thank you David, That's a real help. I'm assuming that's the soonest one? Also, is media access normally allowed? Best, Jim

---

From: McIntyre, David [mailto:David.McIntyre@nrc.gov]
Sent: 17 March 2011 15:52
To: Sciutto, Jim E.
Subject: NPP emergency exercises

Jim – I asked my regional colleagues to check with their EP folks, and Region I informs me that Three Mile Island will be holding an emergency exercise on April 12.

TMI – how good could THAT be?

The media contact is Ralph.desantis@exeloncorp.com

NRC will not be participating in that exercise. You would need to get permission from Exelon to film on the plant premises.

Dave McIntyre
NRC Public Affairs

LLL/385

From: Jonah Green
To: McIntyre, David
Subject: indian point/ nrc report
Date: Thursday, March 17, 2011 4:11:59 PM

Hi David,

Thank you for getting in touch with us about that article.

We've updated our post to clarify that the NRC is not the source of this 'most vulnerable' claim:

http://www.huffingtonpost.com/2011/03/17/cuomo-wants-indian-point-_n_836982.html

Best, Jonah

--

Jonah Green
New York Editor
The Huffington Post
http://www.huffingtonpost.com/new-york/

LLL/386

From: McIntyre, David
To: Piccone, Josephine
Subject: DOE as lead on monitoring
Date: Thursday, March 17, 2011 4:21:00 PM

Josie – what you said in the conf call about DOE being designated lead on the monitoring was news to me. Could you please forward me what you have on it?

Thanks,
Dave

LLL/387

From:	Piccone, Josephine
To:	McIntyre, David
Subject:	Fw: WHITE HOUSE CALL SUMMARY WRT COMMUNICATIONS WITH STATES
Date:	Thursday, March 17, 2011 4:24:51 PM

This is what I received during the call

From: LIA04 Hoc
To: Barker, Allan; Browder, Rachel; Erickson, Randy; Logaras, Harral; Maier, Bill; McNamara, Nancy; Tifft, Doug; Trojanowski, Robert; Woodruff, Gena
Cc: LIA01 Hoc; LIA11 Hoc; OST05 Hoc; Piccone, Josephine; Jackson, Deborah; Turtil, Richard; Collins, Elmo; Dean, Bill; Heck, Jared; McCree, Victor; Pederson, Cynthia; Satorius, Mark; Flannery, Cindy; LIA04 Hoc; Lukes, Kim; Noonan, Amanda; Rautzen, William; Rivera, Alison; Ryan, Michelle; Virgilio, Rosetta
Sent: Thu Mar 17 15:11:18 2011
Subject: WHITE HOUSE CALL SUMMARY WRT COMMUNICATIONS WITH STATES

Below are a few bullets FYI regarding Charlie Miller's participation in a White House call today relative to plume modeling data and communications with States.

The Federal family is working together to develop models to determine whether the plume from the Japanese event will reach the US. This will be run through DOE NARAC (National Atmospheric Release Advisory Center)

DOE is tasked as the **LEAD** agency to provide information to the States in this regard. There will be a **call at 1900**
(7 pm Eastern) this evening with Governors to inform them about DOE aerial monitoring activities.

Also note that NRC is working to hold a **public Commission briefing Monday 3/21 – time TBD**. NRC staff will provide the Commission on the status of the Japanese event, provide an overview of staff actions to date, and any early planned actions. The meeting will be **Web streamed** and will be a good opportunity to **invite/inform our State contacts - when we have all the details.**

Rosetta Virgilio
State Liaison
NRC Operations Center
301-816-5193
LIA04.HOC@nrc.gov

LL/388

From:	McIntyre, David
To:	Harrington, Holly; Uselding, Lara; Chandrathil, Prema; Burnell, Scott; Widomski, Michael; Taylor, Robert; Brenner, Eliot; Couret, Ivonne
Subject:	FW: indian point/ nrc report HuffPo correction
Date:	Thursday, March 17, 2011 4:27:00 PM

FYI – they do quote us. Anyone remember speaking to them?

From: Jonah Green [mailto:jgreen@huffingtonpost.com]
Sent: Thursday, March 17, 2011 4:12 PM
To: McIntyre, David
Subject: indian point/ nrc report

Hi David,

Thank you for getting in touch with us about that article.

We've updated our post to clarify that the NRC is not the source of this 'most vulnerable' claim:

http://www.huffingtonpost.com/2011/03/17/cuomo-wants-indian-point-_n_836982.html

Best, Jonah

--

Jonah Green
New York Editor
The Huffington Post
http://www.huffingtonpost.com/new-york/

LLL/384

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 4:28:00 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!!

LL/390

From:	Mitlyng, Viktoria
To:	McIntyre, David; Harrington, Holly; Couret, Ivonne; Burnell, Scott; Screnci, Diane; Taylor, Robert; Sheehan, Neil; Hannah, Roger; Uselding, Lara; Ledford, Joey; Chandrathil, Prema; Brenner, Eliot
Cc:	Kammerer, Annie
Subject:	RE: Huffington Post correction on MSNBC
Date:	Thursday, March 17, 2011 4:42:22 PM

Not mincing words today, are we? Love it!

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

LLL/391

From: McIntyre, David
To: Piccone, Josephine
Subject: RE: WHITE HOUSE CALL SUMMARY WRT COMMUNICATIONS WITH STATES
Date: Thursday, March 17, 2011 4:53:00 PM

Thanks!

From: Piccone, Josephine
Sent: Thursday, March 17, 2011 4:25 PM
To: McIntyre, David
Subject: Fw: WHITE HOUSE CALL SUMMARY WRT COMMUNICATIONS WITH STATES

This is what I received during the call

From: LIA04 Hoc
To: Barker, Allan; Browder, Rachel; Erickson, Randy; Logaras, Harral; Maier, Bill; McNamara, Nancy; Tifft, Doug; Trojanowski, Robert; Woodruff, Gena
Cc: LIA01 Hoc; LIA11 Hoc; OST05 Hoc; Piccone, Josephine; Jackson, Deborah; Turtil, Richard; Collins, Elmo; Dean, Bill; Heck, Jared; McCree, Victor; Pederson, Cynthia; Satorius, Mark; Flannery, Cindy; LIA04 Hoc; Lukes, Kim; Noonan, Amanda; Rautzen, William; Rivera, Alison; Ryan, Michelle; Virgilio, Rosetta
Sent: Thu Mar 17 15:11:18 2011
Subject: WHITE HOUSE CALL SUMMARY WRT COMMUNICATIONS WITH STATES

Below are a few bullets FYI regarding Charlie Miller's participation in a White House call today relative to plume modeling data and communications with States.

The Federal family is working together to develop models to determine whether the plume from the Japanese event will reach the US. This will be run through DOE NARAC (National Atmospheric Release Advisory Center)

DOE is tasked as the **LEAD** agency to provide information to the States in this regard. There will be a **call at 1900**
(7 pm Eastern) this evening with Governors to inform them about DOE aerial monitoring activities.

Also note that NRC is working to hold a **public Commission briefing Monday 3/21 – time TBD**. NRC staff will provide the Commission on the status of the Japanese event, provide an overview of staff actions to date, and any early planned actions. The meeting will be **Web streamed** and will be a good opportunity to **invite/inform our State contacts - when we have all the details.**

Rosetta Virgilio
State Liaison
NRC Operations Center
301-816-5193
LIA04.HOC@nrc.gov

LL/392

From: Taylor, Robert
To: Harrington, Holly; McIntyre, David; Burnell, Scott
Subject: RE: Interview Request: USC NRC Report
Date: Thursday, March 17, 2011 2:12:17 PM

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

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.

LLL/393

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:	Couret, Ivonne
To:	McIntyre, David
Subject:	FW: Media - Question San Fran chron
Date:	Thursday, March 17, 2011 4:41:17 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: Thursday, March 17, 2011 4:29 PM
To: Couret, Ivonne
Subject: Media - Question

David Perlman
San Francisco Chronicle
Dperlman@sfchronicle.com
415-777-7117
Re: What the NRC is saying about winds from Japan to U.S.

Deanna Royer
Contract Secretary
301-415-8200

LLL/394

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

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

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: 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

111/395

From:	McIntyre, David
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
Date:	Thursday, March 17, 2011 2:19:00 PM

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

LLL/396

From: McIntyre, David
To: Couret, Ivonne
Subject: FW: yUCCA QUESTION
Date: Thursday, March 17, 2011 2:32:00 PM

Please log

From: Hiruo, Elaine [mailto:Elaine_Hiruo@platts.com]
Sent: Thursday, March 17, 2011 12:44 PM
To: McIntyre, David
Subject: yUCCA QUESTION

Hi, David. I realize that you are very busy now with the crisis in Fukushima, but I do have a few questions re: the statements of non-concurrence on Yucca that three staffers signed earlier this year.

1) Are more legible copies of those statements available?
2) What is NRC's response?

Thank you.
Elaine Hiruo

Elaine Hiruo
Managing Editor, NuclearFuel
Platts
The McGraw-Hill Companies Inc.
Office: 202-383-2163
Fax: 202-383-2187
elaine_hiruo@platts.com

LLL397

From: McIntyre, David
To: Brenner, Eliot; Harrington, Holly; Burnell, Scott; Couret, Ivonne; Janbergs, Holly; Ledford, Joey; Hannah, Roger; Screnci, Diane; Sheehan, Neil; Chandrathil, Prema; Mitlyng, Viktoria; Widomski, Michael; Landau, Mindy; Uselding, Lara
Subject: UCS Talking Point
Date: Thursday, March 17, 2011 2:45:00 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.

LLL/398

From: Harrington, Holly
To: Burnell, Scott; McIntyre, David; Taylor, Robert
Subject: FW: Seismic Q&As
Date: Thursday, March 17, 2011 3:29:44 PM
Attachments: image001.png
Importance: High

Can anyone address? I told Nelson not to post anything without our approval

---

From: Nelson, Robert
Sent: Thursday, March 17, 2011 2:27 PM
To: Harrington, Holly
Subject: FYI: Seismic Q&As
Importance: High

Heads up for possible action tomorrow.

NELSON

From: Nelson, Robert
Sent: Thursday, March 17, 2011 2:18 PM
To: Kammerer, Annie
Cc: Roberts, Darrell; Croteau, Rick; Kennedy, Kriss; Lara, Julio; West, Steven; Shear, Gary; Ruland, William; Boger, Bruce; Meighan, Sean; Nguyen, Quynh; Giitter, Joseph
Subject: Action: Seismic Q&As
Importance: High

Annie:

The regions have a critical need for publicly releasable seismic info (Qs & As) to support public meetings beginning next week. We need a releasable version of your document. Can you assemble the info that you have prepared that you believe is good to go. We can then get that reviewed by OPA. Need your input tomorrow.

R.A. Nelson

Robert A. Nelson
Deputy Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation
U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment
E-mail: robert.nelson@nrc.gov | Office: (301) 415-1453 | Cell: (703) 244-7493 | Fax: (301) 415-2102

From: Kammerer, Annie
Sent: Thursday, March 17, 2011 2:36 AM
To: Kammerer, Annie; Hiland, Patrick; Skeen, David; Case, Michael; RST01 Hoc
Cc: Howe, Allen; Nelson, Robert; Stutzke, Martin; Giitter, Joseph; Rihm, Roger; McDermott, Brian; Hasselberg, Rick; Chokshi, Nilesh; Munson, Clifford; Cook, Christopher; Flanders, Scott; Ross-Lee, MaryJane; Brown, Frederick; Giitter, Joseph; Howe, Allen; Ruland, William; Dudes, Laura; Karas, Rebecca; Ake, Jon; Munson, Clifford; Hogan, Rosemary; Uhle, Jennifer; Marshall, Michael; Uselding, Lara; Randall, John; Allen, Don; Burnell, Scott; Hayden, Elizabeth; Pires, Jose; Graves, Herman; Candra, Hernando; Murphy, Andrew; Murphy, Andrew; Pires, Jose; Hogan, Rosemary; Sheron, Brian; Dricks, Victor; Warnick, Greg; Reynoso, John; Lantz, Ryan; Markley, Michael; Orders, William; Santiago, Patricia; Snodderly, Michael; Baggett, Steven; Sosa, Belkys; Davis, Roger; Franovich, Mike; Castleman, Patrick; Sharkey, Jeffry; Boska, John; Ma, John; Tegeler, Bret; Patel, Pravin; Shams, Mohamed; Morris, Scott; Brenner, Eliot; Harrington, Holly; Seber, Dogan; Ledford, Joey; Johnson, Michael; Virgilio, Martin; Holahan, Vincent; Bergman, Thomas
Subject: Seismic Q&As March 17th 2am update

All,

As promised, a sharepoint site has been set up where our friends in NRR will be posting the latest version of the Seismic Q&A document on an ongoing basis. If someone would prefer to use the sharepoint site, instead of being on this distribution list, please let me know…
http://portal.nrc.gov/edo/nrr/NRR%20TA/FAQ%20Related%20to%20Events%20Occuring%20in%20Japan/Forms/AllItems.aspx

This latest update has a number of new questions (not many with answers today, but we are working hard). A high priority question we are working on is "how many plants are near a mapped active fault". We're focusing on anything within 50 miles. We're also pulling relevant questions from the congressional inquiries we just received; and will also give these high priority to support any needs by NRR.

Many new figures and some draft fact sheets have added to the "additional information" section. These include the NRO half

LL 1399

From:	Harrington, Holly
To:	McIntyre, David
Subject:	FW: West Coast Radiation Exposure
Date:	Thursday, March 17, 2011 3:30:40 PM

Does the PMT thingee you e-mailed around earlier address this question?

From: Ridge, Christianne
Sent: Thursday, March 17, 2011 2:31 PM
To: Harrington, Holly
Subject: FW: West Coast Radiation Exposure

Holly, we got a follow-up question about the table in the 3/16 press release. Can the folks who gave you the shed some light?
Thanks.

From: Peter Chang [mailto:pchang@sagientresearch.com]
Sent: Thursday, March 17, 2011 1:42 PM
To: Ridge, Christianne
Subject: West Coast Radiation Exposure

Hi Christianne,

I believe I was speaking with you earlier today on the NRCs estimates for West Coast radiation exposure from Japan. Just had a question on the press release and chart you had referred me to (http://www.nrc.gov/reading-rm/doc-collections/news/2011/11-050_Attchmt.pdf), giving levels closer to the reactor site. Are the T EDE (Total Effective Dose Equivalent) maximum dose (rem) levels in that chart just instantaneous/continuous measures, or is that over a unit of time, and if so, what unit?

Thanks very much.

Peter Chang, MD
Sagient Research Systems
3655 Nobel Drive Suite 540
San Diego, CA 92122
Tel: (858) 200-2347
Fax: (858) 623-1601

LLL/405

From: Harrington, Holly
To: McIntyre, David; Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Janbergs, Holly; Ledford, Joey; Hannah, Roger; Screnci, Diane; Sheehan, Neil; Chandrathil, Prema; Mitlyng, Viktoria; Widomski, Michael; Landau, Mindy; Uselding, Lara
Subject: RE: UCS Talking Point
Date: Thursday, March 17, 2011 3:33:20 PM

I'm sorry, but please use this instead (we are not responding per se, but monitoring)

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: McIntyre, David
Sent: Thursday, March 17, 2011 2:45 PM
To: Brenner, Eliot; Harrington, Holly; Burnell, Scott; Couret, Ivonne; Janbergs, Holly; Ledford, Joey; Hannah, Roger; Screnci, Diane; Sheehan, Neil; Chandrathil, Prema; Mitlyng, Viktoria; Widomski, Michael; Landau, Mindy; Uselding, Lara
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Dave

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LL/401

From: McIntyre, David
To: Harrington, Holly
Cc: Ridge, Christianne
Subject: RE: West Coast Radiation Exposure
Date: Thursday, March 17, 2011 3:45:00 PM

No, that's really just a glossary. I'm told the time span was 16 hours.

From: Harrington, Holly
Sent: Thursday, March 17, 2011 3:31 PM
To: McIntyre, David
Subject: FW: West Coast Radiation Exposure

Does the PMT thingee you e-mailed around earlier address this question?

From: Ridge, Christianne
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To: Harrington, Holly
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To: Ridge, Christianne
Subject: West Coast Radiation Exposure

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Thanks very much.

Peter Chang, MD
Sagient Research Systems
3655 Nobel Drive Suite 540
San Diego, CA 92122
Tel: (858) 200-2347
Fax: (858) 623-1601

402

From: McIntyre, David
To: jim.e.sciutto@abc.com
Subject: NPP emergency exercises
Date: Thursday, March 17, 2011 3:51:00 PM

Jim – I asked my regional colleagues to check with their EP folks, and Region I informs me that Three Mile Island will be holding an emergency exercise on April 12.

TMI – how good could THAT be?

The media contact is Ralph.desantis@exeloncorp.com

NRC will not be participating in that exercise. You would need to get permission from Exelon to film on the plant premises.

Dave McIntyre
NRC Public Affairs

LL 4/03

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 12:37:30 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.

LLL/404

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: McIntyre, David
To: Couret, Ivonne
Subject: The Hill
Date: Thursday, March 17, 2011 12:46:00 PM

A follow-up. Please log.

From: McIntyre, David
Sent: Thursday, March 17, 2011 12:46 PM
To: 'Andrew Restuccia'
Subject: RE: Question

We believe it is still sufficient – as I noted, it's considered a basis that can be expanded if circumstances warrant. However, I would be mighty surprised if that question doesn't come up when we review this incident for lessons learned!

From: Andrew Restuccia [mailto:arestuccia@thehill.com]
Sent: Thursday, March 17, 2011 12:15 PM
To: McIntyre, David
Subject: Re: Question

Is 10 miles for evacuation in the U.S. enough given that the NRC called for a 50-mile evacuation zone in Japan?

On Thu, Mar 17, 2011 at 12:08 PM, Andrew Restuccia <arestuccia@thehill.com> wrote:
Yes, it does. Thanks for the speedy response!

On Thu, Mar 17, 2011 at 12:06 PM, McIntyre, David <David.McIntyre@nrc.gov> wrote:
Emergency preparedness plans for nuclear power plants, developed by the licensees working with NRC and FEMA, are based on a 10-mile radius around each plant for evacuation, and a 50-mile radius "ingestion zone" – one that would look at food supplies, etc. These were developed considering design-basis accidents for each plant. The zones were always considered a base that could be expanded if circumstances warrant.

Does that help?

From: Andrew Restuccia [mailto:arestuccia@thehill.com]
Sent: Thursday, March 17, 2011 11:23 AM
To: McIntyre, David
Subject: Question

The Union of Concerned Scientists just said that NRC doesn't require plans for evacuating the area surrounding a nuclear plant beyond a 10-mile radius. Is that true?

--
Andrew Restuccia
Staff Writer
The Hill
arestuccia@thehill.com
Office: 202-407-8012

LLL/405

From: Harrington, Holly
To: Burnell, Scott; McIntyre, David
Cc: Taylor, Robert
Subject: FW: Interview Request: USC NRC Report
Date: Thursday, March 17, 2011 1:18:57 PM
Importance: High

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

LL/406

From:	Couret, Ivonne
To:	McIntyre, David
Subject:	MEDIA - TIME
Date:	Thursday, March 17, 2011 1:20:50 PM
Importance:	High

He tried to get through yesterday all day today...can you help
Union of Concern Scientist Report Comments/on their public remarks....011-44-*203-148-3200
eben_harrell@timemagazine.com

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

LLL/407

From: McIntyre, David
To: Ahlers, Mike; Brenner, Eliot
Subject: RE: CNN -- MOX fuel question
Date: Thursday, March 17, 2011 1:47:00 PM

Well, there was no sense of sensitivity (Jane Austen, right?) when I posed the question, so I guess you can attribute it to Eliot.

No, just kidding – attribute it to me that we are aware there's mox in #3.

From: Ahlers, Mike [mailto:Mike.Ahlers@turner.com]
Sent: Thursday, March 17, 2011 12:31 PM
To: McIntyre, David; Brenner, Eliot
Subject: RE: CNN -- MOX fuel question

Can I attribute the MOX fuel in unit 3 to NRC spokesman? Official? David McIntyre? Or what?
Thanks – Mike

From: McIntyre, David [mailto:David.McIntyre@nrc.gov]
Sent: Thursday, March 17, 2011 12:21 PM
To: Ahlers, Mike; Brenner, Eliot
Subject: RE: CNN -- MOX fuel question

Hi Mike – yes, unit 3 has MOX fuel. I would say that we are focused equally on all the reactors – and also specifically their spent fuel pools – as the situation is in such flux that we aren't concentrating specifically on any one.

Dave Mc

From: Ahlers, Mike [mailto:Mike.Ahlers@turner.com]
Sent: Thursday, March 17, 2011 12:14 PM
To: Brenner, Eliot; McIntyre, David
Subject: CNN -- MOX fuel question

Eliot, David,

The NYT and others have reported that there is mox (mixed oxide) fuel which includes reclaimed plutonium in Fukushima Daiichi's No. 3 reactor, and that the presence of mixed oxide might explain the Japanese focus on that reactor.

Does the NRC know if there is mox fuel in No. 3? And can you give us any guidance on the NYT reporting that U.S. authorities and Japanese authorities appear to believe different reactors are the bigger threat. (The NYT says the U.S. is focused on Reactor No. 4 and the Japanese on Reactor No. 3.)

Thanks – Mike

Mike Ahlers

LLL 408

From:	Harrington, Holly
To:	Uselding, Lara; Burnell, Scott; 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 1:49:46 PM

In a perfect world, it would be nice to have a statement in response. Do not know if this will happen today. Scott – when you see this, please start working on a statement.

Lara – If you can put her off for now, that would be good. If you cannot, tell her that we've not had time to digest it and will issue a statement later.

In my humble opinion, we may have to realize that we simply aren't going to be able to respond to everything that we'd like to. I think we need to realize that all of us are human and we're doing the best we can in an impossible situation. I should mention that all of you are doing an unbelievable job and that Eliot knows it and appreciates it (as do I).

Holly

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
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

11/409

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.

From: Screnci, Diane
To: McIntyre, David
Subject: RE: Greg Clary
Date: Thursday, March 17, 2011 8:46:55 AM

He's writing a weekend story. His deadline is today. His questions are IP specific.

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

From: McIntyre, David
Sent: Thursday, March 17, 2011 8:45 AM
To: Brenner, Eliot
Cc: Screnci, Diane
Subject: RE: Greg Clary

Diane – the Rock People are working remotely today, until 3 pm when Annie Kammerer is due in. Is Greg working on a particular deadline?

Dave

From: Brenner, Eliot
Sent: Thursday, March 17, 2011 8:41 AM
To: McIntyre, David
Subject: FW: Greg Clary

Can you ask the rock people if they can help tim clary?

From: Screnci, Diane
Sent: Thursday, March 17, 2011 8:41 AM
To: Brenner, Eliot
Subject: Greg Clary

Don't forget. You said you'd decide whether to make a seismic/Indian Point person available to Greg Clary today. I'd like to tell him earlier rather than later whether that will happen.

Also, I don't know any of the seismic people at HQ (there aren't any in any of the Regions) so I don't know who that person would be.

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

LLL/410

From:	McIntyre, David
To:	Decker, David
Cc:	Wittick, Susan
Subject:	Q&A"s from PMT
Date:	Thursday, March 17, 2011 9:46:00 AM
Attachments:	Q&As for DoseAssessment Press Release 3-16-11msc1600.docx

David – sorry, I didn't mean to ignore you! The attached Qs and As were developed late yesterday by the PMT and provided to the LT and OPA.

Dave

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

LEU/4-11

Q&A's for PMT Press Release

This data is based on system condition estimates for a hypothetical, four reactor site. Model results are projections only and may **not** be representative of an actual release. This uses modeled forecast meteorological conditions and is subject to change.

- What does "system condition estimate" mean?
    - NRC made best possible estimates of reactor and spent fuel pool conditions. Such estimates are necessary because of the highly uncertain status of the units and their prognosis.
- What does "hypothetical, four reactor site" mean?
    - Although four reactor units are involved in the radioactivity releases, the NRC combined the accident assumptions for each reactor to create a hypothetical reactor in order to determine the combined release for the single site.
- Why were "hypothetical" sites/reactors used?
    - Although assessments for each unit could be advantageous, available data regarding the units are highly uncertain and assumptions had to be made to provide the inputs to the assessments. Since the NRC does not oversee the design, construction, and operation of Japanese reactors, we do not have access to exact plant conditions, fuel inventory, or fuel burnup.
- What is meant by "Model results are projections only and may not be representative of an actual release"?
    - NRC projections are from computer models using best estimates of site and weather conditions available at the time. As conditions change and information is updated these projections may change.
- What does "modeled forecast meteorological conditions" mean?
    - "Modeled forecast meteorological conditions" is a computer generated weather forecast prepared by the National Weather Service (NWS) and enhanced by the National Atmospheric Release Advisory Center (NARAC) to improve data resolution. Forecast data is needed to assess where the radioactive material is carried to and the amount of material that reaches that location.
- Why is forecast meteorological data being used?
    - Actual meteorological data is not available for the Fukushima area. A radiological assessment typically uses meteorological data observed since the release started and forecast data to allow projection of the plume characteristics and location into the future. Since actual meteorological data is not available, forecasts are being used.
- What is a PAG?
    - The Environmental Protection Agency (EPA) developed Protective Action Guides (PAGs) to help state and local authorities make radiation protection decisions

during emergencies. The PAGs are dose rates at which a protective action may be warranted.

- What happens when a PAG is exceeded?
  - When a PAG is exceeded, the local decision makers will determine what measures are to be implemented to protect the public, and the local emergency response organizations will implement the measures.
- Please define:
  - **EDE**: effective dose equivalent: external (radiation received from sources outside of the body) absorbed by an individual.
  - **TEDE**: total effective dose equivalent: sum of the external dose and internal (radiation received from inside of the body) absorbed by an individual.
  - **CEDE**: committed effective dose equivalent: the total internal dose calculated over 50 years and assigned to the year it occurred. Due to inhalation or ingestion of radioactive materials.
  - **Cloudshine:** Radiation emitted by radioactive material suspended in an overhead plume.
  - **Skyshine**: upwards directed radiation reflected by the atmosphere or clouds back to the ground.
  - **Groundshine**: radiation emitted from radioactive material deposited on the ground.

From: McIntyre, David
To: Bonaccorso, Amy
Cc: Deavers, Ron; Screnci, Diane; Couret, Ivonne
Subject: RE: Japan Related Call
Date: Thursday, March 17, 2011 10:15:00 AM

Done. Concerned cit living near Pilgrim, worried about tsunami in Massachusetts Bay. I explained seismic design criteria, license renewal, potassium iodide. Only thing she stumped me on was what happens to all those people in Japan who are screened and test positive for radiation contamination?

Dave

From: Bonaccorso, Amy
Sent: Thursday, March 17, 2011 9:33 AM
To: McIntyre, David
Cc: Deavers, Ron; Screnci, Diane
Subject: RE: Japan Related Call

Dave:

We don't have NPP specific data up here....but Wikipedia just added something about this NPP being a similar design to the ones in Japan.

Can you help?

Thanks,

Amy

From: Screnci, Diane
Sent: Thursday, March 17, 2011 9:29 AM
To: Bonaccorso, Amy; Deavers, Ron
Subject: FW: Japan Related Call

Can you guys handle?

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

From: McFadden, John
Sent: Thursday, March 17, 2011 9:27 AM
To: Screnci, Diane
Cc: Urban, Richard; Johnson, Sharon; McFadden, John
Subject: Japan Related Call

The following individual called and wanted to know what the NRC is doing about the Pilgrim NPP since it is old and similar in design to the Japanese plants and is also vulnerable to tsunamis and earthquakes.

LL/4/12

From: Eric Tyson
To: McIntyre, David
Subject: Re: NRC
Date: Thursday, March 17, 2011 10:17:52 AM

Provided by WHOM?

That was the question I asked.

-----Original Message-----
From: McIntyre, David <David.McIntyre@nrc.gov>
To: Erictyson <Erictyson@aol.com>
Sent: Wed, Mar 16, 2011 10:40 pm
Subject: NRC

Eric – sorry to be so late getting back to you. Please consider this background, attributable to an NRC official if need be: Our conclusion that the spent fuel pool was dry was based on information provided to our reactor experts in Tokyo.

Dave McIntyre
NRC Public Affairs

111/413

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; Mitlyng, Viktoria; Screnci, Diane; Sheehan, Neil; Uselding, Lara
Subject:	Permission to foward public inquiries on radiation health questions
Date:	Thursday, March 17, 2011 10:45:58 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

From: Screnci, Diane
To: McIntyre, David; Burnell, Scott
Subject: FW: seismic study
Date: Thursday, March 17, 2011 11:19:57 AM

I think the answer is yes. Correct?

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

From: Tumposky, Ellen X. -ND [mailto:Ellen.X.Tumposky.-ND@abc.com]
Sent: Thursday, March 17, 2011 11:12 AM
To: Screnci, Diane
Subject: RE: seismic study

Would you disagree with this statement, from a press release put out by Rep. Eliot Engel:

The NRC has released a report saying that Indian Point's reactor number 3 has the highest risk of core damage from an earthquake among U.S. nuclear plants.

From: Screnci, Diane [mailto:Diane.Screnci@nrc.gov]
Sent: Thursday, March 17, 2011 10:27 AM
To: Tumposky, Ellen X. -ND
Subject: seismic study

I have several comments about the report:

We don't rank plants... and didn't in this case. MSNBC ranked the plants. This wasn't a seismic ranking tool; it was an effort to screen for plants needing a further look.

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's being done. The Indian Point Units are two of those.

414

Here are the instructions for retrieving the document. It's very large:

For the document, go to the NRC's electronic database, called "Adams"...
http://www.nrc.gov/reading-rm/adams.html
Click on "web-based Adams"
Then Click on "begin web based search"
Click on the "simple search" tab
And use this accession number in the "simple search" box: ML100270582

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

From: Widomski, Michael
To: Taylor, Robert; McIntyre, David
Subject: FW: Response to DHS CAT RFI# 0330-11-023
Date: Thursday, March 17, 2011 11:56:52 AM
Attachments: Response DHS CAT RFI 0330-11-023.doc

For info only...no action needed, but htought you might find this informative.

From: Cousino, Judy **On Behalf Of** NOC.CBP
Sent: Thursday, March 17, 2011 10:25 AM
To: NOC.SWO.Restricted; NOC.TRACKER; OPS.CAT
Cc: NOC.CBP
Subject: FW: DHS CAT RFI# 0330-11-023

Please see CBP's response to RFI #0330-023 below.

DHS Nat'l Op Center - CBP DESK
202-282-8130

From: MCHENRY, GARY D
Sent: Thursday, March 17, 2011 10:16 AM
To: SITROOM; MCGRATH, MARGARET
Cc: OFO-Incident-Management; DONNACHIE, JOHN P; ANDERSON, DONALD M
Subject: OFO Response - DHS CAT RFI# 0330-11-023

CBP possesses significant experience and capability for detecting the presence of radioactive materials or contamination and resolving alarms. CBP scans for radiation in both the cargo and passenger environments utilizing non-intrusive inspection technology. Approximately two percent of cargo commerce arriving via sea contains detectible levels of radiation, including legitimate radiological source shipments and a wide range of commodities that have naturally-occurring radiation (e.g., ceramic objects, road salt, and sand). For passenger arrivals, CBP officers utilize Personal Radiation Detectors to identify potential sources of radiation to include passengers undergoing medical radiation treatments.

CBP radiation detection Standard Operating Procedures (SOP) employ a layered approach that requires that all radiation alerts are adjudicated. To identify the source of a RPM alarm or PRD alert, CBP Officers use handheld Radiation Isotope Identification Devices (RIID). CBP Laboratories and Scientific Services (LSS) provides a wide range of support to the CBP Officers including scientific analysis of radiation scanning data and investigation of the source legitimacy,

- LSS currently operates an extensive inventory of advanced handheld and mobile radiation identification equipment that can be rapidly deployed for mobile operations.
- LSS is contacted and determines that the radiation source is legitimate and at safe levels.
- LSS scientists and radiation identification assets could be deployed for mobile operations.

CBP currently has protocols in place, which are routinely executed, if cargo is contaminated with elevated levels of radiation. The cargo is not allowed to enter the United States and is returned to the port of origin via the importer. CBP currently has protocols in place, which are routinely executed, if passengers arrive with elevated levels of radiation.

- If the radiation is not hazardous and is determined to be from legitimate sources (such as medical radiation treatments), the passenger is permitted to enter the United States.
- If the radiation is hazardous or is due to contamination, then the passenger is referred to the CDC in accordance with local procedures.

Gary McHenry
Customs and Border Protection
Office of Field Operations, Operations
Incident Management
202-344-2751

From: OFO-IMD
Sent: Wednesday, March 16, 2011 8:09 PM
To: OFO-Incident-Management
Subject: FW: DHS CAT RFI# 0330-11-023

From: Flynn, Kenneth (CTR) **On Behalf Of** OPS.CAT
Sent: Wednesday, March 16, 2011 4:00 PM
To: NOC.CBP; NOC.USCG
Cc: NOC.SWO.Restricted; NOC.TRACKER; OPS.CAT; Rogers, James D
Subject: DHS CAT RFI# 0330-11-023

All,

Please find an attached Request for Information (RFI) from the DHS Secretary's Crisis Action Team and provide your response by 0800 hours, 17 March 2011.

Subject: Decontamination Plans

Please provide the DHS Crisis Action Team answers to the below questions:

1. Is there a plan in place to monitor and/or decontaminate aircraft and people arriving from Japan
2. What are the USCG and CBP's capabilities to monitor and detect radiation and their ability to screen people, cargo, aircraft, and vessels arriving from Japan?

Please send responses to ops.cat@hq.dhs.gov and cc: noc.swo@hq.dhs.gov.

Note: Please ensure that the "SUBJECT LINE" of your response e-mail contains **"Response Decontamination Plans CAT RFI # 0330-11-023"**

Thank you,

Ken Flynn
RFI Manager
DHS Crisis Action Team
OPS.CAT@HQ.DHS.GOV
202.282.9295/9271

From: McIntyre, David
To: White, Duncan
Subject: RE: 3 pm call today
Date: Thursday, March 17, 2011 11:59:00 AM

I can do it.

-----Original Message-----
From: White, Duncan
Sent: Thursday, March 17, 2011 11:51 AM
To: McIntyre, David
Subject: 3 pm call today
Importance: High

Will you or someone else from OPA be on the OAS/CRCPD call today at 3 pm today?

4/17

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 2:09:34 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-Yeaman
Public Affairs Officer
U.S. Nuclear Regulatory Commission
Region III
Lisle, IL
(630) 829-9663
prema.chandrathil@nrc.gov

LLL/418

Plants needing additional analysis:

Crystal River 3
Dresden 2
Dresden 3
Duane Arnold
Farley 1
Farley 2
Indian Point 2
Indian Point 3
Limerick 1
Limerick 2
North Anna 1
North Anna 2
Oconee 1
Oconee 2
Oconee 3
Perry 1
Peach Bottom 2
Peach Bottom 3
River Bend 1
Saint Lucie 1
Saint Lucie 2
Sequoyah 1
Sequoyah 2
Seabrook
Summer
Watts Barr 1
Wolf Creek

From: McIntyre, David
To: Screnci, Diane; Burnell, Scott
Subject: RE: seismic study
Date: Thursday, March 17, 2011 12:01:00 PM

Yes. We would disagree. The NRC does not have a list of the most vulnerable plants. That "list" was constructed by the MSNBC reporter using partial data and even more partial understanding of our design criteria.

From: Screnci, Diane
Sent: Thursday, March 17, 2011 11:20 AM
To: McIntyre, David; Burnell, Scott
Subject: FW: seismic study

I think the answer is yes. Correct?

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

From: Tumposky, Ellen X. -ND [mailto:Ellen.X.Tumposky.-ND@abc.com]
Sent: Thursday, March 17, 2011 11:12 AM
To: Screnci, Diane
Subject: RE: seismic study

Would you disagree with this statement, from a press release put out by Rep. Eliot Engel:

The NRC has released a report saying that Indian Point's reactor number 3 has the highest risk of core damage from an earthquake among U.S. nuclear plants.

From: Screnci, Diane [mailto:Diane.Screnci@nrc.gov]
Sent: Thursday, March 17, 2011 10:27 AM
To: Tumposky, Ellen X. -ND
Subject: seismic study

I have several comments about the report:

We don't rank plants… and didn't in this case. MSNBC ranked the plants. This wasn't a seismic ranking tool; it was an effort to screen for plants needing a further look.

The report shows us that:

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4/19

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's being done. The Indian Point Units are two of those.

Here are the instructions for retrieving the document. It's very large:

For the document, go to the NRC's electronic database, called "Adams"...
http://www.nrc.gov/reading-rm/adams.html
Click on "web-based Adams"
Then Click on "begin web based search"
Click on the "simple search" tab
And use this accession number in the "simple search" box: ML100270582

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

From: McIntyre, David
To: White, Duncan
Subject: RE: 3 pm call today
Date: Thursday, March 17, 2011 12:12:00 PM

We'll see. I'm in the ops ctr.

-----Original Message-----
From: White, Duncan
Sent: Thursday, March 17, 2011 12:02 PM
To: McIntyre, David
Subject: Re: 3 pm call today

Call in or attend in person? If in person, come to my office a few minutes before 3 pm.

----- Original Message -----
From: McIntyre, David
To: White, Duncan
Sent: Thu Mar 17 11:59:33 2011
Subject: RE: 3 pm call today

I can do it.

-----Original Message-----
From: White, Duncan
Sent: Thursday, March 17, 2011 11:51 AM
To: McIntyre, David
Subject: 3 pm call today
Importance: High

Will you or someone else from OPA be on the OAS/CRCPD call today at 3 pm today?

LL 4/20

From: Harrington, Holly
To: McIntyre, David; Burnell, Scott
Subject: RE: RESPONSE TO MSNBC NEWS ARTICLE
Date: Thursday, March 17, 2011 12:19:17 PM

Can we just do a talking point and add to our talking points?

From: McIntyre, David
Sent: Thursday, March 17, 2011 12:08 PM
To: Harrington, Holly; Burnell, Scott
Subject: RE: RESPONSE TO MSNBC NEWS ARTICLE

If the regional PAOs have it, why can't the regional SLOs get it from them?>???

From: Harrington, Holly
Sent: Thursday, March 17, 2011 11:28 AM
To: McIntyre, David; Burnell, Scott
Subject: FW: RESPONSE TO MSNBC NEWS ARTICLE

Can either of you help rosetta?

From: LIA04 Hoc
Sent: Thursday, March 17, 2011 11:25 AM
To: Bonaccorso, Amy; McIntyre, David; Deavers, Ron; Burnell, Scott; Harrington, Holly; Akstulewicz, Brenda
Cc: OST05 Hoc; Barker, Allan; Browder, Rachel; Erickson, Randy; Logaras, Harral; Maier, Bill; McNamara, Nancy; Tifft, Doug; Trojanowski, Robert; Woodruff, Gena; Flannery, Cindy; LIA04 Hoc; Lukes, Kim; Noonan, Amanda; Rautzen, William; Rivera, Alison; Ryan, Michelle; Turtil, Richard; Virgilio, Rosetta
Subject: RESPONSE TO MSNBC NEWS ARTICLE

My understanding from Region I State Liaison Officers is there ***is*** a response to the Q below, provided yesterday by Scott Burnell to Region I PAOs.

Could you please forward the OPA approved response and include any future such responses to the **State Liaison Team in the Ops Center at LIA04.Hoc@nrc.gov and OST05.Hoc@nrc.gov** so that we can forward to our Regional State Liaison Officers; they are waiting for these so they can respond to State inquiries on this topic.

Also, how are we officially responding to the article? Are we doing anything to help put it into context?

Thanks much

Rosetta Virgilio
State Liaison
NRC Operations Center
301-816-5193
LIA04.HOC@nrc.gov

LL 1421

From: Schechter, David (TBS)
To: McIntyre, David
Cc: Schechter, David (TBS)
Subject: CNN query to NRC
Date: Thursday, March 17, 2011 3:49:27 PM

Dave,

Yes, that's what I was referring to. In a past lifetime, as a newspaper reporter, I covered the Quad-Cities Nuclear Power Station at Cordova, Ill., and used that public document room at a local library. Was this a post-9/11 development? Where would the public go nowadays to review their local plant's emergency response plan or materials on incidents, license extensions, etc.?

Thank,

Dave Schechter
Senior National Editor
CNN Atlanta

From: McIntyre, David [mailto:David.McIntyre@nrc.gov]
Sent: Thursday, March 17, 2011 3:47 PM
To: Couret, Ivonne; Schechter, David (TBS)
Subject: RE: Missed call yesterday - FW: Question - CNN

David – if you're referring to our old local public document rooms – no, those are no longer operating.

Dave McIntyre
NRC Public Affairs

From: Couret, Ivonne
Sent: Thursday, March 17, 2011 2:37 PM
To: McIntyre, David
Subject: Missed call yesterday - FW: Question - CNN

Follow up please

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

LLL 422

From: Steger (Tucci), Christine
Sent: Thursday, March 17, 2011 2:04 PM
To: Couret, Ivonne
Subject: Question - CNN

Call from: David Schechter
CNN – Atlanta
Number: 404-827-2914 o/c
E-mail david.schechter@turner.com

Question: Does this still exist/is it a requirement? – every Nuclear Power Plant designates a local public library with materials/documents specifically, documents related to Emergency Planning (10 mile epz)

Called yesterday, missed call from David

111/423

From:	McIntyre, David
To:	Couret, Ivonne; michael.widomski@dhs.gov
Subject:	RE: McClatchy Newspapers (might be repeat....
Date:	Thursday, March 17, 2011 1:50:00 PM

Michael will do it.

From: Couret, Ivonne
Sent: Thursday, March 17, 2011 1:00 PM
To: michael.widomski@dhs.gov; McIntyre, David
Subject: McClatchy Newspapers (might be repeat....

Greg Gordon (GAVE TO DAVE)
McClatchy Newspapers
202-383-0005 OK
ggordon@mcclatchy.dc.com
Have we considered having a press conference or teleconference
Has other general questions about the situation

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

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LLL 424

From:	Widomski, Michael
To:	Couret, Ivonne; McIntyre, David; Widomski, Michael
Subject:	RE: Medi request - FW: Request for Information for Publication - Politico (Deadline 1:00pm today)
Date:	Thursday, March 17, 2011 1:29:16 PM

I left a detailed message. You can close thi sout. If he has follow up he has the OPs Center OPA number.

Michael

From: prvs=05059eb58=Ivonne.Couret@nrc.gov on behalf of Couret, Ivonne
Sent: Thu 3/17/2011 12:26 PM
To: McIntyre, David; michael.widomski@dhs.gov
Subject: Medi request - FW: Request for Information for Publication - Politico (Deadline 1:00pm today)

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Public Affairs Officer
Office of Public Affairs
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From: Steger (Tucci), Christine
Sent: Thursday, March 17, 2011 11:21 AM
To: Couret, Ivonne
Subject: Request for Information for Publication - Politico (Deadline 1:00pm today)

Call from: Darius Dixon
Organization: Politico
Number: 703-341-4629
E-mail: ddixon@politico.com

Question: Reports in various publications stating radioactive forecast for U.S. – wants comment from NRC – where information is coming from, is it valid, what is the forecast for U.S.? What are the protective measures?

Deadline for print: 1:00pm today

LL/425

From: McIntyre, David
To: Couret, Ivonne
Subject: media query
Date: Thursday, March 17, 2011 1:26:00 PM

Follow-up from Scientific American. Please log.

From: McIntyre, David
Sent: Thursday, March 17, 2011 1:26 PM
To: 'John Matson'
Subject: RE: Clarification

Actually, I think more the opposite – these numbers are based on the assumption of a worst-case scenario, though along the lines of what we knew was happening at the time. I don't mean to be confusing with that – information was sketchy, we knew roughly what was happening and the Protective Measures Team posited worst case data on that.

From: John Matson [mailto:jmatson@sciam.com]
Sent: Thursday, March 17, 2011 12:53 PM
To: McIntyre, David
Subject: Clarification

Hi David,

Thanks again for the call back today. One quick question as I review my notes and the projected doses in the PDF attachment to the press release: Is it accurate to say that the projections in the document are for the state of the nuclear station now, as opposed to what might happen in a worst-case scenario?

Thanks,

John

John Matson
News Reporter, online
Scientific American
jmatson@sciam.com
(212) 451-8807
Twitter: @johnamatson

4/26

From:	McIntyre, David
To:	Couret, Ivonne
Subject:	RE: MEDIA HOT NY Times - California Deadline: asap
Date:	Thursday, March 17, 2011 1:16:00 PM

He called back. I slapped down a report that NRC is beefing up monitoring along West Coast (EPA is). He also asked what USG agency would cover the UN's test ban treaty office in SF; I said it would be State.

From: Couret, Ivonne
Sent: Thursday, March 17, 2011 12:58 PM
To: McIntyre, David
Subject: MEDIA HOT NY Times - California Deadline: asap
Importance: High

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
opa.resource@nrc.gov
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From: Steger (Tucci), Christine
Sent: Thursday, March 17, 2011 12:38 PM
To: Couret, Ivonne
Subject: NY Times - California Deadline: asap

Call from: Ian Lovett
Organization: NY Times – California
Number: 617-448-9505
E-mail: ian.lovett@nytimes.com

Questions regarding West Coast, radiation exposure, what is the latest information?
Deadline: asap

cc/427

From: McIntyre, David
To: Couret, Ivonne
Subject: RE: MEDIA HOT NY Times - California Deadline: asap
Date: Thursday, March 17, 2011 1:10:00 PM

D'oh! Left message. Suggested he call EPA if that's what he was looking for.

From: Couret, Ivonne
Sent: Thursday, March 17, 2011 12:58 PM
To: McIntyre, David
Subject: MEDIA HOT NY Times - California Deadline: asap
Importance: High

Ivonne L. Couret
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From: Steger (Tucci), Christine
Sent: Thursday, March 17, 2011 12:38 PM
To: Couret, Ivonne
Subject: NY Times - California Deadline: asap

Call from: Ian Lovett
Organization: NY Times – California
Number: 617-448-9505
E-mail: ian.lovett@nytimes.com

Questions regarding West Coast, radiation exposure, what is the latest information?
Deadline: asap

From: McIntyre, David
To: Couret, Ivonne
Subject: RE: MEDIA REQUEST - NY Times
Date: Thursday, March 17, 2011 1:07:00 PM

This one's done. Please log.

From: Couret, Ivonne
Sent: Thursday, March 17, 2011 12:42 PM
To: McIntyre, David
Subject: MEDIA REQUEST - NY Times
Importance: High

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
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From: Steger (Tucci), Christine
Sent: Thursday, March 17, 2011 12:15 PM
To: Couret, Ivonne
Subject: NY Times

Call from: Tom Zeller
Organization: NY Times
Number: 212-556-1880 ✓
tom@nytimes.com

Question re – Union of Concerned Scientist report this morning – discrepancy between what U.S. is recommending to Japan (50 miles) for U.S. evacuation vs. what our recommendations are for in our home states (20 miles).

Needs confirmation asap for story

111/428

From: John Matson
To: McIntyre, David
Subject: Clarification
Date: Thursday, March 17, 2011 12:53:59 PM

Hi David,

Thanks again for the call back today. One quick question as I review my notes and the projected doses in the PDF attachment to the press release: Is it accurate to say that the projections in the document are for the state of the nuclear station now, as opposed to what might happen in a worst-case scenario?

Thanks,

John

John Matson
News Reporter, online
Scientific American
jmatson@sciam.com
(212) 451-8807 ✓
Twitter: @johnamatson

111/429

From: Couret, Ivonne
To: McIntyre, David
Subject: WASHINGTON POST - FW: Media
Date: Thursday, March 17, 2011 12:44:38 PM

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

From: Shannon, Valerie
Sent: Thursday, March 17, 2011 12:08 PM
To: Couret, Ivonne
Subject: Media

Name: Rob Stein
From: Washington Post
Phone: 202-334-7338 ✓
E-mail: Steinr@washpost.com

Re: Radiation in Japan

Val

LLL/430

From: Couret, Ivonne
To: McIntyre, David
Subject: MEDIA REQUEST - NY Times
Date: Thursday, March 17, 2011 12:42:17 PM
Importance: High

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From: Steger (Tucci), Christine
Sent: Thursday, March 17, 2011 12:15 PM
To: Couret, Ivonne
Subject: NY Times

Call from: Tom Zeller
Organization: NY Times
Number: 212-556-1880
tom@nytimes.com

Question re – Union of Concerned Scientist report this morning – discrepancy between what U.S. is recommending to Japan (50 miles) for U.S. evacuation vs. what our recommendations are for in our home states (20 miles).

Needs confirmation asap for story

LLL431

From:	McIntyre, David
To:	Couret, Ivonne; michael.widomski@dhs.gov
Subject:	RE: Question for Comment - Scientific American
Date:	Thursday, March 17, 2011 12:39:00 PM

Done – please log.

From: Couret, Ivonne
Sent: Thursday, March 17, 2011 12:11 PM
To: McIntyre, David; michael.widomski@dhs.gov
Subject: FW: Question for Comment - Scientific American

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From: Steger (Tucci), Christine
Sent: Thursday, March 17, 2011 11:05 AM
To: Couret, Ivonne
Subject: Question for Comment - Scientific American

Call from: John Matson
Organization: Scientific American
Number: 212-451-8807✓
E-mail: jmatson@sciam.com

Question for comment: Why are we suggesting such a large evacuation in Japan?

LLL/432

From:	Doug Guarino
To:	McIntyre, David
Subject:	[Fwd: NRC Provides Protective Action Recommendations Based on U.S. Guidelines]
Date:	Thursday, March 17, 2011 12:33:51 PM
Attachments:	NRC Provides Protective Action Recommendations Based on U.S. Guidelines.eml.msg

Dave -- The link for calculations is not working for me. Is there another way to access it?

Also, has NRC, or any other federal agency, done plume modeling for the Japanese incident?

Finally, are statements by NRC officials in recent days that there is a low probablilty of harmful radiation reaching the U.S., does does this mean a low probability of it reaching the U.S. at a level above 1-5 rem, or some other figure? And when they say "harmful" do they mean from an acute standpoint, a long-term latent standpoint, or both?

Thanks.

--
Douglas P. Guarino
Associate Editor
Inside Washington Publishers
(Inside EPA's Superfund Report)
1919 South Eads Street, Suite 201
Arlington, VA 22202
703-416-8518
fax:703-416-8543
mailto:dguarino@iwpnews.com

LLL/433

From:	Widomski, Michael
To:	Couret, Ivonne; Widomski, Michael; McIntyre, David
Subject:	Re: Media Request - FW: Request for Information/Question - Daily Beast/Newsweek Magazine (deadline 1:00pm)
Date:	Thursday, March 17, 2011 12:28:07 PM

Closed. Referred to HHS.

Sent from my BlackBerry Wireless Handheld

From: prvs=05059eb58=Ivonne.Couret@nrc.gov <prvs=05059eb58=Ivonne.Couret@nrc.gov>
To: michael.widomski@dhs.gov <michael.widomski@dhs.gov>; McIntyre, David <David.McIntyre@nrc.gov>
Sent: Thu Mar 17 12:14:59 2011
Subject: Media Request - FW: Request for Information/Question - Daily Beast/Newsweek Magazine (deadline 1:00pm)

Can you follow up on this

Ivonne L. Couret
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From: Steger (Tucci), Christine
Sent: Thursday, March 17, 2011 11:12 AM
To: Couret, Ivonne
Subject: Request for Information/Question - Daily Beast/Newsweek Magazine (deadline 1:00pm)

Call from: Eve Conant
Organization: Daily Beast/Newsweek Magazine
Number: 202-626-2026
E-mail: eve.conant@newsweek.com

Phone - Would like to talk with someone about - acute radiation syndrome.

(deadline 1:00pm today)

4B4

From:	Couret, Ivonne
To:	McIntyre, David; michael.widomski@dhs.gov
Subject:	Medi request - FW: Request for Information for Publication - Politico (Deadline 1:00pm today)
Date:	Thursday, March 17, 2011 12:26:27 PM

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Public Affairs Officer
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From: Steger (Tucci), Christine
Sent: Thursday, March 17, 2011 11:21 AM
To: Couret, Ivonne
Subject: Request for Information for Publication - Politico (Deadline 1:00pm today)

Call from: Darius Dixon
Organization: Politico
Number: 703-341-4629 ✓
E-mail: ddixon@politico.com

Question: Reports in various publications stating radioactive forecast for U.S. – wants comment from NRC – where information is coming from, is it valid, what is the forecast for U.S.? What are the protective measures?

Deadline for print: 1:00pm today

LLL435

From: Couret, Ivonne
To: McIntyre, David
Subject: MEDIA REQUEST - NY Times
Date: Thursday, March 17, 2011 12:16:04 PM
Importance: High

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
opa.resource@nrc.gov
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From: Steger (Tucci), Christine
Sent: Thursday, March 17, 2011 12:15 PM
To: Couret, Ivonne
Subject: NY Times

Call from: Tom Zeller
Organization: NY Times
Number: 212-556-1880 ✓
tom@nytimes.com

Question re – Union of Concerned Scientist report this morning – discrepancy between what U.S. is recommending to Japan (50 miles) for U.S. evacuation vs. what our recommendations are for in our home states (20 miles).

Needs confirmation asap for story

4/30

From: Couret, Ivonne
To: michael.widomski@dhs.gov; McIntyre, David
Subject: Media Request - FW: Request for Information/Question - Daily Beast/Newsweek Magazine (deadline 1:00pm)
Date: Thursday, March 17, 2011 12:15:02 PM

Can you follow up on this

Ivonne L. Couret
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From: Steger (Tucci), Christine
Sent: Thursday, March 17, 2011 11:12 AM
To: Couret, Ivonne
Subject: Request for Information/Question - Daily Beast/Newsweek Magazine (deadline 1:00pm)

Call from: Eve Conant
Organization: Daily Beast/Newsweek Magazine
Number: 202-626-2026
E-mail: eve.conant@newsweek.com

Phone - Would like to talk with someone about - acute radiation syndrome.

(deadline 1:00pm today)

LLL 437

From: Couret, Ivonne
To: McIntyre, David
Subject: FW: Media - Phone interview WVUA AL
Date: Thursday, March 17, 2011 4:19:01 PM

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Public Affairs Officer
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From: Royer, Deanna
Sent: Thursday, March 17, 2011 4:17 PM
To: Couret, Ivonne
Subject: Media - Phone interview

Janie Wallace
WVUA TV – AL
JWallace@wvuatv.com
205-348-7000 o/c
Re: Phone interview about radiation

Deanna Royer
Contract Secretary
301-415-8200

LLL438

From: Couret, Ivonne
To: Burnell, Scott; McIntyre, David
Subject: FW: Media - Interview JAPAN COMM>
Date: Thursday, March 17, 2011 4:08:22 PM

Tell me who is taking this...

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Public Affairs Officer
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From: Royer, Deanna
Sent: Thursday, March 17, 2011 3:56 PM
To: Couret, Ivonne
Subject: Media - Interview

Takashi Kozawa
Japan Communications
japancom@aol.com
312-551-0260 OK
Re: Interview - technical questions

Deanna Royer
Contract Secretary
301-415-8200

LLL 439

From: Sciutto, Jim E.
To: McIntyre, David
Subject: RE: NPP emergency exercises
Date: Thursday, March 17, 2011 3:53:27 PM

Thank you David, That's a real help. I'm assuming that's the soonest one? Also, is media access normally allowed? Best, Jim

---

From: McIntyre, David [mailto:David.McIntyre@nrc.gov]
Sent: 17 March 2011 15:52
To: Sciutto, Jim E.
Subject: NPP emergency exercises

Jim – I asked my regional colleagues to check with their EP folks, and Region I informs me that Three Mile Island will be holding an emergency exercise on April 12.

TMI – how good could THAT be?

The media contact is Ralph.desantis@exeloncorp.com

NRC will not be participating in that exercise. You would need to get permission from Exelon to film on the plant premises.

Dave McIntyre
NRC Public Affairs

LLL440

From:	Burnell, Scott
To:	Couret, Ivonne; McIntyre, David
Subject:	RE: Edward Klump - Bloomberg News
Date:	Thursday, March 17, 2011 4:10:23 PM

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

Organization – Bloomberg News
Contact – Edward Klump
Phone -713-651-4607 C
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

LL/441

From: Couret, Ivonne
To: McIntyre, David
Subject: MEDIA Question Originally Sent Monday to you FW: Tristan Goodley - Darlow Smithson
Date: Thursday, March 17, 2011 4:06:46 PM

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
opa.resource@nrc.gov
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From: Ghneim, Munira
Sent: Thursday, March 17, 2011 3:50 PM
To: Couret, Ivonne
Subject: Tristan Goodley - Darlow Smithson

Organization - Darlow Smithson – TV production in London
Contact - Tristan Goodley
Phone 044-20-8222-4392 OK
Email – Tristan.Goodley@darlowsmithson.com
Request – Tristan stated that he spoke to you on Monday and he sent you the questions but has not received a response. Just to remind you this is a TV production company working on a documentary for the Discovery channel for the U.S.

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

442

From: Couret, Ivonne
To: McIntyre, David
Subject: WSJ - FW: Media Re: Statement by French Regulator that there is water in #4 reactor
Date: Thursday, March 17, 2011 4:03:20 PM
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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From: Royer, Deanna
Sent: Thursday, March 17, 2011 3:39 PM
To: Couret, Ivonne
Subject: Media - Question

Steve Power
Wall street Journal 6/C
Stephen.power@wsj.com
202-862-9269
Re: Statement by French Regulator that there is water in #4 reactor

Deanna Royer
Contract Secretary
301-415-8200

LLL/443

From: Couret, Ivonne
To: McIntyre, David; Taylor, Robert
Subject: MEDIA - FW: LA TImes
Date: Thursday, March 17, 2011 4:02:44 PM

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
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301-415-8200

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From: Akstulewicz, Brenda
Sent: Thursday, March 17, 2011 3:38 PM
To: Couret, Ivonne
Subject: LA TImes

Amina Khan
LA Times
213-237-4529
amina.khan@latimes.com
Info on radiation: when will it get here, how much, what to do, etc…

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

444

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 3:59:00 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

445

From: Akstulewicz, Brenda
To: McIntyre, David
Subject: Yucca ?
Date: Thursday, March 17, 2011 3:53:00 PM

Paul Weingarten
Chicago Tribune
312-222-3756 c
pweingarten@tribune.com
Where are we on yucca mt., what happened to the appeal

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

4416

From: McIntyre, David
To: Couret, Ivonne; david.schechter@turner.com
Subject: RE: Missed call yesterday - FW: Question - CNN
Date: Thursday, March 17, 2011 3:46:00 PM

David – if you're referring to our old local public document rooms – no, those are no longer operating.

Dave McIntyre
NRC Public Affairs

From: Couret, Ivonne
Sent: Thursday, March 17, 2011 2:37 PM
To: McIntyre, David
Subject: Missed call yesterday - FW: Question - CNN

Follow up please

Ivonne L. Couret
Public Affairs Officer
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From: Steger (Tucci), Christine
Sent: Thursday, March 17, 2011 2:04 PM
To: Couret, Ivonne
Subject: Question - CNN

Call from: David Schechter
CNN – Atlanta
Number: 404-827-2914
E-mail david.schechter@turner.com

Question: Does this still exist/is it a requirement? – every Nuclear Power Plant designates a local public library with materials/documents specifically, documents related to Emergency Planning (10 mile epz)

Called yesterday, missed call from David

447

From: Couret, Ivonne
To: McIntyre, David
Subject: FW: Media - question WSJ
Date: Thursday, March 17, 2011 3:06:31 PM

Gave them EPA to call they cited NYTimes source has other questions can you follow up. Ivonne

Ivonne L. Couret
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From: Royer, Deanna
Sent: Thursday, March 17, 2011 2:07 PM
To: Couret, Ivonne
Subject: Media - question
Can you provide them EPA's Public Affairs folks Phone

Cassandra Sweet
Wall Street journal
415-269-4446
Cassandra.sweet@dowjones.com
Re: Radiation reaching U.S.
Models being used in U.S.
Comprehensive Model – Provided that forecast through this source cited the NYTimes source

Deanna Royer
Contract Secretary
301-415-8200

4448

From:	Taylor, Robert
To:	Widomski, Michael; McIntyre, David; Couret, Ivonne
Subject:	RE: McClatchy Newspapers (might be repeat....
Date:	Thursday, March 17, 2011 3:03:37 PM

I left him a voicemail and contact number. He has not called back.

From: Widomski, Michael [mailto:michael.widomski@dhs.gov]
Sent: Thursday, March 17, 2011 3:03 PM
To: McIntyre, David; Couret, Ivonne; Widomski, Michael; Taylor, Robert
Subject: Re: McClatchy Newspapers (might be repeat....

Spoke to the reporter and he needed a bit more info. I referred him to Robert Taylor.

Sent from my BlackBerry Wireless Handheld

From: prvs=0505ff29d=David.McIntyre@nrc.gov <prvs=0505ff29d=David.McIntyre@nrc.gov>
To: Couret, Ivonne <Ivonne.Couret@nrc.gov>; michael.widomski@dhs.gov <michael.widomski@dhs.gov>
Sent: Thu Mar 17 13:50:26 2011
Subject: RE: McClatchy Newspapers (might be repeat....

Michael will do it.

From: Couret, Ivonne
Sent: Thursday, March 17, 2011 1:00 PM
To: michael.widomski@dhs.gov; McIntyre, David
Subject: McClatchy Newspapers (might be repeat....

Greg Gordon (GAVE TO DAVE)
McClatchy Newspapers
202-383-0005
ggordon@mcclatchy.dc.com
Have we considered having a press conference or teleconference
Has other general questions about the situation

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

From: Couret, Ivonne
To: michael.widomski@dhs.gov; McIntyre, David
Subject: FW: Request Information
Date: Thursday, March 17, 2011 2:38:09 PM

More than one call/email from this guy...

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From: Steger (Tucci), Christine
Sent: Thursday, March 17, 2011 2:06 PM
To: Couret, Ivonne
Subject: Request Information

Call from Russ Britt
Organization: Market Watch, Los Angeles
Number: 323-658-3881 o/c
E-mail: rbritt@marketwatch.com

Questions/Specific information on report of radioactive plum from Japan to U.S.
Deadline: ASAP

uul 450

From: Andrew Grant
To: McIntyre, David; Couret, Ivonne
Subject: Re: Discover magazine inquiry
Date: Thursday, March 17, 2011 2:28:10 PM

Hi Dave,

I just wanted to follow up on my email from yesterday about my story. I know you must be very busy with Japan, but I'd appreciate if I could get some time on the phone with an expert to discuss dry casks.

Thanks again,
Andrew

On 3/15/11 6:52 PM, "McIntyre, David" <David.McIntyre@nrc.gov> wrote:

> Hi Andrew -
> I'd be happy to help you. Can you tell me your specific questions? I may be
> able to answer them; if not, I can reach out to our technical staff.
>
> Dave McIntyre
> NRC Public Affairs
>
>
> -----Original Message-----
> From: Andrew Grant [mailto:agrant@discovermagazine.com]
> Sent: Tuesday, March 15, 2011 5:27 PM
> To: OPA Resource
> Subject: Discover magazine inquiry
>
> To Whom It May Concern,
>
> My name is Andrew Grant and I am a reporter for Discover magazine. I am
> writing an article explaining dry cask storage, and I was hoping an expert
> at NRC could speak with me and go through the most important features of the
> containers. Please let me know if we can arrange a brief phone interview
> this week -- my deadline is Friday.
>
> Thank you so much for your help!
>
> Sincerely,
> Andrew Grant
>
>
> ---
> Andrew Grant
> Reporter
> DISCOVER Magazine
> agrant@discovermagazine.com
> 212-624-4802
>
>
>

LLL/451

From: McIntyre, David
To: Davis, Molly
Subject: RE: follow-up
Date: Thursday, March 17, 2011 1:59:00 PM

I found the ML# for ADAMS.

ML100270582

-----Original Message-----
From: Davis, Molly [mailto:MDavis@ap.org]
Sent: Thursday, March 17, 2011 1:38 PM
To: McIntyre, David
Subject: follow-up

David,

He sent me this response yesterday, which leaves me to believe that someone in the Public Affairs office already has the location of the document?

Molly:

In accordance with NRC policy, I am forwarding your email to our Office of Public Affairs (OPA), along with the location on the NRC webpage where the reference you requested resides. I assume if it is OK, they will forward it to you.

Derek Widmayer

DEREK WIDMAYER, SENIOR STAFF SCIENTIST
301-415-7366 | T2-E13A | Derek.Widmayer@nrc.gov

Advisory Committee on Reactor Safeguards

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

452

From: Couret, Ivonne
To: McIntyre, David
Subject: Media Request - Background
Date: Thursday, March 17, 2011 2:02:04 PM

Mary Harris
NPR - TakeAway Public Radio Show
Request Chairman Interview
646-829-4442 6 h
mharris@takeaway.org
Live from 6-8a.m EDT

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

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LL/453

From: Couret, Ivonne
To: McIntyre, David
Subject: Media Request - Decomm
Date: Thursday, March 17, 2011 1:43:45 PM

William "Bill" Hennigan
William.Hennigan@Latimes.com
LA Times
213-237-7037

Question about decommissioning

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

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LLL/454

From: Davis, Molly
To: McIntyre, David
Subject: sent to "Derek.Widmayer@nrc.gov" yesterday
Date: Thursday, March 17, 2011 1:33:16 PM

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

111455

From: Couret, Ivonne
To: McIntyre, David
Subject: FW: Request for Interview - CBS Radio - Charlotte
Date: Thursday, March 17, 2011 12:14:29 PM
Importance: High

Placed in Eliot list however think you or mike can talk on record. 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: Steger (Tucci), Christine
Sent: Thursday, March 17, 2011 11:07 AM
To: Couret, Ivonne
Subject: Request for Interview - CBS Radio - Charlotte

Call from: Francene Marie
Organization: CBS Radio in Charlotte, NC
3 Radio stations would air interview:

- WSDCFM
- WFNZAM
- WBCNAM

Number: 704-258-9901 ✓
E-mail: francenemarie@yahoo.com

Request Interview with Chairman or NRC Expert
Sometime Next Week – preferably Tuesday around 12 noon EST for 15-20 minutes

LL/456

From: Couret, Ivonne
To: McIntyre, David; michael.widomski@dhs.gov
Subject: FW: Question for Comment - Scientific American
Date: Thursday, March 17, 2011 12:10:49 PM

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

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From: Steger (Tucci), Christine
Sent: Thursday, March 17, 2011 11:05 AM
To: Couret, Ivonne
Subject: Question for Comment - Scientific American

Call from: John Matson
Organization: Scientific American
Number: 212-451-8807 ✓
E-mail: jmatson@sciam.com

Question for comment: Why are we suggesting such a large evacuation in Japan?

WD457

From:	McIntyre, David
To:	Couret, Ivonne
Subject:	RE: Media Question - TIME Magazine
Date:	Thursday, March 17, 2011 11:35:00 AM

Done.

From: Couret, Ivonne
Sent: Thursday, March 17, 2011 10:28 AM
To: McIntyre, David
Subject: Media Question - TIME Magazine

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
opa.resource@nrc.gov
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From: OPA Resource
Sent: Thursday, March 17, 2011 10:03 AM
To: Couret, Ivonne
Subject: From Brenda Info request from TIME Magazine

Mark Benjamin
Time Magazine
202-861-4093
What information was 50 mile evacuation guidance based on

Office of Public Affairs
US Nuclear Regulatory Commission
301-415-8200
opa.resource@nrc.gov

458

From: Couret, Ivonne
To: McIntyre, David; michael.widomski@dhs.gov
Subject: Media Request FW: Media Interview request - Voice of America - Armenia
Date: Thursday, March 17, 2011 11:28:26 AM

Backgrounder

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
opa.resource@nrc.gov
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From: Royer, Deanna
Sent: Thursday, March 17, 2011 10:58 AM
To: Couret, Ivonne
Subject: Media Interview request - Voice of America - Armenia

Araxie Vann
Voice of America – Armenia
avann@voanews.com
202-382-5109
Re: Interview with expert on what's going on in Japan and power plants in general
Wants interview ASAP

Deanna Royer
Contract Secretary
301-415-8200

459

From: McIntyre, David
To: Couret, Ivonne
Subject: RE: (Brenda) Phone call Steve Dolley Platts
Date: Thursday, March 17, 2011 11:18:00 AM

Done.

From: Couret, Ivonne
Sent: Thursday, March 17, 2011 10:28 AM
To: McIntyre, David
Subject: FW: (Brenda) Phone call Steve Dolley Platts

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
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From: OPA Resource
Sent: Thursday, March 17, 2011 10:04 AM
To: Couret, Ivonne
Subject: (Brenda) Phone call Steve Dolley Platts

Steve Dolley
Platts
202-383-2166 ✓
Chmn said yesterday that the spent fuel pool in #4 is dry. He reiterated this saying he got information from the NRC team from Japan – please confirm ASAP.

Office of Public Affairs
US Nuclear Regulatory Commission
301-415-8200
opa.resource@nrc.gov

LL/460

From: Widomski, Michael
To: McIntyre, David
Subject: FW: Rodney Comrie - National Network - CBS
Date: Thursday, March 17, 2011 11:14:09 AM

---

did you get this?

From: prvs=05059eb58=Ivonne.Couret@nrc.gov on behalf of Couret, Ivonne
Sent: Thu 3/17/2011 11:09 AM
To: michael.widomski@dhs.gov
Subject: FW: Rodney Comrie - National Network - CBS

Please follow up

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

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Organization – CBS – National Network
Contact – Rodney Comrie
Phone – 212-975-7212
Email – rac@cbsnews.com
Request – Information on nuclear facilities that have be fined or shut down for a period of time.

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

4601

From: Couret, Ivonne
To: McIntyre, David
Subject: FW: (Brenda) Phone call Steve Dolley Platts
Date: Thursday, March 17, 2011 10:28:22 AM

Ivonne L. Couret
Public Affairs Officer
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From: OPA Resource
Sent: Thursday, March 17, 2011 10:04 AM
To: Couret, Ivonne
Subject: (Brenda) Phone call Steve Dolley Platts

Steve Dolley
Platts
202-383-2166 ✓
Chmn said yesterday that the spent fuel pool in #4 is dry. He reiterated this saying he got information from the NRC team from Japan – please confirm ASAP.

Office of Public Affairs
US Nuclear Regulatory Commission
301-415-8200
opa.resource@nrc.gov

LL/462

From: McIntyre, David
To: Couret, Ivonne
Subject: RE: Media Question - TIME Magazine
Date: Thursday, March 17, 2011 10:28:00 AM

OK, I'll take it.

From: Couret, Ivonne
Sent: Thursday, March 17, 2011 10:28 AM
To: McIntyre, David
Subject: Media Question - TIME Magazine

Ivonne L. Couret
Public Affairs Officer
Office of Public Affairs
Media Desk
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From: OPA Resource
Sent: Thursday, March 17, 2011 10:03 AM
To: Couret, Ivonne
Subject: From Brenda Info request from TIME Magazine

Mark Benjamin
Time Magazine
202-861-4093
What information was 50 mile evacuation guidance based on

Office of Public Affairs
US Nuclear Regulatory Commission
301-415-8200
opa.resource@nrc.gov

463

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 6:50:36 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 me 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

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:
Simon Lomax in Washington at +1-202-654-4305 or slomax@bloomberg.net;
John Hughes in Washington at +1-202-624-1819 or jhughes5@bloomberg.net

To contact the editor responsible for this story:
Larry Liebert at +1-202-624-1936 or
lliebert@bloomberg.net

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

LLL/465

From: Leistikow, Dan
To: Brenner, Eliot; McIntyre, David
Cc: Reynolds, Tom; Mueller, Stephanie; LaVera, Damien; Podmaniczky, Katinka; Batkin, Joshua
Subject: RE: Heads up ... and a request
Date: Friday, March 18, 2011 7:02:35 PM

Thanks for this; I know how crazy things are. The obvious follow up question would be "understanding that you don't base it on the richter scale specifically, how do we know that the safe shut down at 7.5 is enough? Couldn't there be a larger quake in that area?"

Sorry to be a pain ... I just want to make sure we're totally prepared for Sunday so we don't have a problem that creates headaches for both of us ...

-----Original Message-----
From: Brenner, Eliot [mailto:Eliot.Brenner@nrc.gov]
Sent: Friday, March 18, 2011 6:58 PM
To: Leistikow, Dan; McIntyre, David
Cc: Reynolds, Tom; Mueller, Stephanie; LaVera, Damien; Podmaniczky, Katinka; Batkin, Joshua
Subject: RE: Heads up ... and a request

Dan: this is a quick and dirty response, blessed by our resident rocks expert. A fuller package of material will be made available (and put up on the web) tomorrow.

Eliot

1) How many reactors are on fault lines?

A: Some plants are near, but not on, fault lines. None are on the San Andreas fault. The NRC prohibits the construction of plants on active faults. Each plant in the country is built to withstand the appropriate hazard level for the particular location. There are two plants, each with two reactors, on the California coast, Diablo Canyon near San Luis Obispo and San Onofre at San Onofre, CA. There are two faults near, but not under, the Diablo Canyon facility. The only fault near any U.S. coast similar to the Japanese fault (a subduction fault) is off the coast of Oregon and Washington, and there are no nuclear plants in the vicinity.

2) What is the design spec for reactors on fault lines (san andreas fault, for example)? Are they designed for a 7.5? An 8.0? A 9.0?

A: No plant is on the San Andreas. We don't use the Richter scale but rather ground motion. The impact of a quake is dependent on its location, its intensity, the intervening geology and other factors. In ballpark terms the Diablo Canyon is required to safely shut down at a roughly 7.5 magnitude temblor at the site and San Onofre must safely shut down at 7. Both have tsunami protections.

3) President Obama asked for a safety review this week. What will NRC be considering as part of this review? How will it work?

The NRC gets periodic updates on geologic information from the USGS and factors that information into its safety oversight. All information available from this earthquake and tsunami will be reviewed as part of the NRC's effort to learn what measures might be feasible to strengthen an already strong safety oversight program.

-----Original Message-----
From: Leistikow, Dan [mailto:Dan.Leistikow@hq.doe.gov]
Sent: Friday, March 18, 2011 5:57 PM
To: Brenner, Eliot; McIntyre, David
Cc: Reynolds, Tom; Mueller, Stephanie; LaVera, Damien; Podmaniczky, Katinka
Subject: Re: Heads up ... and a request

LL/4406

Anything on this?

Also, can you answer this question (which I think chu could be asked on Sunday shows):

1) How many reactors are on fault lines?

2) What is the design spec for reactors on fault lines (san andreas fault, for example)? Are they designed for a 7.5? An 8.0? A 9.0?

3) President Obama asked for a safety review this week. What will NRC be considering as part of this review? How will it work?

Chu and Jaczko speaking by phone now ... Your boss said he'd like exact number for #1 as well...

----- Original Message -----
From: Brenner, Eliot <Eliot.Brenner@nrc.gov>
To: Leistikow, Dan; McIntyre, David <David.McIntyre@nrc.gov>
Cc: Reynolds, Tom; Mueller, Stephanie; LaVera, Damien; Podmaniczky, Katinka
Sent: Fri Mar 18 11:04:46 2011
Subject: RE: Heads up ... and a request

David: once you have reviewed my blog post, can you distill the best of our q-and-a to assist the folks at DOE?

-----Original Message-----
From: Leistikow, Dan [mailto:Dan.Leistikow@hq.doe.gov]
Sent: Friday, March 18, 2011 11:02 AM
To: Brenner, Eliot
Cc: Reynolds, Tom; Mueller, Stephanie; LaVera, Damien; Podmaniczky, Katinka
Subject: Heads up ... and a request
Importance: High

Our Dep Sec was on 6 morning shows this AM ... 5 of the 6 went well, but Scarborough was pretty tough on the issue of U.S. plants in earthquake zones. Poneman was deferential to NRC and the importance of your independent oversight. Scarborough wouldn't drop the point and the interview was a bit rough.

So heads up ... and also if there are TPs you want to provide us on these questions, we'd definitely be eager to have those. Our Secretary is doing Sunday shows this weekend, so I want to make sure he is fully prepared.

Here's all 6 interviews. The link to the MSNBC hit is #6 and #7.

http://www.criticalmention.com/report/11626x204719.htm#

From: Brenner, Eliot
To: SIMON LOMAX, BLOOMBERG/ NEWSROOM:
Cc: McIntyre, David; Burnell, Scott; Sheehan, Neil; Taylor, Robert; Harrington, Holly; Brenner, Eliot; Couret, Ivonne
Subject: RE: Bloomberg question re radiation information
Date: Friday, March 18, 2011 5:50:57 PM

Simon, for the moment, would you keep this as either an NRC or a government source? "The radiation is actually at a rather low altitude, less than a kilometer, rather than up high. It is bleeding out, carried on plumes of heat and radiation levels drop off rapidly higher above the plant."

Tell your buddies the altitude is far below long distance flight routes so they probably don't need to pursue that angle.

Scott/david/neil et al...once simon runs this, expect some calls. Feel free to provide the same background material or something close.

Eliot

-----Original Message-----
From: SIMON LOMAX, BLOOMBERG/ NEWSROOM: [mailto:slomax@bloomberg.net]
Sent: Friday, March 18, 2011 3:53 PM
To: Brenner, Eliot
Subject: RE: Bloomberg question re radiation information

Thanks Eliot -- is your welcome guidance on the way radiation is moving on the record or off? if it's on the record it might be very useful for some of my colleagues who are working directly on the flight routes.
cheers, and thank you again,
Simon.

----- Original Message -----
From: Eliot Brenner <Eliot.Brenner@nrc.gov>
To: SIMON LOMAX (BLOOMBERG/ NEWSROOM:)
At: 3/18 15:17:41

Simon: any call on changing flight routes is up to the FAA or Japanese ATC officials. You need to talk with them. However, you need to remember that this radiation is actually at low altitudes rather than up high. It is bleeding out at ground level -- carried upwards on plumes of heat -- rather than, as was the case at Chernobyl, being explosively ejected high into the air currents.

Eliot

-----Original Message-----
From: SIMON LOMAX, BLOOMBERG/ NEWSROOM: [mailto:slomax@bloomberg.net]
Sent: Friday, March 18, 2011 2:40 PM
To: Burnell, Scott; Brenner, Eliot
Cc: Couret, Ivonne
Subject: RE: Bloomberg question re radiation information

Okay, thanks. Who makes the call about whether it's safe to fly through those plumes?
I'm (reluctantly) bugging you all because NRC's recommendation was what led to the 50-mile evacuation zone for U.S. citizens in Japan.

----- Original Message -----
From: Scott Burnell <Scott.Burnell@nrc.gov>
To: Eliot.Brenner@nrc.gov, SIMON LOMAX (BLOOMBERG/ NEWSROOM:)
Cc: Ivonne.Couret@nrc.gov
At: 3/18 14:35:53

LL/467

Hi Simon;

I would suggest contacting DOE for information on plume projections across the Pacific. I'd check with EPA on information regarding monitoring on U.S. territory. Thanks.

Scott

-----Original Message-----
From: SIMON LOMAX, BLOOMBERG/ NEWSROOM: [mailto:slomax@bloomberg.net]
Sent: Friday, March 18, 2011 2:34 PM
To: Brenner, Eliot
Cc: Couret, Ivonne; Burnell, Scott
Subject: RE: Bloomberg question re radiation information

Hi Eliot
FYI, just heard from our FAA reporter -- FAA says it has no information on radioactivity over the Pacific.

----- Original Message -----
From: Eliot Brenner <Eliot.Brenner@nrc.gov>
To: SIMON LOMAX (BLOOMBERG/ NEWSROOM:)
Cc: Ivonne.Couret@nrc.gov, Scott.Burnell@nrc.gov
At: 3/18 13:49:02

We are in contact with the FAA offering them information that might affect flight routes. You would have to check with FAA public affairs 202-267-3883. I do not have immediate details on the rest of your questions. We are not the sole repository for all information, though folks think we are.

eliot

-----Original Message-----
From: SIMON LOMAX, BLOOMBERG/ NEWSROOM: [mailto:slomax@bloomberg.net]
Sent: Friday, March 18, 2011 12:55 PM
To: Brenner, Eliot
Cc: Burnell, Scott; Couret, Ivonne
Subject: Bloomberg question re radiation information

Hi Eliot (cc Scott & Ivonne):

Hope you're hanging in there.

We're trying to nail down the specific information that U.S. Agencies have collected on radiation from the Fukushima plant. Does the NRC have this information:

-- the latest radiation measurements from the affected area in Japan;

-- radiation levels in the atmosphere over the Pacific Ocean; and

-- an assessment of whether it's safe for passenger aircraft to be flying through airspace with radiation that's coming from the Fukushima reactors.

If you've got this information, can you please provide ASAP? If not, can you tell us which agency of the U.S. government is making that information available? My deadline is ASAP.

Thank you again for your help,

Simon Lomax
Bloomberg News

From: Taylor, Robert
To: McIntyre, David
Subject: FW: Text of Blog Post Just Posted -- Verbiage about MSNBC report
Date: Friday, March 18, 2011 4:28:44 PM

I heap my praise on you for the verbiage in the blog.

From: Harrington, Holly
Sent: Friday, March 18, 2011 4:26 PM
To: Taylor, Robert
Subject: RE: Text of Blog Post Just Posted -- Verbiage about MSNBC report

'tis our very own Dave McIntyre

From: Taylor, Robert
Sent: Friday, March 18, 2011 4:12 PM
To: Harrington, Holly
Subject: RE: Text of Blog Post Just Posted -- Verbiage about MSNBC report

Who is the great poet? Mr. Brenner?

From: Harrington, Holly
Sent: Friday, March 18, 2011 4:09 PM
To: Taylor, Robert
Subject: RE: Text of Blog Post Just Posted -- Verbiage about MSNBC report

Alas, I can take no credit for writing this!

From: Taylor, Robert
Sent: Friday, March 18, 2011 3:30 PM
To: Harrington, Holly
Subject: RE: Text of Blog Post Just Posted -- Verbiage about MSNBC report

You are AMAZING!

From: Harrington, Holly
Sent: Friday, March 18, 2011 3:22 PM
To: Taylor, Robert; 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: Text of Blog Post Just Posted -- Verbiage about MSNBC report

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.

4468

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.

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: McIntyre, David
Cc: Couret, Ivonne
Subject: RE: MEDIA Question Originally Sent Monday to you FW: Tristan Goodley - Darlow Smithson
Date: Friday, March 18, 2011 4:16:45 PM

Embassy for time being. I have a message in to Chuck Casto to check his availability.

From: McIntyre, David
Sent: Friday, March 18, 2011 12:05 PM
To: Brenner, Eliot
Cc: Couret, Ivonne
Subject: FW: MEDIA Question Originally Sent Monday to you FW: Tristan Goodley - Darlow Smithson

Eliot – these guys want to film our "operations" in Japan. I suspect we would not be able to accommodate this during the chaos over there. Or should we refer them to the US Embassy?

Dave

From: Goodley, Tristan [mailto:Tristan.Goodley@darlowsmithson.com]
Sent: Friday, March 18, 2011 11:12 AM
To: McIntyre, David; Couret, Ivonne
Subject: RE: MEDIA Question Originally Sent Monday to you FW: Tristan Goodley - Darlow Smithson

Dear Yvonne & David,

Thanks for your email, this email is a slight adjustment on the one I sent earlier in the week. I'm an assistant producer with Darlow Smithson Productions in the UK and we're working on a documentary about the ongoing disaster in Japan. The Discovery Channel have commissioned a film for US and UK audiences exploring the science & engineering aspects of such a massive seismic event in one of the world's most developed countries. Particular attention will be paid to the mechanisms of the disaster and the international effort involved with controlling the damaged Fukushima reactors. The expert assistance offered by the NRC team that has travelled to Japan, and the back-up infrastructure in the US is a really strong human story amongst the factual elements in the film. We will have a team in Tokyo by Sunday for a week of shooting and would be extremely interested in visiting the NRC operation centre there, and perhaps record a brief interview with one of your colleagues.

Some questions I'd really like to explore further include:

- The specifics of the assistance that the NRC experts in Japan will be able to offer?
- What physical measures might be deployed over the coming weeks?
- The projected length of time that the NRC assistance team will be stationed in Japan?

If there is a possibility of making contact with Charles Castro in Japan I'd also be extremely keen to briefly discuss the operation with him though I fully understand that this is an ongoing crisis and that opportunity is particularly unlikely.

Kindest Regards
Tristan

LL/469

From: McIntyre, David [mailto:David.McIntyre@nrc.gov]

From: McIntyre, David
To: EDWARD KLUMP, BLOOMBERG/ NEWSROOM:
Subject: RE: Edward Klump - Bloomberg News
Date: Friday, March 18, 2011 3:59:00 PM

Yes to both

From: EDWARD KLUMP, BLOOMBERG/ NEWSROOM: [mailto:eklump@bloomberg.net]
Sent: Friday, March 18, 2011 3:41 PM
To: McIntyre, David
Subject: RE: Edward Klump - Bloomberg News

David -- Just to circle back... The 63,000 metric tons of spent fuel stored at nuclear plants as of January 2010 listed on page 78 of the document earlier -- That just refers to the amount stored at nuclear plants in the United States, right? As in... U.S. nuclear plants store 63,000 metric tons of spent fuel. Question 2... Saying there are 104 operating reactors in the U.S. also is accurate, right? Thanks again.

From: David McIntyre<David.McIntyre@nrc.gov>
To: <Scott.Burnell@nrc.gov>
To: EDWARD KLUMP, BLOOMBERG/ NEWSROOM:
Subject: RE: Edward Klump - Bloomberg News
Date: 3/18/2011 12:17:17

I'll call.

From: EDWARD KLUMP, BLOOMBERG/ NEWSROOM: [mailto:eklump@bloomberg.net]
Sent: Friday, March 18, 2011 12:11 PM
To: Burnell, Scott
Cc: McIntyre, David
Subject: RE: Edward Klump - Bloomberg News

Scott, David -- I know you all are swamped, but I am on a tight deadline. Could either of you call me soon just to go over a few stats I'm seeing in the 2010 Information Digest? I want to be clear on a couple points so I'm quoting this properly. I am at 713-651-4607. Thanks. -- Edward Klump, Bloomberg News

From: Scott Burnell<Scott.Burnell@nrc.gov>
To: EDWARD KLUMP, BLOOMBERG/ NEWSROOM:
Cc: <David.McIntyre@nrc.gov>
Subject: RE: Edward Klump - Bloomberg News
Date: 3/18/2011 12:06:22

LLL/470

Hi Edward;

My colleague David McIntyre does the most work in this area, so he's a better first option

From:	Couret, Ivonne
To:	McIntyre, David
Subject:	Media - Question CALIFORNIA
Date:	Friday, March 18, 2011 4:02:49 PM

It starting...

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 2:23 PM
To: Couret, Ivonne
Subject: Media - Question

Ed - ask for editor
KNX Radio
323-368-9406
Re: What's going on in CA with radiation

LU471

From: McIntyre, David
To: Harrington, Holly; Brenner, Eliot; Burnell, Scott
Subject: RE: Text of Blog Post Just Posted -- Verbiage about MSNBC report
Date: Friday, March 18, 2011 3:53:00 PM

Holly – Annie Kammerer, the seismic expert, LOVES this blog post. She would like us to tweak two words: in the sentence about the 1 US fault similar to Japan, she asks if we can insert the one techie word ." ... that is similar to the 'subduction' fault in Japan, ..."

And in Scott's tweak, she warns that "a few plants might have stronger ground motions" will leave us open to trouble, because nearly all of them fit this description. She suggests "some" or "several" instead of "a few".

Dave

From: Harrington, Holly
Sent: Friday, March 18, 2011 3:22 PM
To: Taylor, Robert; 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: Text of Blog Post Just Posted -- Verbiage about MSNBC report

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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.

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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.

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Eliot Brenner
Public Affairs Director

From: Moderator
Date: Friday, March 18, 2011 3:20:51 PM
Posted At: U.S. NRC Blog
Conversation: Don't Believe Everything You Read
Subject: Don't Believe Everything You Read

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Eliot Brenner
Public Affairs Director

Filed under: General 

View article...

From: Harrington, Holly
To: McIntyre, David
Subject: RE: FEMA EPZ Fact Sheet
Date: Friday, March 18, 2011 12:11:34 PM

Aarrggh. He's running around with his head cut off. I'll try to track him down. Last I saw was his response to you with changes? Can you send me the final version you'd like to run?

How are things in the op center?
Things are still nuts here

From: McIntyre, David
Sent: Friday, March 18, 2011 12:10 PM
To: Harrington, Holly
Subject: RE: FEMA EPZ Fact Sheet

It was your suggestion, you raised it first ....

And yes, I sent it back to him.

From: Harrington, Holly
Sent: Friday, March 18, 2011 12:08 PM
To: McIntyre, David
Subject: RE: FEMA EPZ Fact Sheet

See the question mark!!!!???

Hey are you done with the blog post for Eliot?

From: McIntyre, David
Sent: Friday, March 18, 2011 12:00 PM
To: Harrington, Holly
Subject: RE: FEMA EPZ Fact Sheet

Was too!

From: Harrington, Holly
Sent: Friday, March 18, 2011 10:23 AM
To: McIntyre, David
Subject: RE: FEMA EPZ Fact Sheet

If NsIR people like it, should we post? Or use as talking points?

From: McIntyre, David
Sent: Friday, March 18, 2011 10:22 AM
To: Harrington, Holly; Widomski, Michael; Brenner, Eliot; Burnell, Scott; Sheehan, Neil; Screnci, Diane; Couret, 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, Harral; Maier, Bill; McNamara, Nancy; Tifft, 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; Turtil, 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

From:	McIntyre, David
To:	Brenner, Eliot
Subject:	FW: Japanese TV request for Snadia video footage. FW: NHK-TV, Japan - Sandia OECD Lower Head Failure Project - final report
Date:	Friday, March 18, 2011 12:14:00 PM

Eliot - fyi. NEA in Paris (should have asked Beth!) relayed this request from NHK for video footage of a test on a pressure vessel that was pressurized to the point of failure, a typical test in mfring and ASME codes. RES said no objection, and the data and all is apparently publicly available. We said there is no issue, but wanted to let you know of it.

Also, I am losing all feeling in my hands and the ability to type.

-----Original Message-----
From: LIA02 Hoc
Sent: Friday, March 18, 2011 12:12 PM
To: McIntyre, David
Subject: FW: Japanese TV request for Snadia video footage. FW: NHK-TV, Japan - Sandia OECD Lower Head Failure Project - final report

-----Original Message-----
From: Schwartzman, Jennifer
Sent: Friday, March 18, 2011 12:04 PM
To: LIA02 Hoc
Subject: Fw: Japanese TV request for Snadia video footage. FW: NHK-TV, Japan - Sandia OECD Lower Head Failure Project - final report

Sent from an NRC Blackberry

----- Original Message -----
From: Dehn, Jeff
To: Schwartzman, Jennifer
Sent: Fri Mar 18 11:21:40 2011
Subject: FW: Japanese TV request for Snadia video footage. FW: NHK-TV, Japan - Sandia OECD Lower Head Failure Project - final report

Jen,
No objection to approving NEA's request from RES. I do think it should be on the radar within the Ops Center though. I can contact NEA, or you could (as OIP or as Ops Center). When you have a chance could you call me to hammer down the next/last steps?
Thanks,
Jeff
301-251-7672

-----Original Message-----
From: Sheron, Brian
Sent: Friday, March 18, 2011 11:13 AM
To: Sangimino, Donna-Marie; Uhle, Jennifer; Gibson, Kathy
Cc: Lee, Richard; Valentin, Andrea; Kardaras, Tom; Dehn, Jeff; Weber, Michael
Subject: Re: Japanese TV request for Snadia video footage. FW: NHK-TV, Japan - Sandia OECD Lower Head Failure Project - final report

I have no objection, since OECD cooperative research program data is made available 3 years later.

Please notify OPA and IRC ET that we are releasing it.

LL/4/15

From: Burnell, Scott
To: Jeremy Singer-Vine
Subject: RE: [Slate Magazine] Radiation expert available for interview today?
Date: Friday, March 18, 2011 12:08:35 PM

It's on the to-do list, thanks Jeremy.

From: Jeremy Singer-Vine [mailto:Jeremy.Singer-Vine@slate.com]
Sent: Friday, March 18, 2011 10:07 AM
To: Burnell, Scott
Subject: RE: [Slate Magazine] Radiation expert available for interview today?

Thanks for the note, Scott. I can imagine that there's been a lot to juggle.

I don't know if you have any control over the NRC's website, but I thought you should know: The 360-mrem-typical-annual-dose number at the bottom of http://www.nrc.gov/about-nrc/radiation/rad-health-effects.html is now out of date.

Best,
Jeremy

-----Original Message-----
From: Burnell, Scott [mailto:Scott.Burnell@nrc.gov]
Sent: Thu 3/17/2011 9:40 PM
To: Jeremy Singer-Vine
Subject: RE: [Slate Magazine] Radiation expert available for interview today?

Hello Jeremy;

I'm very sorry we missed your deadline, things have really been just that busy. We appreciate your reaching out, please try again as you continue to write on the unfolding events.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

From: Jeremy Singer-Vine [mailto:Jeremy.Singer-Vine@slate.com]
Sent: Thursday, March 17, 2011 10:15 AM
To: OPA Resource
Subject: [Slate Magazine] Radiation expert available for interview today?

Eliot & Co.,

I'm writing an "Explainer" about radiation levels today for Slate Magazine. Specifically, what's the science behind determining what counts as "safe" levels of radiation? I see some answers at http://www.nrc.gov/about-nrc/radiation/rad-health-effects.html, but I'm hoping I could talk with an expert for more details. Can you think of anyone at the NRC who'd be available for an interview before 1pm Eastern?

Many thanks, and all best,
Jeremy Singer-Vine
Assistant Editor
Slate Magazine -- Slate.com

111476

From: McIntyre, David
To: Brenner, Eliot
Subject: MSNBC blog post-2.docx
Date: Friday, March 18, 2011 11:39:00 AM
Attachments: MSNBC blog post-2.docx

For your review and then please send to Holly.

LLL477

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 issues such as design flaws in 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. 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 thee 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. This study has shown that quakes may slightly exceed those the plants were designed to withstand, but not by much.

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.

From: McIntyre, David
To: Jones, Cynthia
Subject: RE: OPS guidance to public on reference material?
Date: Friday, March 18, 2011 11:27:00 AM

I guess our website on biological effects, daily exposure, etc.

From: Jones, Cynthia
Sent: Friday, March 18, 2011 11:27 AM
To: McIntyre, David
Subject: RE: OPS guidance to public on reference material?

Just general information, like rad safety, radiation 101, etc.

From: McIntyre, David
Sent: Friday, March 18, 2011 11:23 AM
To: Jones, Cynthia
Subject: RE: OPS guidance to public on reference material?

I don't know that we've directed anyone anywhere. Is this for monitoring the plume that's now stalking the US West Coast? That would be DOE ...

From: Jones, Cynthia
Sent: Friday, March 18, 2011 11:14 AM
To: McIntyre, David
Subject: OPS guidance to public on reference material?

Dave

Where is OPA directing people for reference info related to nuclear safety and source concerns related to Japan?

Thanks
Cyndi

111/478

From: Harrington, Holly
To: McIntyre, David
Subject: RE: FEMA EPZ Fact Sheet
Date: Friday, March 18, 2011 11:03:52 AM

I'll distribute

From: McIntyre, David
Sent: Friday, March 18, 2011 10:57 AM
To: Harrington, Holly
Subject: RE: FEMA EPZ Fact Sheet

NSIR apparently vetted it, according to the FEMA liaison, and is ok to distribute or post.

From: Harrington, Holly
Sent: Friday, March 18, 2011 10:23 AM
To: McIntyre, David
Subject: RE: FEMA EPZ Fact Sheet

If NsIR people like it, should we post? Or use as talking points?

From: McIntyre, David
Sent: Friday, March 18, 2011 10:22 AM
To: Harrington, Holly; Widomski, Michael; Brenner, Eliot; Burnell, Scott; Sheehan, Neil; Screnci, Diane; Couret, 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, Harral; Maier, Bill; McNamara, Nancy; Tifft, 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; Turtil, 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

LL/479

From: Couret, Ivonne
To: McIntyre, David
Subject: MEDIA media request - REUTERS
Date: Friday, March 18, 2011 11:03:42 AM

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: scott.disavino@thomsonreuters.com [mailto:scott.disavino@thomsonreuters.com]
Sent: Friday, March 18, 2011 9:47 AM
To: OPA Resource; Couret, Ivonne
Subject: media request

Hi,

This can be totally on background – an answer to any of these questions would be most helpful

How would you bury a reactor –

Is there danger to burying a reactor – can the fuel left in the reactor go critical in the spent fuel pool or in the reactor core and what would be the danger if that is underground

Could dropping dirt, cement, water on a spent fuel pool cause it to go critical – someone called it an inadvertent criticality

Once incased in cement or whatever – what is the danger

Can you put monitors into the sarcophagus to see what is going on

Has the you heard anything about the power line – maybe you are getting better information then we are

Thanks,

Scott

Scott DiSavino

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 10:41:24 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

111/481

From: Harrington, Holly
To: Burnell, Scott
Cc: McIntyre, David
Subject: RE: Suggested press release on MSNBC article
Date: Friday, March 18, 2011 10:32:11 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

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: McIntyre, David
To: Harrington, Holly; Brenner, Eliot
Subject: MSNBC blog post.docx
Date: Friday, March 18, 2011 10:24:00 AM
Attachments: MSNBC blog post.docx

Attached is my proposed blog post on the MSNBC.com earthquake rankings. It uses my talking point from yesterday, which was OK'd by Annie Kemmerer, and some points from her Qs&As.

1483

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 issues such as design flaws in 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.

An egregious example was an "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.

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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. So we can't give a simple answer to such a simple question.

From: Weingarten, Paul E.
To: McIntyre, David
Subject: RE: Yucca Mountain
Date: Friday, March 18, 2011 10:11:39 AM

Thanks, David...Another quick question..Trying to confirm these numbers on where waste is stored now...
We said last year:

Most of the nation's 131 temporary storage sites in 39 states are near large population centers; 161 million Americans live within 75 miles of a temporary site.

Are these numbers still accurate?

From: McIntyre, David [mailto:David.McIntyre@nrc.gov]
Sent: Thursday, March 17, 2011 5:01 PM
To: Weingarten, Paul E.
Subject: Yucca Mountain

Hi Paul –
A quick answer, please consider this background.

There are two avenues of appeal: DOE moved early last year to withdraw its application from NRC and terminate the adjudication before our Atomic Safety and Licensing Board. In June, the Board ruled that DOE lacks legal authority to withdraw its application. DOE appealed to the Commission (the five-member commission of presidential appointees that sets policy for the agency). The Commission has not yet ruled on the appeal.

Soon after DOE moved to withdraw, the states of Washington and South Carolina, along with Aiken County SC, sued in US Appeals Court for the DC Circuit to block it and keep the Yucca proceeding alive. That was stayed for awhile for the NRC to exhaust its process, but since the Commission hasn't ruled, the Court resumed its proceeding. Oral arguments are scheduled for March 22 in DC.

Meanwhile, in October the federal government began operating under temporary funding measures known as Continuing Resolutions. Chairman Gregory B. Jaczko at that time directed the staff to close out its review of the Yucca Mountain application, which had continued pending resolution of the adjudication. This was a budget decision based on the Commission's budget guidance for FY11. The staff is now closing out its review, to be completed by end of FY11.

I hope this helps.

David McIntyre
NRC Public Affairs

From: Screnci, Diane
To: McIntyre, David
Subject: new question
Date: Friday, March 18, 2011 10:09:37 AM

Are we planning to put out a press release or statement about the MSNBC.com thing? I thought the answer was no.

But, I have a call from the Westchester County Executive and he thinks yes.

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

111/486

From: McIntyre, David
To: LIA04 Hoc
Subject: RE: 10 mile EPZ and 50 mile evacuation zone in Japan
Date: Friday, March 18, 2011 9:54:00 AM

For more info on the assumptions that went into it, I'd suggest talking to the PMT. Much of it was because we did not have reliable data given the chaos of the situation, so they were assuming multiple worst-case scenarios.

From: LIA04 Hoc
Sent: Friday, March 18, 2011 9:53 AM
To: McIntyre, David
Subject: FW: 10 mile EPZ and 50 mile evacuation zone in Japan

---

From: Maier, Bill
Sent: Friday, March 18, 2011 9:52 AM
To: LIA04 Hoc; Barker, Allan; Browder, Rachel; Erickson, Randy; Logaras, Harral; McNamara, Nancy; Tifft, Doug; Trojanowski, Robert; Woodruff, Gena
Cc: Piccone, Josephine; LIA06 Hoc; OST05 Hoc; Harrington, Holly; Flannery, Cindy; Lukes, Kim; Noonan, Amanda; Rautzen, William; Rivera, Alison; Ryan, Michelle; Turtil, Richard; Virgilio, Rosetta; Howell, Linda; Collins, Elmo; Howell, Art
Subject: RE: 10 mile EPZ and 50 mile evacuation zone in Japan

I still have my reservations about the adequacy of the statement below to satisfy our partners in off-site radiological emergency preparedness.

I believe if a discussion of some of the conservative assumptions used in the development of the 50 mile protective action recommendation could be included, that would make it a more satisfactory answer.

I recognize that maybe we can't share that information at this time, so I am willing to limit my information sharing to the statement below.

My request is:

DO THE RSLOs HAVE PERMISSION TO FORWARD THIS STATEMENT ON TO OUR FEDERAL, STATE AND LOCAL PARTNERS?

This action is preferable to just using it as a talking point within the NRC, as it will get the information out more quickly.

I will wait for permission to come from the NRC Liaison Team in Headquarters before sending it out.

Bill Maier

From: LIA04 Hoc
Sent: Thursday, March 17, 2011 7:49 PM
To: Barker, Allan; Browder, Rachel; Erickson, Randy; Logaras, Harral; Maier, Bill; McNamara, Nancy; Tifft, Doug; Trojanowski, Robert; Woodruff, Gena

Cc: Piccone, Josephine; LIA06 Hoc; OST05 Hoc; Harrington, Holly; Collins, Elmo; Dean, Bill; Heck, Jared; McCree, Victor; Pederson, Cynthia; Satorius, Mark; Flannery, Cindy; LIA04 Hoc; Lukes, Kim; Noonan, Amanda; Rautzen, William; Rivera, Alison; Ryan, Michelle; Turtil, Richard; Virgilio, Rosetta
Subject: 10 mile EPZ and 50 mile evacuation zone in Japan
Importance: High

RSLOs:

Many of your states and others have inquired about the 10 mile EPZ and the 50 mile evacuation recommendation as stated in the NRC's press release of March 16 (No. 11-050), which states "the NRC believes it is appropriate for U.S. residents within 50 miles of the Fukushima reactors to evacuate."

The following has been provided by OPA on March 17 through its approved Talking Points.

- The 10-mile EPZ reflects the area where projected doses from design basis accidents at nuclear power plants would not exceed the EPA's protective action guidelines, and we are confident that it would be adequate even for severe accidents. However, the 10-mile zone was always considered a base for emergency response that could be expanded if the situation warranted. The situation in Japan, with four reactors experiencing exceptional difficulties simultaneously, creates the need to expand the EPZ beyond the normal 10-mile radius. We have said from the beginning of this crisis that the NRC would analyze this situation for any lessons that can be derived to improve our oversight of U.S. nuclear power plants. Emergency planning will be part of that review.

Richard Turtil
State Liaison – Liaison Team
Incident Response Center

From: McIntyre, David
To: Couret, Ivonne
Subject: RE: MEDIA - FW: Request Information Deadline Today
Date: Friday, March 18, 2011 3:53:00 PM

Done

From: Couret, Ivonne
Sent: Friday, March 18, 2011 12:07 PM
To: McIntyre, David
Subject: MEDIA - FW: Request Information Deadline Today
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: Steger (Tucci), Christine
Sent: Friday, March 18, 2011 12:02 PM
To: Couret, Ivonne
Subject: Request Information Deadline Today

Call from: Joe Richter
Organization: Bloomberg News
Number: 202-624-1872
E-mail: jrichter1@bloomberg.net

Request information on potential regulatory changes, lessons learned.
Deadline: Today

From: Gordon, Greg
To: McIntyre, David
Subject: questions
Date: Friday, March 18, 2011 1:20:50 PM

Hi Dave,

First, please say hello to Eliot, with whom I worked at UPI many years ago.

I had to huddle with my colleague and an editor to see where we're headed before messaging you.

Here are some questions on behalf of myself and Rene Schoof:

--After the 9/11 attacks, didn't NRC take action to move backup generators away from the power plants? If this is true, could someone provide details? Were the diesel generators situated in a vulnerable position at Fukishima?

--Aren't the controls for the Fukishima Mark I plants' water pumps in the basements of the plants, and didn't they get flooded by the tsunami? What are the chances they'll work? Is this another design lesson?

--Could someone walk me through all the steps that can be taken to contain the Fukishima radiation leaks? Can they pour sand on the reactors, or would that worsen prospects for an explosion if a meltdown hit the water table and triggered a hydrogen explosion? What is the worst-case scenario? When projections on potential worst-case radiation are made, do they include more than one reactor melting down, or just a single reactor?

----Can you please identify or point me to a list of the 17 plants being asked to reassess seismic issues? How many and which of those plants are boiling water plants?

--Have there ever been instances in which the understanding of earthquake risks changed and a U.S. plant was reinforced? Can you provide details?

--Is the strength of the reactor core containment vessels an issue in the review of Mark I plants? Can it withstand the pressure of a partial meltdown like Three-Mile Island?

Again, I'd love to have a background briefing on the worst-case scenario and the backup systems.

Many thanks for your assistance, Dave.

Greg Gordon
National Correspondent
McClatchy Newspapers Washington Bureau
202-383-0005
ggordon@mcclatchydc.com

From: EDWARD KLUMP, BLOOMBERG/ NEWSROOM:
To: McIntyre, David
Subject: RE: Edward Klump - Bloomberg News
Date: Friday, March 18, 2011 3:41:22 PM

David -- Just to circle back... The 63,000 metric tons of spent fuel stored at nuclear plants as of January 2010 listed on page 78 of the document earlier -- That just refers to the amount stored at nuclear plants in the United States, right? As in... U.S. nuclear plants store 63,000 metric tons of spent fuel. Question 2... Saying there are 104 operating reactors in the U.S. also is accurate, right? Thanks again.

From: David McIntyre<David.McIntyre@nrc.gov>
To: <Scott.Burnell@nrc.gov>
To: EDWARD KLUMP, BLOOMBERG/ NEWSROOM:
Subject: RE: Edward Klump - Bloomberg News
Date: 3/18/2011 12:17:17

I'll call.

From: EDWARD KLUMP, BLOOMBERG/ NEWSROOM: [mailto:eklump@bloomberg.net]
Sent: Friday, March 18, 2011 12:11 PM
To: Burnell, Scott
Cc: McIntyre, David
Subject: RE: Edward Klump - Bloomberg News

Scott, David -- I know you all are swamped, but I am on a tight deadline. Could either of you call me soon just to go over a few stats I'm seeing in the 2010 Information Digest? I want to be clear on a couple points so I'm quoting this properly. I am at 713-651-4607. Thanks. -- Edward Klump, Bloomberg News

From: Scott Burnell<Scott.Burnell@nrc.gov>
To: EDWARD KLUMP, BLOOMBERG/ NEWSROOM:
Cc: <David.McIntyre@nrc.gov>
Subject: RE: Edward Klump - Bloomberg News
Date: 3/18/2011 12:06:22

Hi Edward;

My colleague David McIntyre does the most work in this area, so he's a better first option to discuss. Let me know if I need to fill in. Thx

From: EDWARD KLUMP, BLOOMBERG/ NEWSROOM: [mailto:eklump@bloomberg.net]
Sent: Friday, March 18, 2011 11:33 AM
To: Burnell, Scott
Subject: RE: Edward Klump - Bloomberg News

111/489

From: McIntyre, David
To: Burnell, Scott; EDWARD KLUMP, BLOOMBERG/ NEWSROOM:
Subject: RE: Edward Klump - Bloomberg News
Date: Friday, March 18, 2011 12:15:00 PM

Edward – I don't believe we have an individual breakdown of how much SNF each plant has stored. NEI might have that information.

Dave McIntyre

From: Burnell, Scott
Sent: Friday, March 18, 2011 12:06 PM
To: EDWARD KLUMP, BLOOMBERG/ NEWSROOM:
Cc: McIntyre, David
Subject: RE: Edward Klump - Bloomberg News

Hi Edward;

My colleague David McIntyre does the most work in this area, so he's a better first option to discuss. Let me know if I need to fill in. Thx

---

From: EDWARD KLUMP, BLOOMBERG/ NEWSROOM: [mailto:eklump@bloomberg.net]
Sent: Friday, March 18, 2011 11:33 AM
To: Burnell, Scott
Subject: RE: Edward Klump - Bloomberg News

Scott -- I have a few follow-up questions on some of the fuel storage stats in the document you sent me yesterday. Would you have a couple moments to discuss sometime soon? I want to be clear I'm looking at the numbers properly. Thanks. --Edward Klump, Bloomberg News, 713-651-4607

From: Scott Burnell<Scott.Burnell@nrc.gov>
To: EDWARD KLUMP, BLOOMBERG/ NEWSROOM:
Subject: RE: Edward Klump - Bloomberg News
Date: 3/17/2011 19:02:03

That should be attributed to the NRC's 2010 Information Digest. Thanks.

From: EDWARD KLUMP, BLOOMBERG/ NEWSROOM: [mailto:eklump@bloomberg.net]
Sent: Thursday, March 17, 2011 7:01 PM
To: Burnell, Scott
Subject: RE: Edward Klump - Bloomberg News

Thanks for passing that along. If I use some of the information in this report, do I attribute it to the NRC? What is the year or date of this report? Thanks....

From: Scott Burnell<Scott.Burnell@nrc.gov>
To: EDWARD KLUMP, BLOOMBERG/ NEWSROOM:

From: McIntyre, David
To: EDWARD KLUMP, BLOOMBERG/ NEWSROOM:; Burnell, Scott
Subject: RE: Edward Klump - Bloomberg News
Date: Friday, March 18, 2011 12:17:00 PM

I'll call.

From: EDWARD KLUMP, BLOOMBERG/ NEWSROOM: [mailto:eklump@bloomberg.net]
Sent: Friday, March 18, 2011 12:11 PM
To: Burnell, Scott
Cc: McIntyre, David
Subject: RE: Edward Klump - Bloomberg News

Scott, David -- I know you all are swamped, but I am on a tight deadline. Could either of you call me soon just to go over a few stats I'm seeing in the 2010 Information Digest? I want to be clear on a couple points so I'm quoting this properly. I am at 713-651-4607. Thanks. -- Edward Klump, Bloomberg News

From: Scott Burnell<Scott.Burnell@nrc.gov>
To: EDWARD KLUMP, BLOOMBERG/ NEWSROOM:
Cc: <David.McIntyre@nrc.gov>
Subject: RE: Edward Klump - Bloomberg News
Date: 3/18/2011 12:06:22

Hi Edward;

My colleague David McIntyre does the most work in this area, so he's a better first option to discuss. Let me know if I need to fill in. Thx

From: EDWARD KLUMP, BLOOMBERG/ NEWSROOM: [mailto:eklump@bloomberg.net]
Sent: Friday, March 18, 2011 11:33 AM
To: Burnell, Scott
Subject: RE: Edward Klump - Bloomberg News

Scott -- I have a few follow-up questions on some of the fuel storage stats in the document you sent me yesterday. Would you have a couple moments to discuss sometime soon? I want to be clear I'm looking at the numbers properly. Thanks. --Edward Klump, Bloomberg News, 713-651-4607

From: Scott Burnell<Scott.Burnell@nrc.gov>
To: EDWARD KLUMP, BLOOMBERG/ NEWSROOM:
Subject: RE: Edward Klump - Bloomberg News
Date: 3/17/2011 19:02:03

That should be attributed to the NRC's 2010 Information Digest. Thanks.

From: EDWARD KLUMP, BLOOMBERG/ NEWSROOM: [mailto:eklump@bloomberg.net]
Sent: Thursday, March 17, 2011 7:01 PM
To: Burnell, Scott
Subject: RE: Edward Klump - Bloomberg News

Thanks for passing that along. If I use some of the information in this report, do I attribute it to the NRC? What is the year or date of this report? Thanks....

From:	Scott Burnell<Scott.Burnell@nrc.gov>
To:	EDWARD KLUMP, BLOOMBERG/ NEWSROOM:
Subject:	RE: Edward Klump - Bloomberg News
Date:	3/17/2011 18:22:28

Hi Edward;

Thanks for clarifying. We don't have a plant-by-plant breakdown, but our Information Digest includes a brief discussion of spent fuel:

http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1350/v22/sr1350v22-sec-5.pdf starting on PDF page 4 of 14

Hope that's helpful.

Scott

From: EDWARD KLUMP, BLOOMBERG/ NEWSROOM: [mailto:eklump@bloomberg.net]
Sent: Thursday, March 17, 2011 6:20 PM
To: Burnell, Scott
Subject: RE: Edward Klump - Bloomberg News

Thanks for the note. I'm wondering if the NRC has data on how much spent fuel is kept at each reactor in the U.S. Is this something you can help with? Thanks. --Edward Klump, Bloomberg News, 713-651-4607

From:	Scott Burnell<Scott.Burnell@nrc.gov>
To:	EDWARD KLUMP, BLOOMBERG/ NEWSROOM:
Subject:	RE: Edward Klump - Bloomberg News
Date:	3/17/2011 18:11:59

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.

From: Couret, Ivonne
To: McIntyre, David
Subject: MEDIA - FW: Request Information Deadline Today
Date: Friday, March 18, 2011 12:07:15 PM
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/

From: Steger (Tucci), Christine
Sent: Friday, March 18, 2011 12:02 PM
To: Couret, Ivonne
Subject: Request Information Deadline Today

Call from: Joe Richter
Organization: Bloomberg News
Number: 202-624-1872
E-mail: jrichter1@bloomberg.net

Request information on potential regulatory changes, lessons learned.
Deadline: Today

LLL490

From: Couret, Ivonne
To: McIntyre, David
Subject: Media Question FW: Request Image and more information
Date: Friday, March 18, 2011 12:00:20 PM

See if you can provide leads.

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

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From: Steger (Tucci), Christine
Sent: Friday, March 18, 2011 11:44 AM
To: Couret, Ivonne
Subject: Request Image

Call from: Atsuko Nameki
Organization: Japanese Public TV based in California
Number: 310-822-7601
E-mail: anameki@earthlink.com

Question: would like a photo or moving image of what it would look like if a meltdown were to occur. If we do not have this, a recommendation on who would.

LLL491

From: Couret, Ivonne
To: McIntyre, David
Subject: Media - Voice of America
Date: Friday, March 18, 2011 11:22:01 AM

Steve Shy (sp)
5 minutes background
202-203-4238

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

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ML11492

From: McIntyre, David
To: Brenner, Eliot
Cc: Couret, Ivonne
Subject: FW: MEDIA Question Originally Sent Monday to you FW: Tristan Goodley - Darlow Smithson
Date: Friday, March 18, 2011 12:04:00 PM

Eliot – these guys want to film our "operations" in Japan. I suspect we would not be able to accommodate this during the chaos over there. Or should we refer them to the US Embassy?

Dave

From: Goodley, Tristan [mailto:Tristan.Goodley@darlowsmithson.com]
Sent: Friday, March 18, 2011 11:12 AM
To: McIntyre, David; Couret, Ivonne
Subject: RE: MEDIA Question Originally Sent Monday to you FW: Tristan Goodley - Darlow Smithson

Dear Yvonne & David,

Thanks for your email, this email is a slight adjustment on the one I sent earlier in the week. I'm an assistant producer with Darlow Smithson Productions in the UK and we're working on a documentary about the ongoing disaster in Japan. The Discovery Channel have commissioned a film for US and UK audiences exploring the science & engineering aspects of such a massive seismic event in one of the world's most developed countries. Particular attention will be paid to the mechanisms of the disaster and the international effort involved with controlling the damaged Fukushima reactors. The expert assistance offered by the NRC team that has travelled to Japan, and the back-up infrastructure in the US is a really strong human story amongst the factual elements in the film. We will have a team in Tokyo by Sunday for a week of shooting and would be extremely interested in visiting the NRC operation centre there, and perhaps record a brief interview with one of your colleagues.

Some questions I'd really like to explore further include:

- The specifics of the assistance that the NRC experts in Japan will be able to offer?
- What physical measures might be deployed over the coming weeks?
- The projected length of time that the NRC assistance team will be stationed in Japan?

If there is a possibility of making contact with Charles Castro in Japan I'd also be extremely keen to briefly discuss the operation with him though I fully understand that this is an ongoing crisis and that opportunity is particularly unlikely.

Kindest Regards
Tristan

From: McIntyre, David [mailto:David.McIntyre@nrc.gov]
Sent: 17 March 2011 21:00
To: Couret, Ivonne; Goodley, Tristan
Subject: RE: MEDIA Question Originally Sent Monday to you FW: Tristan Goodley - Darlow Smithson

Tristan, I'm afraid I can't find an email from you on Monday among the hundreds I received that day. Could you please resend?

Thanks,

4/493

David McIntyre
NRC Public Affairs

From: Couret, Ivonne
Sent: Thursday, March 17, 2011 4:07 PM
To: McIntyre, David
Subject: MEDIA Question Originally Sent Monday to you FW: Tristan Goodley - Darlow Smithson

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 3:50 PM
To: Couret, Ivonne
Subject: Tristan Goodley - Darlow Smithson

Organization - Darlow Smithson – TV production in London
Contact - Tristan Goodley
Phone 044-20-8222-4392
Email – Tristan.Goodley@darlowsmithson.com
Request – Tristan stated that he spoke to you on Monday and he sent you the questions but has not received a response. Just to remind you this is a TV production company working on a documentary for the Discovery channel for the U.S.

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

Please note that from 13th December 2010, Darlow Smithson Productions will be based at Shepherds Building Central, Charecroft Way; London W14 0EE, England, UK

Tel: +44 (0)20 7482 7027 www.darlowsmithson.com

From:	McIntyre, David
To:	Couret, Ivonne
Subject:	RE: Media - Ray Henry AP
Date:	Friday, March 18, 2011 10:53:00 AM

He said this was from yesterday.

From: Couret, Ivonne
Sent: Friday, March 18, 2011 10:39 AM
To: McIntyre, David
Subject: Media - Ray Henry AP

AP
Ray Henry ✓
404-522-8971
NEA has said there will begin INSPECTIONS Above and beyond expectation is this different the current inspections required by NRC????

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

111494

From: Couret, Ivonne
To: McIntyre, David
Subject: Media Request - FW: Request Information: Technology Review
Date: Friday, March 18, 2011 10:22:46 AM

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: Steger (Tucci), Christine
Sent: Friday, March 18, 2011 10:14 AM
To: Couret, Ivonne
Subject: Request Information: Technology Review

Call from: Kevin Bullis
Organization: Technology Review
Number: 617-475-8020 ✓
E-mail: Kevin.Bullis@technologyreview.com

Would like information on spent fuel pools in U.S.

LLL 495

From: McIntyre, David
To: Screnci, Diane
Cc: Brenner, Eliot; Harrington, Holly
Subject: RE: NEI"s response to: MSNBC Seismic Article
Date: Friday, March 18, 2011 9:50:00 AM

It's not an OPA product. Kinda looks like one of Annie Kammerer's talking points ...

From: Screnci, Diane
Sent: Friday, March 18, 2011 9:34 AM
To: McIntyre, David
Subject: FW: NEI's response to: MSNBC Seismic Article

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

From: Schmidt, Wayne
Sent: Friday, March 18, 2011 8:28 AM
To: McNamara, Nancy; Gray, Mel; Wilson, Peter; Roberts, Darrell
Cc: Screnci, Diane; Lorson, Raymond
Subject: RE: NEI's response to: MSNBC Seismic Article

What is going on. Why is NEI writing an NRC Response or is this from us and they are repeating it?

From: McNamara, Nancy
Sent: Friday, March 18, 2011 8:24 AM
To: Schmidt, Wayne; Gray, Mel; Wilson, Peter; Roberts, Darrell
Cc: Screnci, Diane; Lorson, Raymond
Subject: NEI's response to: MSNBC Seismic Article

From: paul_eddy@dps.state.ny.us [mailto:paul_eddy@dps.state.ny.us]
Sent: Thursday, March 17, 2011 10:05 PM
To: McNamara, Nancy; Tifft, Doug; Peterson, Alyse L
Subject: Fw: NRC response to MSNBC Seismic Article

In case you haven't seen this yet.

From: NEIGA
Sent: 03/17/2011 07:48 PM AST
To: Paul Eddy
Subject: NRC response to MSNBC Seismic Article

4916

From: Screnci, Diane
To: McIntyre, David
Subject: FW: NEI"s response to: MSNBC Seismic Article
Date: Friday, March 18, 2011 9:34:01 AM

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

From: Schmidt, Wayne
Sent: Friday, March 18, 2011 8:28 AM
To: McNamara, Nancy; Gray, Mel; Wilson, Peter; Roberts, Darrell
Cc: Screnci, Diane; Lorson, Raymond
Subject: RE: NEI's response to: MSNBC Seismic Article

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To: Schmidt, Wayne; Gray, Mel; Wilson, Peter; Roberts, Darrell
Cc: Screnci, Diane; Lorson, Raymond
Subject: NEI's response to: MSNBC Seismic Article

From: paul_eddy@dps.state.ny.us [mailto:paul_eddy@dps.state.ny.us]
Sent: Thursday, March 17, 2011 10:05 PM
To: McNamara, Nancy; Tifft, Doug; Peterson, Alyse L
Subject: Fw: NRC response to MSNBC Seismic Article

In case you haven't seen this yet.

From: NEIGA
Sent: 03/17/2011 07:48 PM AST
To: Paul Eddy
Subject: NRC response to MSNBC Seismic Article

NRC response to MSNBC Seismic Article:

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.

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 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:	McIntyre, David
To:	LIA04 Hoc
Cc:	Maier, Bill
Subject:	RE: 10 mile EPZ and 50 mile evacuation zone in Japan
Date:	Friday, March 18, 2011 9:52:00 AM

By all means, yes!

From: LIA04 Hoc
Sent: Friday, March 18, 2011 9:52 AM
To: McIntyre, David
Cc: Maier, Bill
Subject: FW: 10 mile EPZ and 50 mile evacuation zone in Japan
Importance: High

Dave,

Can this be sent to federal , State, and local government partners? We noticed that this particular bullet is in the approved 3/18 talking points. Bill Maier needs to know ASAP.

Thanks,
Cindy Flannery

From: LIA04 Hoc
Sent: Thursday, March 17, 2011 8:49 PM
To: Barker, Allan; Browder, Rachel; Erickson, Randy; Logaras, Harral; Maier, Bill; McNamara, Nancy; Tifft, Doug; Trojanowski, Robert; Woodruff, Gena
Cc: Piccone, Josephine; LIA06 Hoc; OST05 Hoc; Harrington, Holly; Collins, Elmo; Dean, Bill; Heck, Jared; McCree, Victor; Pederson, Cynthia; Satorius, Mark; Flannery, Cindy; LIA04 Hoc; Lukes, Kim; Noonan, Amanda; Rautzen, William; Rivera, Alison; Ryan, Michelle; Turtil, Richard; Virgilio, Rosetta
Subject: 10 mile EPZ and 50 mile evacuation zone in Japan
Importance: High

RSLOs:

Many of your states and others have inquired about the 10 mile EPZ and the 50 mile evacuation recommendation as stated in the NRC's press release of March 16 (No. 11-050), which states "the NRC believes it is appropriate for U.S. residents within 50 miles of the Fukushima reactors to evacuate."

The following has been provided by OPA on March 17 through its approved Talking Points.

- The 10-mile EPZ reflects the area where projected doses from design basis accidents at nuclear power plants would not exceed the EPA's protective action guidelines, and we are confident that it would be adequate even for severe accidents. However, the 10-mile zone was always considered a base for emergency response that could be expanded if the situation warranted. The situation in Japan, with four reactors experiencing exceptional difficulties simultaneously, creates the need to expand the EPZ beyond the normal 10-mile radius. We have said from the beginning of this crisis that the NRC would analyze this situation for any lessons that

can be derived to improve our oversight of U.S. nuclear power plants. Emergency planning will be part of that review.

Richard Turtil
State Liaison – Liaison Team
Incident Response Center

From: Brenner, Eliot
To: Gibson, Kathy; Burnell, Scott; McIntyre, David; Hayden, Elizabeth
Subject: RE: Suggested Q&A
Date: Saturday, March 19, 2011 7:32:34 AM

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.

From: Janbergs, Holly
To: McIntyre, David
Subject: RE: fact checking
Date: Sunday, March 20, 2011 10:33:22 AM

☺

From: McIntyre, David
Sent: Sunday, March 20, 2011 10:32 AM
To: Janbergs, Holly
Subject: RE: fact checking

Thanks, I'll handle.

From: Janbergs, Holly
Sent: Sunday, March 20, 2011 10:31 AM
To: McIntyre, David
Subject: FW: fact checking

From: Kaufman, Leslie [mailto:leslie@nytimes.com]
Sent: Friday, March 18, 2011 5:57 PM
To: Janbergs, Holly
Subject: fact checking

1) how many opeational reactors are there in the us? 104?
2) how many were there at the height? 125?
3)how many reactors were there in 1973?
4) when was the last permit for construction of what became a fully operational nuclear plant issued in ??? 1978 for Shearon Harris, Carolina Power & Light?

499

From: McIntyre, David
To: Janbergs, Holly
Subject: RE: fact checking
Date: Sunday, March 20, 2011 10:44:00 AM

This came in on Friday, and when I left around 6:30, Beth was working on something like this. Do we know for sure that it hasn't been answered?

From: Janbergs, Holly
Sent: Sunday, March 20, 2011 10:31 AM
To: McIntyre, David
Subject: FW: fact checking

From: Kaufman, Leslie [mailto:leslie@nytimes.com]
Sent: Friday, March 18, 2011 5:57 PM
To: Janbergs, Holly
Subject: fact checking

1) how many opeational reactors are there in the us? 104?
2) how many were there at the height? 125?
3)how many reactors were there in 1973?
4) when was the last permit for construction of what became a fully operational nuclear plant issued in ??? 1978 for Shearon Harris, Carolina Power & Light?

To: Janbergs, Holly
Cc: leslie@nytimes.com
Subject: RE: fact checking
Date: Sunday, March 20, 2011 10:44:08 AM

Hi Leslie – I thought someone was working with your folks on this information on Friday. Off the top of my head, I can confirm 104 for currently operating reactors. And looking at Appendix A of our Information Digest, it does indeed look like Shearon Harris was the last plant (1978) to receive a Construction Permit. I'm not in a position right now to verify the others.

From: Kaufman, Leslie [mailto:leslie@nytimes.com]
Sent: Friday, March 18, 2011 5:57 PM
To: Janbergs, Holly
Subject: fact checking

1) how many opeational reactors are there in the us? 104?
2) how many were there at the height? 125?
3)how many reactors were there in 1973?
4) when was the last permit for construction of what became a fully operational nuclear plant issued in ??? 1978 for Shearon Harris, Carolina Power & Light?

From: Janbergs, Holly
To: McIntyre, David
Subject: RE: fact checking
Date: Sunday, March 20, 2011 10:46:50 AM

I haven't received any emails or follow ups on it. As far as I know, the email was sent only to my personal address. Leslie had told me on the phone she would send it, and then didn't till I was headed out.

Just checked, and she's not listed in Ivonne's media chart. Don't know where else I can look.

From: McIntyre, David
Sent: Sunday, March 20, 2011 10:45 AM
To: Janbergs, Holly
Subject: RE: fact checking

This came in on Friday, and when I left around 6:30, Beth was working on something like this. Do we know for sure that it hasn't been answered?

From: Janbergs, Holly
Sent: Sunday, March 20, 2011 10:31 AM
To: McIntyre, David
Subject: FW: fact checking

From: Kaufman, Leslie [mailto:leslie@nytimes.com]
Sent: Friday, March 18, 2011 5:57 PM
To: Janbergs, Holly
Subject: fact checking

1) how many opeational reactors are there in the us? 104?
2) how many were there at the height? 125?
3)how many reactors were there in 1973?
4) when was the last permit for construction of what became a fully operational nuclear plant issued in ??? 1978 for Shearon Harris, Carolina Power & Light?

From: Harrington, Holly
To: McIntyre, David
Subject: any reason to add this to the talking points?
Date: Sunday, March 20, 2011 11:02:43 AM

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

LW/SD

From:	McIntyre, David
To:	Harrington, Holly
Subject:	RE: any reason to add this to the talking points?
Date:	Sunday, March 20, 2011 11:09:00 AM

Although, most of the links on that website don't work.

From: Harrington, Holly
Sent: Sunday, March 20, 2011 11:03 AM
To: McIntyre, David
Subject: any reason to add this to the talking points?

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

111501

From:	Burnell, Scott
To:	Mitlyng, Viktoria; Harrington, Holly; Sheehan, Neil
Cc:	McIntyre, David
Subject:	RE: QUAKE_TP_3_20.docx
Date:	Sunday, March 20, 2011 3:04:13 PM

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 containmnent 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
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: McIntyre, David
To: Janbergs, Holly
Subject: RE: Information - AP
Date: Sunday, March 20, 2011 3:06:00 PM

My reaction to this is unprintable.

From: Janbergs, Holly
Sent: Sunday, March 20, 2011 3:05 PM
To: McIntyre, David
Subject: Information - AP

Ray Henry from the AP called. He is working on a story and would like to discuss the National Academy of Science's 2006 recommendations regarding spent fuel pools, and whether the NRC ever formally adopted any of them. His deadline is this afternoon.

Ray Henry
404-308-9916
rhenry@ap.org

Beth Janbergs
Public Affairs Assistant
301-415-8211

LW503

From: Schogol, Jeffrey
To: McIntyre, David
Subject: RE: Is NRC tracking the path of the radioactive plume from Fukushima?
Date: Sunday, March 20, 2011 3:56:02 PM

If I sent you a map of where U.S. bases in Japan are located, could NRC say whether any might see elevated levels of radiation?

Jeff Schogol

From: McIntyre, David
To: Westreich, Barry; RST01 Hoc; Bowman, Eric; Rosenberg, Stacey
Cc: McGinty, Tim
Subject: RE: B5b questions from OPA
Date: Sunday, March 20, 2011 4:57:00 PM

Thank you all. With Eric's help, I reached Eric Bowman, who enabled me to answer Yes, Yes, No to the reporter's questions. The reporter naturally then hit me with a zillion follow-ups ("When was that imposed? What kind of spray system?, etc) but he was appreciative that we were able to get him answers.

Thanks for your help – and good luck tomorrow in the Commission briefing.

Dave Mc, OPA

From: Westreich, Barry
Sent: Sunday, March 20, 2011 4:55 PM
To: RST01 Hoc; Bowman, Eric; Rosenberg, Stacey; McIntyre, David
Cc: McGinty, Tim
Subject: RE: B5b questions from OPA

I can answer some questions related to the "checkerboarding" of fuel assemblies. In the B.5.b Phase activities, licensees that had the ability (enough space in the pool) did put their fuel in the desired configuration to significantly reduce the time to air coolabilty.

What additional details do you need?

Of course most of the material accomplished under B.5.b was considered Safeguards Information, so it may be difficult to round up the specifics and we will have to be careful how we characterize the information publically.

From: RST01 Hoc
Sent: Sunday, March 20, 2011 4:29 PM
To: Bowman, Eric; Rosenberg, Stacey
Cc: McGinty, Tim; Westreich, Barry
Subject: B5b questions from OPA

Stacey and Eric,

OPA is trying to get answers to a few questions regarding SFP recommendations from the National Academy & Science 2006 recommendations. Questions are related to:

1. Checkerboarding of old and new assemblies
2. Water Spray systems to cool fuel if bldg is damaged
3. Any NRC analysis to encourage plants to move older fuel to casks.

Please contact Dave McIntyre directly via email or at 301-816-5107

Regards, Eric

LLL505

From: McIntyre, David
To: Brenner, Eliot; Harrington, Holly
Subject: tnt
Date: Sunday, March 20, 2011 4:57:00 PM

Naturally, AP calls in late afternoon to ask, "Hey, did you guys ever implement any of those recommendations by the National Academies in that spent fuel report way back in 2005?"

Eventually, with the help of the RST, I reached Eric Bowman of NRR, who was able to confirm for me that we did followup on two of the three the reporter was interested in (checkerboarding of fuel, and water spray systems to cool fuel if building is damaged), and that we went "pfffffft" on the third, which was to recommend earlier transfer of fuel from pool to cask.

Also had a query from the Stars and Stripes guy trying to confirm a "rumor" that US bases in Japan were in danger of radiation exposure. (My answer: "Ya think??") I told him we are monitoring the radioactive releases and weather conditions to make sure that our protective action recommendations remain valid, that I was unaware of any specific DOD guidance to US forces, and that if he gave us a map showing US bases, we wouldn't tell him which ones are most in danger, because that situation can change quickly with the weather. He sent me a link to the map anyway, but it was blocked for being a "social networking" site.

I will be leaving now; and will alert the HOO that if OPA is needed tonight they can reach out to me at home or on my BB or to Eliot.

Dave

From: Gilfillan.Brendan@epamail.epa.gov
To: Dan.leistikow@hq.doe.gov; McIntyre, David
Cc: Andy.Adora@epamail.epa.gov
Subject: Protective Action Guidelines
Date: Sunday, March 20, 2011 5:09:12 PM

Hey -

We're getting questions about what radiation levels would cause us some concern, or even lead us to take action. Our technical folks are telling us that in emergencies, EPA, NRC and DOE all use the published EPA Protective Action Guides in making recommendations back to State public health and environmental officials.

Just want to make sure that's your understanding as well, so that there's no confusion and to ensure we're not putting different numbers/guidance out there.

- Brendan

11/607

Couret, Ivonne

From: McIntyre, David
Sent: Monday, March 21, 2011 12:31 PM
To: Couret, Ivonne; Cool, Donald
Subject: hormesis???

Oh lordy. Don – I don't suppose we agree with Ann Coulter, do we? ;-)

I think we're on for 4 pm. I'll try to come to your office.

Dave

From: Couret, Ivonne
Sent: Monday, March 21, 2011 12:30 PM
To: McIntyre, David
Subject: FW: Todd Frankel - St Louis Post Dispatch

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/

Organization - St Louis Post Dispatch
Contact - Todd Frankel
Phone – 314-340-8110
Email – tfrankel@post-dispatch.com
Request – Would like to know NRC's position regarding radiation hormesis (the notion that low doses of radiation are good for people).

LLL/568

Couret, Ivonne

From: Hayden, Elizabeth
Sent: Monday, March 21, 2011 10:22 AM
To: WebContractor Resource; Hardy, Sally
Cc: Harrington, Holly; Couret, Ivonne
Subject: Re: Japan page: KI info

The slides for this morning's OCM mtg can be posted on the Japan page. Suggest putting it under a new heading Commission Meeting 3/21 - Slides and list it under Press Releases. We will then add a link to the video and transcript when available.

From: WebContractor Resource
To: Hayden, Elizabeth
Cc: WebWork Resource
Sent: Mon Mar 21 09:02:15 2011
Subject: RE: Japan page: KI info

Good Morning Beth,

This has been updated and posted live.

Thank you,
Michael

From: Hayden, Elizabeth
Sent: Monday, March 21, 2011 8:36 AM
To: Main, Jeffrey
Cc: Hoffman, Joan; Hardy, Sally
Subject: RE: Japan page: KI info

The KI FAQs at http://www.nrc.gov/about-nrc/emerg-preparedness/about-emerg-preparedness/potassium-iodide/ki-faq.html needs to be linked under FAQs on the Japan webpage as **Potassium Iodide**

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: Main, Jeffrey
Sent: Monday, March 21, 2011 7:36 AM
To: Harrington, Holly
Cc: Hayden, Elizabeth; Main, Jeffrey; Hoffman, Joan; Hardy, Sally
Subject: RE: Japan page: KI info

Holly,

One more note. I ran a check and verified that NO pages at our site link to the old KI page (which doesn't exist). All the links, including those from our google search engine search results, point to the new page.

This means that most or all of those 12000 requests for the old KI page that no longer exists are likely from people who still have the old page bookmarked. As I said, I've now redirected the old page to push users to the new KI page—it works, getting you to the new page; you can test it at http://www.nrc.gov/about-nrc/emerg-preparedness/protect-public/ki-faq.html

As for our new KI page, I went to google.com (not our site google search) and could not find our KI page anywhere in the top 100 pages on the subject. What I could find were (as you would expect at #1) Walmart.com selling it, many news and science sites with KI articles, other sites that could be scammers, and still other sites saying the U.S. govt is trying to hide it from people.

I know that this is a politically sensitive issue and also that we cannot control the outside search engines, but I think this goes to the point that I think we should elevate the visibility of our response to the issue in light of the current crisis and resulting site usage data.

--Jeffrey

From: Main, Jeffrey
Sent: Sunday, March 20, 2011 11:43 AM
To: Harrington, Holly; Hardy, Sally; Hoffman, Joan
Cc: Hayden, Elizabeth
Subject: RE: Japan page: KI info

Yes, I understand, thanks.

I guess my thought was that we do have KI info at the site. You can find it if you simply enter "KI" in a site search. By not linking to it from the Japan page when we have it and 1000s of people are looking for it, people may infer we are trying to hide it.

--Jeffrey

From: Harrington, Holly
Sent: Sunday, March 20, 2011 11:37 AM
To: Main, Jeffrey; Hardy, Sally; Hoffman, Joan
Cc: Hayden, Elizabeth
Subject: FW: Japan page: KI info

Jeffrey – Thank you so much for getting the redirect to the KI page! As for adding a link to the Japan page, I'll let Beth weigh in. She created and organized the page and there might have been a specific reason why KI was not added (since we say that no one in the U.S. needs it right now, perhaps?)

Holly

From: Janbergs, Holly **On Behalf Of** OPA Resource
Sent: Sunday, March 20, 2011 11:35 AM
To: Harrington, Holly
Subject: FW: Japan page: KI info

From: Main, Jeffrey
Sent: Sunday, March 20, 2011 11:02 AM
To: OPA Resource
Cc: Hardy, Sally; Hoffman, Joan; Main, Jeffrey
Subject: Japan page: KI info

Good morning!

I was looking through the usage stats for the public site and noticed **over 12,000** failed attempts to get to the old KI FAQ page in the past 7 days. During that period, this old page is by far the single most requested page that can not be found at our site.

http://www.nrc.gov/about-nrc/emerg-preparedness/protect-public/ki-faq.html
that was moved to .
http://www.nrc.gov/about-nrc/emerg-preparedness/about-emerg-preparedness/potassium-iodide/ki-faq.html

I've created a redirect to push the requests to the new location. It will take a few hours to become effective, but should get users the info they are looking for soon.

However, I also noticed that the new Japan info page does not actually mention KI. I know there is a PDF on how to protect yourself (linked from the Japan page), but I think people may be looking specifically for KI information and may bypass this PDF since KI is not mentioned in the title. In addition, the PDF file does not mention the other info we have on KI at the site. Given the recent news reports on the KI scare out west, we might want to specifically mention it on the Japan page with links to the KI information.

Just a thought.

--Jeffrey

From: OST01 HOC
Sent: Tuesday, March 22, 2011 5:41 PM
To: Kugler, Andrew
Cc: OST02 HOC
Subject: RE: RST Communicator Shifts

Andy,

Thanks again. Just to clarify: you are talking about next week, March 28, 29 and 31, correct?

Clyde Ragland
EST Coordinator

From: Kugler, Andrew
Sent: Tuesday, March 22, 2011 4:50 PM
To: OST01 HOC
Subject: RST Communicator Shifts

Based on what you showed me a little while ago, I'll go ahead and take the following shifts next week:

Monday mid-shift (11pm – 7am Tues)
Tuesday mid-shift (11pm – 7am Wed)
Thursday day shift (7am – 3pm)

Please confirm that this has been added to the schedule so that I can plan ahead.

Andy Kugler

LL/61D

Couret, Ivonne

From: U.S. EPA [usaepa@govdelivery.com]
Sent: Tuesday, March 22, 2011 8:45 PM
To: Couret, Ivonne
Subject: Air News Release (HQ): CORRECTION: UPDATED - please note the addition of "hundreds of thousands" in the second and sixth paragraphs

CONTACT:
EPA Press Office
press@epa.gov

FOR IMMEDIATE RELEASE:
March 22, 2011

CORRECTION: UPDATED – please note the addition of "hundreds of thousands" in the second and sixth paragraphs

Radiation Monitors Continue to Confirm That No Radiation Levels of Concern Have Reached the United States

WASHINGTON – During a detailed analysis of four west coast RadNet air monitor filters, the U.S. Environmental Protection Agency (EPA) identified trace amounts of radioactive iodine, cesium, and tellurium consistent with the Japanese nuclear incident. These levels are consistent with the levels found by a Department of Energy monitor last week and are to be expected in the coming days.

EPA's samples were captured by three monitors in California and one in Washington State on Friday, March 18 and sent to EPA scientists for detailed laboratory analysis. The data was reviewed over the weekend and the analysis was completed Monday night. The radiation levels detected on the filters from California and Washington monitors are **hundreds of thousands** to millions of times below levels of concern.

In addition, last night preliminary monitor results in Hawaii detected minuscule levels of an isotope that is also consistent with the Japanese nuclear incident. This detection varies from background and historical data in Hawaii. This isotope was detected at our fixed monitor in Hawaii, and it is far below any level of concern for human health. The sampling filter from this monitor is being sent to our national radiation lab for further analysis.

In a typical day, Americans receive doses of radiation from natural sources like rocks, bricks and the sun that are about 100,000 times higher than what we have detected coming from Japan. For example, the levels we're seeing coming from Japan are 100,000 times lower than what you get from taking a roundtrip international flight.

EPA is in the process of conducting detailed filter analyses for fixed monitors located in Oregon.

EPA's RadNet filter results for San Francisco, Seattle, Riverside and Anaheim, California detected minuscule quantities of iodine isotopes and other radioactive particles that pose no health concern at the detected levels. Below are the results of the detailed filter analysis. All of the radiation levels detected during the detailed filter analysis are **hundreds of thousands to** millions of times below levels of concern.

All units are in Picocuries per meter cubed.

- Filter results for Anaheim, Calif. found:
  Cesium-137: 0.0017
  Tellurium-132: 0.012
  Iodine-132: 0.0095

3/24/11

Iodine-131: 0.046

- Filter results for Riverside, Calif. found:
  Cesium-137: 0.00024
  Tellurium-132: 0.0014
  Iodine-132: 0.0015
  Iodine-131: 0.011
- Filter results for Seattle, Wash. found:
  Cesium-137: 0.00045
  Tellurium-132: 0.0034
  Iodine-132: 0.0029
  Iodine-131: 0.013

- Filter results for San Francisco, Calif. found:
  Cesium-137: 0.0013
  Tellurium-132: 0.0075
  Iodine-132: 0.0066
  Iodine-131: 0.068

EPA's RadNet system is designed to protect the public by notifying scientists, in near real time, of elevated levels of radiation so they can determine whether protective action is required. In addition, an analysis of the filters in the monitors can identify even the smallest trace amounts of specific radioactive isotopes.

As part of the federal government's continuing effort to make our activities and science transparent and available to the public, EPA will continue to keep RadNet data available at: http://www.epa.gov/japan2011/

R102

Note: If a link above doesn't work, please copy and paste the URL into a browser.

Note: If a link above doesn't work, please copy and paste the URL into a browser.

View all news releases related to air issues

Couret, Ivonne

From: USA.gov Team [subscriptions@subscriptions.usa.gov]
Sent: Tuesday, March 22, 2011 4:35 PM
To: Couret, Ivonne
Subject: Japan 2011 Earthquake and Tsunami -- U.S. Government Information

Visit USA.gov's new page, **Japan 2011 Earthquake and Tsunami -- U.S. Government Information**. You'll find a variety of resources from across the government, including:

- Updates on **air quality** and **food safety in the United States**.
- Information about **Potassium Iodide** (KI).
- Monitoring of **food, mail,** and **cargo from Japan**.
- Information about **evacuations for Americans in Japan**.
- Advisories on **travel to Japan**.
- Information about **donations** and **relief efforts**.
- **Disaster preparedness** resources.

ud 5/12

Couret, Ivonne

From: Janbergs, Holly
Sent: Tuesday, March 22, 2011 9:59 AM
To: WebContractor Resource; WebWork Resource
Cc: Couret, Ivonne; Janbergs, Holly
Subject: Photo Gallery Information

Hello,

The following is additional information required to add the photo sent on 3/21 by Beth Hayden to the public photo gallery. WebContractor Resource will provide further information as well.

Information	Description
Admin	BH/BJ
Cat	In the News Photo Archives
Scat	Commission
Location	
Source	
Date	3/21/2011
People	Chairman Jaczko, Commissioner Svinicki, Commissioner Apostolakis, Commissioner Ostendorff, Commissioner Magwood, Bill Borchardt
Event	Japan earthquake/tsunami response
Keyword(s)	Japan, EDO, Borchardt, Commission, briefing
Description	The Commission listens as EDO Bill Borchardt briefs on agency's response to recent nuclear events in Japan
Longdesc	The five members of the Nuclear Regulatory Commission listen as NRC Executive Director for Operations Bill Borchardt briefs on the agency's response to recent nuclear events in Japan.

If you have any questions, please contact Ivonne Couret or Bethany Janbergs.

Thank you.

Beth Janbergs
Public Affairs Assistant
301-415-8211

uu 513

Couret, Ivonne

From: Burnell, Scott
Sent: Tuesday, March 22, 2011 11:45 AM
To: Annette Heist
Cc: Brenner, Eliot
Subject: Science Friday, March 2011 edition

Hi Annette;

I'm not sure why the e-mail bounced, and I greatly appreciate the invitation. Please let me know with as much specificity as possible what you're planning to discuss, as well as the time requirements, and we'll see what can be done. No promises, of course, given the level of effort in directly responding to events in Japan.

Scott

LL/5/14

Couret, Ivonne

From: Breskovic, Clarence
Sent: Wednesday, March 23, 2011 7:56 AM
To: Breskovic, Clarence
Subject: Fukushima: Panel discussion by Wisconsin Institutes for Discovery (March 22)

Online video (1.45 hrs):
http://mediasite.ics.uwex.edu/mediasite5/Viewer/?peid=aa0340142f4448c3969ee005e68331b11d

Description:

"This panel discussion provides a technical and medical background to the emerging situation at Japan's damaged Fukushima Daiichi nuclear plant. Experts in nuclear engineering and medical physics will describe the chain of events that led to damage at the nuclear plant and what the risks are to public health of radiation releases."

About the Wisconsin Institutes for Discovery: http://discovery.wisc.edu/home/discovery/about-us/about-us.cmsx

I can't vouch for the scientific or news value of this event but I am sure many others will follow.

Clarence Breskovic
International Policy Analyst
U.S. Nuclear Regulatory Commission
Office of International Programs
11555 Rockville Pike
Rockville, MD 20852, USA
Tel: 1-301-415-2364
Fax: 1-301-415-2395
Alternate Email: cal.breskovic@gmail.com

LL/675

From: Uselding, Lara
To: Lyan.babilonia@us.corp.terra.com
Subject: Lyan babilonia for Terra.com Interview about Nuclear Technology Safety (Deadline COB)
Date: Wednesday, March 23, 2011 5:39:00 PM

Hola Lyan: Si quiere converser manana, me puede llamar a 817-276-6519. I've provided answers below to your questions.

Lara Uselding
U.S. Nuclear Regulatory Commission (NRC)
Public Affairs - Region IV

Lara.Uselding@nrc.gov
Office: 817-276-6519

For more information visit **www.nrc.gov**

From: Lyan Babilonia [mailto:Lyan.babilonia@us.corp.terra.com]
Sent: Wednesday, March 23, 2011 1:58 PM
To: OPA Resource
Subject: Lyan babilonia Terra.com Interview about Nuclear Technology Safety

Hello,

As per as your request I'm sending a questions guide for the interview. My deadline is tomorrow morning, but I will appreciate if we can schedule it for today. Terra.com is the number 1 destination for US Hispanics looking for up to the minute culturally relevant, trusted and credible content. With a total of 3.9 monthly million users, Terra is one of the leading media companies in the U.S.

Please, don't hesitate in call me back.

What the United States can learn from the nuclear situation in Japan after the earthquake?
The NRC continues to monitor the situation. We will be reviewing all information we gather from the Japan incident and as always (like Three Mile Island or Chernobyl) look to learn from situations like this and make improvements or changes where needed.

What measures are taking this country in order to warranty the safety of the species and environment in the case of a catastrophe?
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 is confident that the robust design of these plants makes it highly unlikely that a similar event could occur in the United States.

How the governments can improve the regulations of nuclear technology?
U.S. nuclear power plants are built to withstand environmental hazards, including earthquakes and tsunamis. 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

LL/5/16

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 is confident that the robust design of these plants makes it extremely unlikely that a similar event could occur it then U.S.

Is the nuclear technology the best alternative to produce energy?
We are the agency charged with regulating the nuclear power industry, we do not promote or not promote nuclear.

How many plants we have in the United Sates? Are the plant located in safe areas?
104 safe operating nuclear power reactors
The radiation in Japan is going to have an impact in the climate change, species and in the ecosystem in general?

The NRC is working closely with our federal partners to monitor radiation releases from the Japanese nuclear power plants. Given the results of the monitoring and distance between Japan and Hawaii, Alaska, U.S. Pacific Territories and the U.S. West Coast, the NRC expects the U.S. to avoid any harmful levels of radioactivity.

Which level of radiation is necessary to have a serious impact in the environment?
You may also want to contact the EPA www.epa.gov
NRC has established strict limits on the radioactive emissions allowed to be released from nuclear power plants
A rem is a measure of radiation dose. The average American is exposed to approximately 620 millirems, or 0.62 rem, of radiation each year from natural and manmade sources.

Warmest Regards,

Lyan Babilonia

From: Droggitis, Spiros
Sent: Thursday, March 24, 2011 12:16 PM
To: Ilya.Fischhoff@mail.house.gov
Cc: Riley (OCA), Timothy
Subject: KI
Attachments: image001.gif

Ilya: Tim asked that I provide an answer to your KI question. Our KI section on the website says:

Why is KI only being provided to the 10-mile EPZ around nuclear power plants?

The population closest (within the 10 mile EPZ) to the nuclear power plant are at greatest risk of exposure to radiation and radioactive materials. The purpose of radiological emergency preparedness is to protect people from the effects of radiation exposure after an accident at a nuclear power plant. Evacuation is the most effective protective measure in the event of a radiological emergency because it protects the whole body (including the thyroid gland and other organs) from all radionuclides and all exposure pathways. However, in situations when evacuation is not feasible, in-place sheltering is substituted as an effective protective action. In addition, administering potassium iodide is a reasonable, prudent, and inexpensive supplement to both evacuation and sheltering. When the population is evacuated out of the area, and potentially contaminated foodstuffs are interdicted, the risk from further radioactive iodine exposure to the thyroid gland is essentially eliminated.

TOP

Why is the NRC only providing two KI tablets per person?

The tablets are to be used, if necessary, to supplement evacuation or sheltering. After individuals have evacuated the area, then they will no longer be exposed to significant quantities of radioiodines. The KI tablets, if taken at the appropriate dosage and time, block the thyroid gland, preventing uptake of radioactive iodine. Any radioactive iodine taken into the body after consumption of KI will be rapidly removed from the body. The two tablets will protect the thyroid gland for approximately 48 hours.

I understand States actually get more than the two per individual for example because school kids are considered in the population count not only at school, but as home as well.

Couret, Ivonne

From: Landau, Mindy
Sent: Thursday, March 24, 2011 1:59 PM
To: Reiter, Stuart; Hayden, Elizabeth; Goldberg, Francine; Harrington, Holly; Couret, Ivonne; Rihm, Roger; Ousley, Elizabeth; Leong, Edwin
Cc: Garrity, Paula
Subject: RE: Quarterly Update of OG Plan Status

Stu, under "collaboration" for the Task Assignments spreadsheet, shouldn't we also note that we opened up staff access to YouTube and Twitter as a result of the Japan event, to improve our information access, etc?

From: Reiter, Stuart
Sent: Thursday, March 24, 2011 9:04 AM
To: Hayden, Elizabeth; Landau, Mindy; Goldberg, Francine; Harrington, Holly; Couret, Ivonne; Rihm, Roger; Ousley, Elizabeth; Leong, Edwin
Cc: Garrity, Paula
Subject: Quarterly Update of OG Plan Status

At the end of the quarter I will provide an updated OG Milestone report and an updated OG Dashboard/Highlights to the WEB team to refresh what is currently there. Please let me have any comments on the attached by COB 3/30.

Thanks Stu

Couret, Ivonne

From: Hayden, Elizabeth
Sent: Thursday, March 24, 2011 3:54 PM
To: Harrington, Holly; Brenner, Eliot; Burnell, Scott; Couret, Ivonne; McIntyre, David; Chandrathil, Prema; Dricks, Victor; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Screnci, Diane; Sheehan, Neil; Uselding, Lara
Subject: RE: In case this was not already communicated

We're working on a press release for the RIS that is suppose to be issued tomorrow or Monday on our request to licensees to voluntarily report on confirmed anomalous environmental radioactivity measurements likely from Fukushima plants. We plan to use the information to complement the federal and state monitoring programs.

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

From: Harrington, Holly
Sent: Thursday, March 24, 2011 12:13 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: In case this was not already communicated

Ignore, if you're already received this information, but just in case:

From: LIA04 Hoc
Sent: Wednesday, March 23, 2011 6:33 PM
To: LIA08 Hoc; LIA06 Hoc; Barker, Allan; Browder, Rachel; Erickson, Randy; Logaras, Harral; Maier, Bill; McNamara, Nancy; Tifft, Doug; Trojanowski, Robert; Woodruff, Gena
Cc: OST05 Hoc; LIA04 Hoc; Piccone, Josephine; Jackson, Deborah; Easson, Stuart; Flannery, Cindy; Lukes, Kim; Maupin, Cardelia; Noonan, Amanda; Rautzen, William; Rivera, Alison; Ryan, Michelle; Turtil, Richard; Virgilio, Rosetta
Subject: FYI - Trace amounts of I-131 in rainfall samples of Eastern plants

The HQs Operations Center (PMT and LIA teams) are working on a plan of action regarding confirmed samples of trace amounts of I-131 at three northeastern nuclear power plants – Ginna (NY), Nine Mile Point (NY), and Millstone (CT). We suspect that the info or news of positive samples may be released to the public ahead of the federal government. EPA has been contacted. NEI has agreed to collect the data from licensees and provide the data to NRC.

The ET requested that we hold off on any communications on this issue outside of the NRC until further notice.

uul519

From: OST01 HOC
Sent: Monday, April 04, 2011 9:31 AM
To: Sun, Casper
Cc: OST01 HOC; OST02 HOC; PMT11 Hoc; Brandon, Lou
Subject: RE: PMTR Dose Assessment RASCAL

Casper:

You are on shift April 9 from 3pm – 11pm.

Steve

From: Sun, Casper
Sent: Monday, April 04, 2011 9:27 AM
To: OST01 HOC
Subject: RE: PMTR Dose Assessment RASCAL

Dear Steve,

Look forward and thanks

Casper Sun, Ph.D.,CHP
Health Physicist
Health Effects Branch, Division of System Analysis
Office of Nuclear Regulatory Research

MS CSB 3C-07
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555
Office 301-251-7912 Fax 301-251-7436

From: OST01 HOC
Sent: Monday, April 04, 2011 9:26 AM
To: Sun, Casper
Cc: PMT11 Hoc; OST02 HOC; Brandon, Lou; OST01 HOC
Subject: RE: PMTR Dose Assessment RASCAL

Ok Casper,

You will be paired with Fritz Sturz for April 10 from 3pm – 11pm.

Thanks for supporting the shift.

Steve Campbell
EST Coordinator

From: Sun, Casper
Sent: Monday, April 04, 2011 9:15 AM
To: OST01 HOC
Cc: PMT11 Hoc
Subject: RE: PMTR Dose Assessment RASCAL

Dear Steve,

Yes, Thanks.

BTW, I also signed up the same hours for April 10.

Casper Sun, Ph.D.,CHP
Health Physicist
Health Effects Branch, Division of System Analysis
Office of Nuclear Regulatory Research

MS CSB 3C-07
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555
Office 301-251-7912 Fax 301-251-7436

From: OST01 HOC
Sent: Saturday, April 02, 2011 3:57 PM
To: Sun, Casper
Cc: OST02 HOC; OST01 HOC; Brandon, Lou
Subject: PMTR Dose Assessment RASCAL
Importance: High

Casper:

The watchbill indicates you will be filling the subject position for the following shift:

4/9: 3pm-11pm

There is a question mark by your name. Please confirm whether you will be able to fill this shift

Thanks,

Steve Campbell
EST Coordinator

From: Google Alerts
To: Couret, Ivonne
Subject: Google Alert - Nuclear Regulatory Commission
Date: Tuesday, April 12, 2011 11:10:56 AM

Blogs **2** new results for **Nuclear Regulatory Commission**

NRC: Japan nuke crisis 'static' but not yet stable | The Daily **...**
WASHINGTON (AP) — The top U.S. **nuclear** regulator said Monday he will not change a recommendation that U.S. citizens stay at least 50 miles away from Japan's.
The Daily Caller - Breaking News.... - http://dailycaller.com/

NRC: Japan nuke crisis 'static' but not yet stable - KansasCity.com
The top U.S. **nuclear** regulator said Monday he will not change a recommendation that U.S. citizens stay at least 50 miles away from Japan's crippled **nuclear** power plant, even as he declared that the crisis in that country remains "static **...**
Kansas City Star: Business - http://www.kansascity.com/

LIU521

From: Google Alerts
To: Couret, Ivonne
Subject: Google Alert - Nuclear Regulatory Commission
Date: Monday, April 18, 2011 11:16:36 PM

News **10** new results for **Nuclear Regulatory Commission**

U.S. **Nuclear** Power Output Hits Lowest in 4 Years After Tornado

Bloomberg

By Colin McClelland - Mon Apr 18 13:51:44 GMT 2011 US nuclear-power output fell to the lowest level in almost 4 ½ years after a tornado forced Surry Units 1 and 2 in Virginia to shut yesterday, the **Nuclear Regulatory Commission** said. **...**

See all stories on this topic »

US **nuclear** regulator a policeman or salesman?

CNET

by Reuters The **Nuclear Regulatory Commission** exists to police, not promote, the domestic nuclear industry--but diplomatic cables show that it is sometimes used as a sales tool to help push American technology to foreign governments. **...**

CNET

See all stories on this topic »

Sen. Alexander, officials, tour Watts Bar **Nuclear** Plant

WBIR-TV

Senator Lamar Alexander, along with **Nuclear Regulatory Commission's** Bill Ostendorff and TVA officials toured the Watts Bar Plant in Rhea County Monday to see how the nuclear site stacks up. "Nuclear power is important to the Tennessee Valley, **...**

See all stories on this topic »

Plant Owner Sues Vermont Over License for Reactor

New York Times

The federal **Nuclear Regulatory Commission** had granted the 39-year-old reactor a 20-year operating extension last month, setting up a court battle over who will decide whether the plant can operate. The parties bringing the suit are two subsidiaries of **...**

See all stories on this topic »

Committee to review whether proximity to **nuclear** power plants boosts cancer risk

Superior Telegram

A national committee looking at cancer risks near nuclear power plants will hold a public meeting in the Midwest today. The **Nuclear Regulatory Commission** (**NRC**) recently asked the National Academy of Sciences to look at the possibility that living near **...**

See all stories on this topic »

Nuclear Regulatory Commission head to speak at Leaders + Legends

The JHU Gazette

By Andrew Blumberg Gregory B. Jaczko, chairman of the US **Nuclear Regulatory Commission**, is the featured speaker at the Johns Hopkins Carey Business School's Leaders + Legends lecture series on April 21. The event will take place at 7:30 am in the Legg **...**

See all stories on this topic »

UPI NewsTrack Health and Science News

UPI.com

Twenty of the nation's 104 reactors have undergone these "extended power uprates" since the US **Nuclear Regulatory Commission** began approving such boosts, some as much as 20

4/5/22

percent, in 1998. Nuclear watchdogs and the US **Nuclear Regulatory Commission's ...**
See all stories on this topic »

Concrete crumbling at **nuclear** storage site

UPI.com

The US **Nuclear Regulatory Commission** in a letter to the Energy Department called for an outline of the corrective measures needed to ensure the integrity of the concrete storage containers used to house the damaged fuel rods. The **NRC** said large pieces **...**
See all stories on this topic »

What about that 50-mile zone around the **nuclear** power accident in Japan?

The Keene Sentinel

Less than a week after the March 11 tsunami hit Japan, causing the ongoing crisis at the Fukushima nuclear power plant, the US **Nuclear Regulatory Commission** recommended: "Under the guidelines for public safety that would be used in the United States **...**
See all stories on this topic »

Expect the Unexpected

The Sag Harbor Express

The **Nuclear Regulatory Commission** has found that the Indian Point 3 reactor located on the Hudson River in Westchester County, carries the highest risk of damage of all nuclear reactors in this country due to the fact that it sits atop a fairly good **...**
See all stories on this topic »

From: Google Alerts
To: Couret, Ivonne
Subject: Google Alert - Nuclear Regulatory Commission
Date: Tuesday, April 12, 2011 11:16:30 PM

News **10** new results for **Nuclear Regulatory Commission**

NRC chairman: Reactor situation in Japan is static but not stable
CNN International
By Jim Barnett, CNN Senior Producer Washington (CNN) -- The chairman of the **Nuclear Regulatory Commission** said Tuesday that the situation in the wake of the Japanese nuclear reactor crisis is static but not yet stable. On the day that Japan bumped up **...**
See all stories on this topic »

State Senator Blakeslee testifies to U.S. Senate committee on Diablo Canyon
KSBY San Luis Obispo News
Local State Senator Sam Blakeslee and US Congresswoman Lois Capps were among those who testified to the Senate Committee on Environment and Public Works, which oversees the **Nuclear Regulatory Commission**. "Will the **NRC** strengthen its own earthquake **...**
See all stories on this topic »

NRC team inspects Cooper plant
Omaha World-Herald
By Juan Perez Jr. The US **Nuclear Regulatory Commission** began a special inspection of the Cooper Nuclear Station near Brownville, Neb., after three workers were exposed to high levels of radiation during an April 3 incident. The **NRC** announced the **...**
See all stories on this topic »

U.S. **Nuclear** Output Rises as Southern Boosts Farley in Alabama
Bloomberg
By Colin McClelland - Tue Apr 12 12:34:30 GMT 2011 US nuclear-power output rose for a second day as plants in Pennsylvania and Alabama boosted energy production, the **Nuclear Regulatory Commission** said. Power generation nationwide increased 1085 **...**
See all stories on this topic »

Missouri Senate to debate **nuclear** bill today
Jefferson City News Tribune
By Bob Watson Senate leaders expect to begin debating today the bill that would let a Missouri utility company charge its customers for the costs of seeking and winning a US **Nuclear Regulatory Commission** early site permit. Read additional details in **...**
See all stories on this topic »

More nails in Yucca coffin
Las Vegas Review-Journal (blog)
Besides the dollars, Reid also killed a provision that would have prevented the **Nuclear Regulatory Commission** from moving forward with closing down its portion of the Yucca project. The final budget also shows $10 million allocated to the **NRC** in **...**
See all stories on this topic »

Riverkeeper warns lawmakers of risks at Indian Point
The Journal News | LoHud.com
Federal and state officials have also made nuclear safety a priority, prompting the **Nuclear Regulatory Commission** to assure that Indian Point will top the list when the agency conducts more thorough seismic assesments of the nation's nuclear plants. **...**

4/12/23

See all stories on this topic »

Energy stocks lose as oil pulls back

MarketWatch

Late Monday, the utility operator said it has asked the **Nuclear Regulatory Commission** to delay final action on the renewal of its US operating license for the Diablo Canyon nuclear power plant, while it steps up efforts to study three-dimensional data **...**

See all stories on this topic »

NTK (Need to Know)

Omaha World-Herald

The US **Nuclear Regulatory Commission** began a special inspection of the Cooper Nuclear Station near Brownville, Neb., after three workers were exposed to high levels of radiation during an April 3 incident. • University of Nebraska-Lincoln officials are **...**

See all stories on this topic »

Indian Point Opponents: How Many Lives Is the Plant's Energy Worth?

Patch.com

But the federal **Nuclear Regulatory Commission** (**NRC**), whose approval is also required, recently said that no environmental impact exists to prevent the power plant from getting relicensed for another 20 years. "You have to be suspicious of what you hear **...**

See all stories on this topic »

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

From:	Harrington, Holly
To:	Chandrathil, Prema; Dricks, Victor; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Screnci, Diane; Sheehan, Neil; Uselding, Lara
Cc:	Brenner, Eliot; Burnell, Scott; Couret, Ivonne; Hayden, Elizabeth; McIntyre, David
Subject:	In case you get questions about the INES Scale 7 for Japan
Date:	Tuesday, April 12, 2011 1:40:59 PM

These are talking points from DOE, blessed by Eliot:

While this accident is now the second most severe in history, there are some important differences from Chernobyl. This new rating does not mean that the ultimate health effects on those living near the plant will be anything like the Chernobyl disaster, which involved an explosion and intense fire in the reactor that quickly lofted radioactive materials over a large area before people had evacuated or taken health precautions.

In this case, the effects on public health are likely to be much lower because many fewer people have been exposed and because protective measures have been implemented promptly, in sharp contrast to Chernobyl. While there are still risks of additional releases, the situation is steadily being stabilized, and the potential danger to the public is declining over time. The change in the accident severity rating results from a reassessment of the amount of radioactive material released previously, not a change in the expected course of the accident or the affect on public health.

LL 524

From: Hayden, Elizabeth
To: Janbergs, Holly; Couret, Ivonne
Subject: FW: Please clear by COB: Japan Nuclear Cooperation Interagency Fact Sheet
Date: Tuesday, April 12, 2011 3:29:15 PM

You could probably craft the text of the IR for the Info Digest from this.

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

From: Harrington, Holly
Sent: Tuesday, April 12, 2011 3:24 PM
To: Brenner, Eliot; Hayden, Elizabeth
Subject: RE: Please clear by COB: Japan Nuclear Cooperation Interagency Fact Sheet

See the red. These changes have been previously submitted as various editions of this same verbiage has been sent around for approval:

- Immediately after the March 11 earthquake, a team of experts from the Nuclear Regulatory Commission (NRC) and the Departments of Energy and of Health and Human Services came to Japan to help the Government of Japan assess and address the damage at Fukushima Daiichi. The NRC, which has maintained a long working relationship with its regulatory counterpart, the Japanese Nuclear and Industrial Safety Agency (NISA) over many years, established a dialogue with NISA, which developed into daily discussions about the status of the Fukushima Daiichi plant's reactors, and related concerns.

- An NRC team of subject matter experts on reactor safety, protective measures and international relations has been stationed in Tokyo since March 13. The team is being supported by additional experts working in the NRC Headquarters Operations Center near Washington, D.C. Approximately 30 such experts on a rotating basis have been in Tokyo, working with their NISA counterparts and meeting with officials from the Japan Atomic Energy Agency, Tokyo Electric Power Company (TEPCO), the Ministry of Economy, Trade and Industry (METI), the Ministry of Education, Culture, Sports, Science and Technology (MEXT), and the Ministry of Foreign Affairs (MOFA).

From: Brenner, Eliot
Sent: Tuesday, April 12, 2011 3:09 PM
To: Harrington, Holly; Hayden, Elizabeth
Subject: Fw: Please clear by COB: Japan Nuclear Cooperation Interagency Fact Sheet

Would one of you chop on this quickly please. Thanks.
Eliot Brenner

From: Google Alerts
To: Couret, Ivonne
Subject: Google Alert - Nuclear Regulatory Commission
Date: Wednesday, April 13, 2011 11:11:19 AM

Blogs **1** new result for **Nuclear Regulatory Commission**

Senators Accuse **NRC** Chair Of Unnecessarily Invoking Emergency **...**
By Jeff McMahon
Senate Republicans today accused **Nuclear Regulatory Commission** Chairman Gregory Jaczko of invoking emergency powers without cause and taking authority away from other members of the **NRC**. Jaczko disputed the claim.
The Ingenuity of the Commons - http://blogs.forbes.com/jeffmcmahon/

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

Remove this alert.
Create another alert.
Manage your alerts.

111526

From: Google Alerts
To: Couret, Ivonne
Subject: Google Alert - Nuclear Regulatory Commission
Date: Wednesday, April 13, 2011 11:16:34 PM

News **8** new results for **Nuclear Regulatory Commission**

NRC hears St. Lucie evacuation worry

Palm Beach Post

s St. Lucie nuclear plant on Hutchinson Island, and he's worried about how the island would be evacuated during a disaster. "With a telescope, I can see this building," Berg told FPL and **Nuclear Regulatory Commission** officials at a meeting at the plant **...**

See all stories on this topic »

County against Diablo nuke plant relicensing

San Jose Mercury News

PG&E has asked the **Nuclear Regulatory Commission** to extend the power plant's operating licenses an additional 20 years. Diablo's licenses for the twin reactors expire in 2024 and 2025. Diablo Canyon sits on a bluff 85 feet above the Pacific Ocean near **...**

See all stories on this topic »

'No Justification' for Oyster Creek to Be Singled Out, **NRC** Says in Brief

Patch.com

By Patricia A. Miller | Email the author | 11:43am The **Nuclear Regulatory Commission** has asked a federal appellate court to deny a petition by a coalition of citizen groups to re-examine the relicensing of the Oyster Creek nuclear plant, in the wake of **...**

See all stories on this topic »

Michigan **nuclear** plants — are they safe?

Fenton Tri County Times

According to the US **Nuclear Regulatory Commission** (**NRC**), the combined effects of the earthquake and tsunami in Japan exceeded the Fukushima Daiichii nuclear plant's design limits. Natural environmental disasters, as well as the Sept. **...**

See all stories on this topic »

US **Nuclear** Output Rises on FirstEnergy Boosts in Pennsylvania

Bloomberg

By Colin McClelland - Wed Apr 13 12:16:50 GMT 2011 US nuclear-power output rose for a third day as plants in Alabama and Pennsylvania boosted energy production, the **Nuclear Regulatory Commission** said. Power generation nationwide increased 514 megawatts **...**

See all stories on this topic »

Rockcland County Executive: It's Time To Shut Indian Point

Patch.com

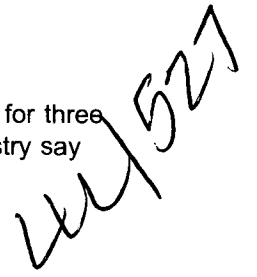
This has mainly become an issue because officials from the **Nuclear Regulatory Commission** recommended that Americans staying within 50 miles of the Japanese nuclear power plant impacted by the country's recent earthquake should evacuate the area. **...**

See all stories on this topic »

US begins to reconsider **nuclear** risks in light of Japan crisis

Kansas City Star

Germany responded to Japan's nuclear crisis by shutting down its seven oldest reactors for three months for safety checks. The US **Nuclear Regulatory Commission** and the industry say there's no need to do that here. "The next generation will be a safer **...**



See all stories on this topic »

Berkeley Officials Call for Immediate Closure of Oyster Creek

Patch.com

By Patricia A. Miller | Email the author | 5:28pm Berkeley Mayor Jason J. Varano and Township Council members had a simple message last night for the owners of the Oyster Creek Nuclear Generating Station and the federal **Nuclear Regulatory Commission**. **...**

See all stories on this topic »

Nuclear News Flashes
Wednesday, Apr 13, 2011

[Inside This Issue:]

*** Tepco says Fukushima I cannot be worse than Chernobyl

Tokyo Electric Power Co. said April 13 that there is "no possibility" for the accident at Fukushima I to be worse than the 1986 Chernobyl disaster.

It made the statement after the Nuclear and Industrial Safety Agency on April 12 uprated the severity level of the Fukushima I accident to Level 7, the highest of seven levels, on the International Nuclear Event Scale. Chernobyl was previously the only INES Level 7 event.

A Tepco spokesman was also quoted in media reports the same day as saying that the accident was still ongoing and that releases could potentially exceed those of Chernobyl.

In a statement, Tepco said it tentatively estimates the amount of radioactive iodine-131 released during the Fukushima I accident to be on the order of magnitude 10 E17 Becquerels (100,000 Terabecquerels), and the amount of released cesium-137 at about one-tenth that of I-131. These estimates are almost the same as NISA's, Tepco said.

Tepco said it was continuing to investigate the reactors' behavior and the figures from stack monitors at the Fukushima I site and "try to evaluate more accurately" the amount of released radioactivity.

But it said it considered that "there is no possibility to release [a] large amount of radioactivity in the future, because water is stably injected into the reactors now."

*** Overheating spent fuel pool prompts Tepco to inject water

Tokyo Electric Power Co. sprayed 195 tons of water into the spent fuel pool at unit 4 at the Fukushima I nuclear power plant April 13, due to concerns the fuel rods might be further damaged, NHK reported.

Tepco detected radiation levels at the pool's water surface of 84 milliSieverts per hour and a temperature of 90 degrees Celsius (194 degrees Fahrenheit) during April 12 testing, NHK reported following an April 13 briefing by the utility. Tepco officials estimate water levels in the pool are about 2 meters (6.5 feet) above the fuel rods, which is 5 meters lower than normal, NHK said.

Tepco said the loss of water in the pool immediately after the March 11 earthquake and tsunami might have damaged the spent fuel rods, based on the tests that found high levels of iodine-131 and cesium-134. In late March, Tepco sprayed water into the pool due to concern that fuel rods might have been at least partially exposed. The utility said April 13 it will continue to spray water into the pool until temperatures and radiation levels return to a normal range, NHK said.

Meanwhile, Tepco President Masataka Shimizu said at an April 13 media briefing that the utility soon will announce a "road map" to stabilize the Fukushima I plant, as requested by Japanese Prime Minister Naoto Kan, according to NHK.

*** Areva, Bulgaria join in nuclear cooperation

Areva and the Bulgarian Energy Holding Co. may cooperate on new nuclear power projects at the Belene and Kozloduy sites in Bulgaria, under the terms of a memorandum of understanding announced April 13.

The MOU also covers potential work on fuel management, including recycling of spent fuel, as well as cooperation in nuclear safety, Areva said.

Areva was involved in the modernization project for Kozloduy-5 and -6 and more recently in preliminary contracts for the Belene nuclear site completion.

Bulgaria and Russia's Atomstroyexport, or ASE, disagree over the price for a planned 2,000-MW nuclear power plant at Belene. The contract signed between Bulgaria and ASE in 2008 was for Eur3.9 billion to deliver two 1,000-MW Russian design VVERs, but ASE has said delays have pushed the price up to Eur6.3 billion.

Last week, Bulgarian state-owned electric utility NEK and ASE agreed to put "maximum efforts" toward signing a final contract by June 1 for the plant's construction, according to Bulgarian press reports.

On March 2, Bulgaria's government approved a draft energy strategy to 2020 that includes proposals for construction of 2,000 MW of nuclear generating capacity. The strategy does not specify whether the increase will come from the planned Belene plant or two new units at the existing Kozloduy nuclear plant.

*** Rio Tinto's first-quarter uranium production down 47%

Rio Tinto said April 13 its first-quarter 2011 uranium production fell 47% from a year ago to 1.4 million pounds U3O8.

Rio Tinto said full-year 2011 production is expected to be 7.5 million lb, down from 11.3 million lb in 2010.

The UK-headquartered company owns 68.4% of Energy Resources of Australia, which operates the Ranger mine in Australia's Northern Territory, and 68.6% of the Rossing mine in Namibia.

At Rossing, Rio Tinto said production was lower due to lower-grade ore and lower extraction rates.

Energy Resources of Australia April 12 announced it would continue a suspension of uranium processing operations at its Ranger mine from the end of April through July.

Rio Tinto said its share of Ranger production in first-quarter 2011 was 577,000 lb, down 58% from the same period in 2010.

*** US should not let Fukushima I accident slow nuclear projects, says Southern CEO

The accident at the Fukushima I nuclear plant in Japan should not be allowed to derail the construction of power reactors in the US, Southern Co. Chairman and CEO Thomas Fanning said April 13.

"We can't â€¦ let the events there distract us from what we must do here," he said. Fanning spoke at a luncheon in Washington sponsored by the US Chamber of Commerce.

The US needs to pursue new nuclear units as well as "21st century coal," natural gas, renewable energy sources and energy efficiency, Fanning said.

The president, regulators and Congress "understand the facts" about nuclear energy's safety and are proceeding properly to study the lessons of the Fukushima I nuclear accident, he said.

The nuclear industry itself is also reviewing any lessons and will "look deeply into our own safety systems" and make improvements to US plants, he said.

Southern Co. subsidiary Georgia Power and three partners are building two additional units at the company's Vogtle site in eastern Georgia.

The Westinghouse Electric AP1000 reactor design selected for construction at Vogtle is "a completely different approach to nuclear safety" because of its extensive use of passive systems, Fanning said. Although the cost to build nuclear units is higher than other baseload energy sources, nuclear energy provides "long-term price stability" that makes it attractive for utilities, he said.

*** US support for nuclear 'surprisingly high,' FBR says

Public support for nuclear energy in the US is "surprisingly high," although political opposition may rise after reports on the causes of the Fukushima I nuclear power plant accident are released, FBR Capital

Markets said in a report April 13.

Public confidence in the safety of the existing fleet of US power reactors is holding, the Virginia-based investment bank said, citing an AP/GfK poll released last week. That poll showed 39% of US residents surveyed support building new nuclear plants, just 10 percentage points less than before the accident, FBR analyst Benjamin Salisbury wrote. By comparison, support for offshore oil and gas drilling dropped 20 percentage points following the Macondo oil spill in the Gulf of Mexico last year, FBR said.

Only 27% of respondents in the poll said they were confident the US government is prepared to handle a similar emergency, indicating policymakers may focus on emergency response instead of making changes to the existing nuclear fleet, Salisbury said.

AP-GfK polled 1,000 adults by telephone from March 24-28. The results have a margin of error of plus or minus 4 percentage points.

Political opposition might rise after the release of reports examining the cause and early responses to the crisis, Salisbury wrote. Some nuclear opponents are "dampening their objections as the crisis is ongoing," the report said.

*** SCE to seek $64 million for San Onofre seismic studies

Southern California Edison Co. plans to file a funding authorization request with the California Public Utilities Commission on April 15 seeking $64 million for seismic studies related to its San Onofre nuclear power plant.

SCE said in a statement April 12 that the research is aimed at increasing its scientific understanding of seismic and tsunami conditions that could affect the two-reactor station on California's coastline.

"We have been planning the seismic and tsunami studies for several months," SCE Chief Nuclear Officer Pete Dietrich said in the statement. "Following the recent tragic natural disasters in Japan, we re-evaluated and enlarged the scope in order to further increase the scientific information we could obtain."

San Onofre, near Long Beach, is designed to withstand a 7.0-magnitude earthquake and a tsunami 30 feet (about 9 meters) high.

SCE said the new studies will employ enhanced data gathering and analysis technologies and will include preparing an updated tsunami hazard analysis.

*** Westinghouse plans to apply for SMR certification next year

Westinghouse plans to submit a design certification application for its small modular reactor design in fourth-quarter 2012, according to a company letter to NRC made public April 13.

The letter, dated March 11, said "Westinghouse anticipates that, as a minimum, a site application"â€" either a construction permit or early site permit â€" "will be submitted to NRC" before the design certification application is filed.

It also said the company is in discussions with potential clients on the design, site location, and numbers of units at each site.

Westinghouse said its 200-MW design will reflect the design features of the company's 1,100-MW-class AP1000 reactor in the areas of fuel, instrumentation and control, human factors, and passive safety system design. It said the schedule to complete the SMR design "has not yet been established" but work already done on AP1000 is expected "to enable an accelerated development of the Westinghouse SMR design."

*** NRC cites Dominion for fire protection violations at Surry

The NRC has issued a notice of violation to Dominion's Surry nuclear plant in Virginia, saying a former worker at Surry "deliberately failed to conduct fire watches and deliberately falsified fire watch logs."

On March 31, NRC issued Dominion a Severity Level IV violation, the least significant of four levels in the agency's enforcement scheme.

Dominion spokesman Richard Zuercher said April 13 that the worker's actions were discovered by a supervisor and reported by Dominion to the NRC. The worker admitted he falsified the logs and was terminated, Zuercher said.

The company has 30 days to respond to NRC's notice. Dominion does not plan to contest the violation, Zuercher said.

The worker did not conduct fire watches during a five-hour period on May 4 and 5, 2010 but signed a documentation sheet saying he had done so, NRC said in a March 31 letter to Dominion that the agency released publicly April 13.

"Surry's internal investigation identified numerous additional examples of missed fire watches and related falsified documentation involving this employee" that occurred over several months, NRC said in its letter. NRC's Office of Investigations conducted a five-month investigation, but its reports are not typically released publicly.

NRC requested that Dominion's response to the violation "address corrective actions that have [been] or will be implemented to permit or allow for early identification of similar non-compliances, should they occur in the future."

*** Reactor report

â€" South Carolina Electric & Gas said its Summer unit will be taken offline for a refueling and maintenance outage April 15. In a statement April 13, SCE&G said the unit's power has been reduced in preparation for the outage. Summer was operating at 85% power early April 13, according to NRC's daily reactor status report.

***

Contact Us:

From:	Manoly, Kamal
To:	Burnell, Scott
Cc:	Couret, Ivonne; Khanna, Meena; Hiland, Patrick
Subject:	RE: Feedback Appreciated for NRC/Fw: Earthquake Monitoring and Nuclear Power Plants Report
Date:	Wednesday, April 13, 2011 1:41:22 PM

You are correct. Seismic monitoring is not related to GI-199. In general, operating reactor procedures include provisions for seismic monitoring capabilities. Only one or two plants in CA that are required to do so in compliance with their TS.

From: Burnell, Scott
Sent: Wednesday, April 13, 2011 1:36 PM
To: Manoly, Kamal
Cc: Couret, Ivonne; Khanna, Meena; Hiland, Patrick
Subject: RE: Feedback Appreciated for NRC/Fw: Earthquake Monitoring and Nuclear Power Plants Report

So this is NOT GSI-199 related, to the best of your understanding?

From: Manoly, Kamal
Sent: Wednesday, April 13, 2011 1:36 PM
To: Burnell, Scott
Cc: Couret, Ivonne; Harrington, Holly; Khanna, Meena; Hiland, Patrick
Subject: RE: Feedback Appreciated for NRC/Fw: Earthquake Monitoring and Nuclear Power Plants Report

Scott,
NRR does ***not*** have a direct contact with USGS. NRO and RES do have periodic communications with USGS since they have all the seismologist within the NRC other than one I know in NMSS who is not directly involved in GI-199.
Kamal

From: Burnell, Scott
Sent: Tuesday, April 12, 2011 3:42 PM
To: Manoly, Kamal; Khanna, Meena
Cc: Couret, Ivonne; Harrington, Holly
Subject: FW: Feedback Appreciated for NRC/Fw: Earthquake Monitoring and Nuclear Power Plants Report

Folks;

This seems to be GI-199 related, are you the proper NRR contacts for this USGS/NRC report?

Strategies for Improved Earthquake Monitoring in Support of Nuclear Power Plant Safety in the Central and Eastern United States

Thanks.

Scott

LL/529

From:	Burnell, Scott
To:	Khanna, Meena; Manoly, Kamal
Cc:	Couret, Ivonne; Harrington, Holly
Subject:	RE: Feedback Appreciated for NRC/Fw: Earthquake Monitoring and Nuclear Power Plants Report
Date:	Tuesday, April 12, 2011 3:49:33 PM

Yes, that's fine. Thanks.

From: Khanna, Meena
Sent: Tuesday, April 12, 2011 3:49 PM
To: Burnell, Scott; Manoly, Kamal
Cc: Couret, Ivonne; Harrington, Holly
Subject: Re: Feedback Appreciated for NRC/Fw: Earthquake Monitoring and Nuclear Power Plants Report

Scott,
Kamal and I will be back in the office tomorrow and will be able to respond to you tomorrow; will that be okay?

From: Burnell, Scott
To: Manoly, Kamal; Khanna, Meena
Cc: Couret, Ivonne; Harrington, Holly
Sent: Tue Apr 12 15:41:54 2011
Subject: FW: Feedback Appreciated for NRC/Fw: Earthquake Monitoring and Nuclear Power Plants Report

Folks;

This seems to be GI-199 related, are you the proper NRR contacts for this USGS/NRC report?

Strategies for Improved Earthquake Monitoring in Support of Nuclear Power Plant Safety in the Central and Eastern United States

Thanks.

Scott

From: Clarice E Ransom [mailto:cransom@usgs.gov]
Sent: Tuesday, April 12, 2011 2:48 PM
To: William S Leith; Harley M Benz; David Applegate
Cc: Harrington, Holly; Burnell, Scott
Subject: Feedback Appreciated for NRC/Fw: Earthquake Monitoring and Nuclear Power Plants Report

Bill, Harley and Dave:

Please see Holly's questions below -- she is from NRC and would value your feedback to decide next steps in planning a response for the upcoming report and/or including a quote in our news release.

Thanks in advance for your help.

Sincerely,

Clarice Nassif Ransom
Public Affairs Specialist
Office of Communications
U.S. Geological Survey
703-648-4299
cransom@usgs.gov
www.usgs.gov

----- Forwarded by Clarice E Ransom/DO/USGS/DOI on 04/12/2011 02:46 PM -----

From:	"Harrington, Holly" <Holly.Harrington@nrc.gov>
To:	"cransom@usgs.gov" <cransom@usgs.gov>
Cc:	"Burnell, Scott" <Scott.Burnell@nrc.gov>
Date:	04/12/2011 02:34 PM
Subject:	Earthquake Monitoring and Nuclear Power Plants Report

---

Clarice – thank you for the press release and draft report. I'm cc'ing my colleague, Scott Burnell, who is our "reactor guy," and will be probably be organizing our response.

I do have two questions:

Do you know who in the NRC requested the report (we can find out, but it might saw us some trouble).
Do you know when you plan to release it? (and is that timeframe at all negotiable should we have some need to control release date for some reason?)

Best,

Holly Harrington

From: Couret, Ivonne
To: Burnell, Scott
Subject: Media Request - Popular Mechanics (deadline April 15)
Date: Thursday, April 14, 2011 1:58:00 PM
Importance: High

Scott can you respond to this request? Ivonne

-----Original Message-----
From: Janbergs, Holly On Behalf Of OPA Resource
Sent: Thursday, April 14, 2011 1:40 PM
To: Couret, Ivonne
Subject: FW: Media Inquiry

-----Original Message-----
From: Sarah Fecht [mailto:sfecht@hearst.com]
Sent: Thursday, April 14, 2011 1:39 PM
To: OPA Resource
Subject: Media Inquiry

Below is the result of your feedback form. It was submitted by

Sarah Fecht (sfecht@hearst.com) on Thursday, April 14, 2011 at 13:38:43
---

comments: Hello,

I'm a reporter for Popular Mechanics magazine and we'd like to compare the Fukushima nuclear reactors to a U.S. Mark I reactor, pointing out differences in design with implications toward safety.

Could I set up a time to speak with someone about this? My deadline is tomorrow afternoon.

Thank you,
Sarah Fecht

organization: Popular Mechanics

address1:

address2:

city: New York

state: NY

zip:

country:

phone: 212-649-2873

LL/630

From: Google Alerts
To: Couret, Ivonne
Subject: Google Alert - Nuclear Regulatory Commission
Date: Thursday, April 14, 2011 11:16:44 PM

News **9** new results for **Nuclear Regulatory Commission**

Lawmakers seek studies for Calif. **nuclear** plants

San Francisco Chronicle

During a legislative hearing Thursday, lawmakers questioned a **Nuclear Regulatory Commission** official about why the agency has not suspended work on relicensing the Diablo Canyon plant near San Luis Obispo until new studies are completed. **...**

See all stories on this topic »

After Fukushima, Groups Ask **NRC** To Suspend Licensing Plants

International Business Times

International Business Times

By Jesse Emspak | April 14, 2011 2:43 PM EDT Several advocacy groups have petitioned the **Nuclear Regulatory Commission** to suspend reactor licensing until a full review of the Fukushima disaster in Japan is complete. Subscribe to The Intelligent **...**

See all stories on this topic »

Oconee Nuclear Station meets safety objectives, **NRC** says

Greenville News

2011 12:35PM OCONEE NUCLEAR STATION — Oconee Nuclear Station met all safety requirements in 2010, according to the US **Nuclear Regulatory Commission**, which will present and discuss its annual safety performance review of Oconee in a public meeting **...**

See all stories on this topic »

NRC says Peach Bottom nuclear plant prepared for emergencies

Yorkdispatch.com

The **Nuclear Regulatory Commission** is confident the Peach Bottom Atomic Station is safe and properly maintained, with sufficient planning in place to respond to emergencies, including natural disasters, said Darrell Roberts, an **NRC** director of the **...**

See all stories on this topic »

Officials Demand Diablo Canyon Relicensing Be Suspended

Santa Barbara Independent

Santa Barbara Independent

Just one day before the Senate hearing, PG&E announced it had asked the **Nuclear Regulatory Commission** (**NRC**) to hold off making a final recommendation on relicensing the plant until such studies could be conducted. But that, said Capps and State Senator **...**

See all stories on this topic »

Less **regulatory** scrutiny at Wisconsin **nuclear** plants due to improved safety grades

The Republic

The plants will get a safety review by the **Nuclear Regulatory Commission** during the next six months, as will all US nuclear plants because of the earthquake and tsunami in Japan. The Journal Sentinel says the plants generate nearly one-fifth of **...**

See all stories on this topic »

Japan crisis raises questions about spent **nuclear** fuel in the United States

CNN (blog)

111531

Obama appointed Gregory Jaczko as chairman of the **Nuclear Regulatory Commission**, the government agency with the power to regulate the nation's nuclear plants and with oversight over Yucca Mountain. Jazcko (pronounced "Yaz-Koh") served for years as **...**
See all stories on this topic »

U.S. Should Halt Approvals for **Nuclear** Reactors, Groups Say
Bloomberg
The **Nuclear Regulatory Commission** should "immediately suspend all licensing activities," Curran said, speaking for 45 groups and individuals including the Knoxville, Tennessee-based Southern Alliance for Clean Energy, the Institute for Energy and **...**
See all stories on this topic »

Federal **nuclear** regulators to discuss safety at Shearon Harris power plant in **...**
The Republic
AP HOLLY SPRINGS, NC — Nuclear regulators are visiting North Carolina to answer questions about the safety performance at the Shearon Harris power plant. Staff from the US **Nuclear Regulatory Commission** will also discuss Thursday night the agency's **...**
See all stories on this topic »

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

Remove this alert.
Create another alert.
Manage your alerts.

From: Harrington, Holly
Date: Thursday, April 14, 2011 3:01:42 PM
Posted At: Office of Public Affairs: Posts
Conversation: Themes of Japan Coverage
Subject: Themes of Japan Coverage

Body:
While the tremendous volume of media calls related to the Japanese nuclear emergency has abated somewhat since March 11, there remains a steady stream of interest in the NRC, with some recurring themes.

OPA is looking at the themes and strategizing about ways to get our message heard, get ahead of the stories and ensure accuracy of coverage (not always a hallmark of some of the post-Japan coverage.)

A review of recent clips found these not-surprising themes:

1. A need for guarantees that a similar catastrophe is not going to happen here and a drumbeat that the NRC should do more to protect the public.
2. Concerns about the safety of spent fuel pools in general, and some interest in spent fuel pools vs dry cask storage
3. Questions about emergency planning zones – what are they, who decides, are they adequate
4. Re-examination of NRC regulations related to nuclear power plant back-up
5. The question of whether or not there should there be a moratorium on new nuclear power plants
6. Major concerns and confusion about safety thresholds for radiation
7. Some concern about NRC's independence from the nuclear power industry

Stay tuned as we use press releases, media briefings, Congressional testimony, blog posts, fact sheets, press statements and other tools to address these themes.

Holly Harrington
HQ Public Affairs
Published: 4/14/2011 2:59 PM

View article...

LL1532

From:	Couret, Ivonne
To:	Harrington, Holly
Cc:	Janbergs, Holly; Stuckle, Elizabeth
Subject:	FW: EPA News Release (HQ): EPA STATEMENT: Update on Ongoing Monitoring
Date:	Thursday, April 14, 2011 1:17:00 PM

I know this is old but forwarding the links as FYI. Ivonne

From: U.S. EPA [mailto:usaepa@govdelivery.com]
Sent: Monday, April 04, 2011 8:34 PM
To: Couret, Ivonne
Subject: EPA News Release (HQ): EPA STATEMENT: Update on Ongoing Monitoring

CONTACT:
EPA Press Office
press@epa.gov

FOR IMMEDIATE RELEASE
April 4, 2011

EPA STATEMENT: Update on Ongoing Monitoring

WASHINGTON – As a result of the incident with the Fukushima nuclear plant in Japan, several EPA air monitors have detected very low levels of radioactive material in the United States consistent with estimated releases from the damaged nuclear reactors. EPA has stepped up monitoring of precipitation, milk, and drinking water in response to the Fukushima events. The detections in air, precipitation, and milk were expected, and the levels detected have been far below levels of public-health concern.

Today, EPA released its latest RadNet results, which include the first results for drinking water. Drinking water samples from two locations, Boise, Idaho and Richland, Washington, showed trace amounts of Iodine-131 – about 0.2 picocuries per liter in each case. An infant would have to drink almost 7,000 liters of this water to receive a radiation dose equivalent to a day's worth of the natural background radiation exposure we experience continuously from natural sources of radioactivity in our environment.

Earlier precipitation samples collected by EPA have shown trace amounts of radioactivity, so EPA has expected to find results such as these in some drinking water samples. Similar findings are to be expected in the coming weeks.

To see results from these samples, please visit:
http://www.epa.gov\japan2011\docs\rert\RadNet-Drinking-Water-Data-Public-Release-4-2-2011.pdf

In addition, results of EPA's precipitation sampling and air filter analyses continue to detect very low levels of radioactive material consistent with estimated releases from the damaged nuclear reactors. These detections were expected and the levels detected are far below levels of public-health concern. For the latest sample results please visit:

For the latest air monitoring filter data: http://epa.gov/japan2011/docs/rert/radnet-cart-filter-final.pdf

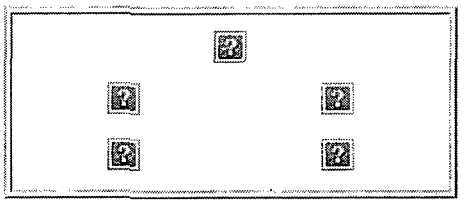
For the latest milk sampling data: http://epa.gov/japan2011/docs/rert/radnet-milk-final.pdf

LL 1533

For the latest precipitation sampling data: http://epa.gov/japan2011/docs/rert/radnet-precipitation-final.pdf

R116

Note: If a link above doesn't work, please copy and paste the URL into a browser.



From: Couret, Ivonne
To: Janbergs, Holly
Subject: FW: CRS Reports on the Japan Situation - please follow the links
Date: Thursday, April 14, 2011 1:23:00 PM

FYI

From: Breskovic, Clarence
Sent: Monday, April 04, 2011 11:17 AM
To: Breskovic, Clarence
Cc: Gambone, Kimberly; Newell, Trenton; Miranda, Samuel; Astwood, Heather; Burgess, Michele; Shaffer, Mark; Thompson, Richard; Piccone, Josephine; Weber, Michael; Fragoyannis, Nancy; Banic, Merrilee; Burnell, Scott; Giitter, Joseph; Afshar-Tous, Mugeh; 574a4440-3c721c05-9c3de9fa-5df9ccd9; Satorius, Mark; Sapp, Lynne; Adler, James; Costello, Ralph; Crockett, Steven; Cullingford, Michael; Dickman-Disabled-11/14/2010, Paul; Layton, Michael; Tappert, John; Hahn, Matthew; Tschiltz, Michael; Romano, Michelle; Zobler, Marian; Wegner, Mary; Nelson, Robert; Joosten, Sandy; Jasinski, Robert; Landau, Mindy; Warren, Roberta; Ditto, David; Kirkwood, Sara; Mayfield, Michael; Ramsey, Jack; Culp, Lisa; Holahan, Patricia; Smith, Wilkins; Smith, Shawn; StAmour, Norman; Whaley, Sheena; MAGWOOD_Distribution; Mitchell, Linda; Aguilar, Santiago; Cal Breskovic; Smith, Brian; Freeman, Eric; Rivera-Capella, Gretchen; Jackson, Gerard; Nieh, Ho; Grice, Thomas; Ostendorff, William; Beall, James; Franovich, Mike; Bradford, Anna; Mangefrida, Michael; Harris, Tim; Rutz, Wayne; Rasmussen, Richard; Sastre, Eduardo; Batkin, Joshua; Rothschild, Trip; Hall, Victor; Reddick, Darani; Clark, Theresa; Koshy, Thomas; Thomas, Eric; Alvarado, Lydiana; Williams, Shawn; Lee, Samuel; Mamish, Nader; Monninger, John; Johnson, Clay; Font, Ossy; Krsek, Robert; Marshall, Jane; Baggett, Steven; Orlando, Dominick; Jones, William; Ross-Lee, MaryJane; Sharkey, Jeffry; Thoma, John; Hipschman, Thomas; Ramsey, Jack; Carter, Mary; Diaz-Toro, Diana; Nazario, Tomy; Schwartz, Maria; Coggins, Angela; Coe, Doug; Paul Dickman; Abrams, Charlotte; APOSTOLAKIS_Distribution; Armstrong, Janine; Baker, Stephen; Barnes, Robin; Benner, Eric; Billings, Sally; Bozin, Sunny; Smith, Brian; Carpenter, Gene; Carter, Mary; Chazell, Russell; Chimood, Jane; Coates, Carlotta; Coggins, Angela; Cool, Donald; Couret, Ivonne; Cramer, Chad; Dembek, Stephen; Diaz, Jose; Doane, Margaret; Emche, Danielle; English, Lance; Fehst, Geraldine; Floyd, Daphene; Foggie, Kirk; Fragoyannis, Nancy; Gnugnoli, Giorgio; Goldfeiz, Eliezer; Haney, Catherine; Hayden, Elizabeth, Heck, Jared; Henderson, Karen; Herr, Linda; HOO Hoc; Hopkins, Jay; Horn, Brian; Jackson, Kia; Jaczko, Gregory; Jones, Andrea; Jones, Cynthia; Kasputys, Clare; Kim, Grace; Kock, Andrea; Kozal, Jason; Kreuter, Jane; Larson, Emily; Lepre, Janet; Mayros, Lauren; McDermott, Brian; McDevitt, Joan; McIntyre, David; Michele.O'Shaughnessy@srs.gov; Mitchell, Linda; Moore, Scott; Musico, Bruce; Orders, William; Owens, Janice; Pstrak, David; Rayland, Andrew; Rosales-Cooper, Cindy; Sastre, Eduardo; Schwartzman, Jennifer; Shaffer, Mark; Sharkey, Jeffry; Shepherd, Jill; Smiroldo, Elizabeth; Smith, Brooke; Storch, Jaclyn; Stuyvenberg, Andrew; Svinicki, Kristine; Tobin, Jennifer; Tuttle, Glenn; Weaver, Doug; Whitney, James; Wittick, Brian; Young, Francis; Zeleznock, Karen; Zorn, Jason
Subject: CRS Reports on the Japan Situation - please follow the links

US Nuclear Power Plant Sites: Maps of Seismic Hazards and Population Centers [506 Kb]
The Japanese Nuclear Incident: Technical Aspects [215 Kb]
Japan's 2011 Earthquake and Tsunami: Economic Effects and Implications for the United States [524 Kb]
Fukushima Nuclear Crisis [251 Kb]
Japan-U.S. Relations: Issues for Congress [536 Kb]
Japan 2011 Earthquake: U.S. Department of Defense (DOD) Response [346 Kb]

LLL/534

From: Couret, Ivonne
To: Burnell, Scott
Subject: FW: Exact meaning of "mile"
Date: Thursday, April 14, 2011 3:30:00 PM

Do you want to answer this one? Ivonne

-----Original Message-----
From: Janbergs, Holly On Behalf Of OPA Resource
Sent: Thursday, April 14, 2011 3:29 PM
To: Couret, Ivonne
Subject: FW: Exact meaning of "mile"

-----Original Message-----
From: katsup64@gmail.com [mailto:katsup64@gmail.com] On Behalf Of Toshihiko Katsuda
Sent: Thursday, April 14, 2011 3:27 PM
To: OPA Resource
Cc: Toshihiko Katsuda
Subject: Exact meaning of "mile"

Dir Sir,

My name is Toshi Katsuda. I am a science correspondent of ASAHI, Japanese daily newspaper.

My question is about a unit of length that NRC uses in statements and/or press releases, specifically, "mile."

When NRC use "mile" in its statements and/or press releases, does it mean statute mile(1.609 km) or nautical mile (1.852 km)? This distinction is important for us to make sure our stories accurate because we write in metric unit not in English unit.

Thank you.

--
Toshihiko Katsuda
Science Correspondent
The ASAHI Shimbun (Japanese daily newspaper)
American General Bureau
National Press Bldg. #1022, 529 14th St., NW
Washington, D.C., 20045 USA
Phone: +1-202-783-1000
Fax: +1-202-783-0039
E-mail: MHH02277@nifty.com

LL4535

From: Couret, Ivonne
To: Medina, Veronika; Janbergs, Holly
Subject: FW: media - Ruters-Question
Date: Thursday, April 14, 2011 12:43:00 PM

Did anyone follow up with this found it in my emails. Ivonne

From: Royer, Deanna
Sent: Wednesday, April 06, 2011 10:47 AM
To: Couret, Ivonne
Subject: media - Ruters-Question

Tim Gardner
202-898-8360
Timothy.gardner@reuters.com
Re: Assessment in NY Times regarding Fukushima's reactor.

Deanna Royer
Contract Secretary
Division of New Reactor Licensing
(301) 415-7158
Deanna.Royer@nrc.gov

LLL 5316

From: Brenner, Eliot
To: Brenner, Eliot
Subject: Two late TNT additions
Date: Thursday, April 14, 2011 8:30:12 PM

FUKUSHIMA-DRIVEN US REACTOR UPGRADES – The New York Times reports: The Tennessee Valley Authority said Thursday it was considering millions of dollars of improvements to protect its six nuclear reactors from earthquakes and floods. It is the first American reactor operator to announce safety changes that it is weighing since an earthquake and tsunami set off a nuclear crisis at the Fukushima Daiichi plant in Japan last month. Other operators have said publicly that they might have to make changes, but they have avoided saying what those were.

The T.V.A. issued a fact sheet saying that it was considering reducing the amount of fuel in its spent fuel pools by transferring older fuel to passively cooled "dry casks" and adding additional backup diesel generators. It also listed three changes that are less commonly discussed: improving electrical switchyards to make them more resistant to earthquakes, adding small generators to recharge cellphone batteries and keep the lights on, and reinforcing the pipes that provide cooling water to spent fuel pools.

http://www.nytimes.com/2011/04/15/science/earth/15nuclear.html

SONGS Plume Phase and State Ingestion Pathway Exercise (Irvine, CA) – OPA staffed a press room for real media today at the ingestion pathway exercise in anticipation of possible press attendance. FEMA, SONGS and DHS Public Affairs also staffed the exercise. 29 media outlets attended the Tuesday plume phase exercise at the SONGS JIC. Today, no media showed up at the hotel during the exercise as they were encouraged on Tuesday that the Friday meeting would be more worthwhile. We expect a large turnout tomorrow at the public meeting in San Juan Capistrano and will have OPA on site to manage press.

From: Janbergs, Holly
To: Couret, Ivonne; Medina, Veronika
Subject: RE: media - Ruters-Question
Date: Thursday, April 14, 2011 12:45:08 PM

I didn't.

From: Couret, Ivonne
Sent: Thursday, April 14, 2011 12:44 PM
To: Medina, Veronika; Janbergs, Holly
Subject: FW: media - Ruters-Question

Did anyone follow up with this found it in my emails. Ivonne

From: Royer, Deanna
Sent: Wednesday, April 06, 2011 10:47 AM
To: Couret, Ivonne
Subject: media - Ruters-Question

Tim Gardner
202-898-8360
Timothy.gardner@reuters.com
Re: Assessment in NY Times regarding Fukushima's reactor.

Deanna Royer
Contract Secretary
Division of New Reactor Licensing
(301) 415-7158
Deanna.Royer@nrc.gov

LLL/538

From: Brenner, Eliot
To: Couret, Ivonne
Cc: Sheehan, Neil; Burnell, Scott
Subject: Re: CNN call for interview - May piece
Date: Friday, April 15, 2011 1:43:29 PM

Why don't you ask scott to talk with her. I would be interested in finding out if anyone has been whispering in her ear to pique her interest.
Eliot Brenner
Director, Office of Public Affairs
US Nuclear Regulatory Commission
Protecting People and the Environment
301 415 8200
C:240 888 2923
Sent from my Blackberry

From: Couret, Ivonne
To: Brenner, Eliot
Cc: Sheehan, Neil
Sent: Fri Apr 15 13:25:30 2011
Subject: CNN call for interview - May piece

Eliot - Dana Garrett for CNN called when I was on leave said she spoke to both Veronika and Neil about a story they are trying to do NOT about Japan but issues with safety at US nuclear plants, groundwater leaks and recent taskforce informational memo. Her phone number is 212-275-7983. Please advise how I should respond. Ivonne

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/

111539

From: Burnell, Scott
To: sfecht@hearst.com
Cc: Brenner, Eliot
Subject: RE: Media Request - Popular Mechanics (deadline April 15)
Date: Thursday, April 14, 2011 2:02:48 PM

Hello Sarah;

My apologies, but the NRC isn't in a position to have that discussion at this time, particularly since the agency's only just started its review of all the issues associated with the Fukushima situation. Thanks for checking with us.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

-----Original Message-----
From: Sarah Fecht [mailto:sfecht@hearst.com]
Sent: Thursday, April 14, 2011 1:39 PM
To: OPA Resource
Subject: Media Inquiry

Below is the result of your feedback form. It was submitted by

Sarah Fecht (sfecht@hearst.com) on Thursday, April 14, 2011 at 13:38:43
---

comments: Hello,

I'm a reporter for Popular Mechanics magazine and we'd like to compare the Fukushima nuclear reactors to a U.S. Mark I reactor, pointing out differences in design with implications toward safety.

Could I set up a time to speak with someone about this? My deadline is tomorrow afternoon.

Thank you,
Sarah Fecht

organization: Popular Mechanics

address1:

address2:

city: New York

state: NY

zip:

country:

phone: 212-649-2873

NRR/DPR

From:	Janbergs, Holly on behalf of OPA Resource
To:	Couret, Ivonne
Subject:	FW: Media Inquiry -- Popular Mechanics
Date:	Thursday, April 14, 2011 1:45:34 PM

Same lady--

From: Fecht, Sarah [mailto:sfecht@hearst.com]
Sent: Thursday, April 14, 2011 1:44 PM
To: OPA Resource
Subject: Media Inquiry -- Popular Mechanics

Hello,

I'm a reporter for Popular Mechanics magazine and we'd like to compare the design of a U.S. Mark 1 reactor to the design at Fukushima, with an emphasis on safety features. Could we set up a time to speak in depth about this?

My deadline is tomorrow afternoon, but the sooner the better!

Many thanks,
Sarah Fecht

LL/541

From: Couret, Ivonne
To: Burnell, Scott
Subject: FW: Markey: NRC Directing Secrecy in the Wake of Fukushima Meltdown
Date: Friday, April 15, 2011 12:39:00 PM

Scott, Can you call and speak to Ryan new reporter for Dow Jones about Markey letter 202-862-9245. Ivonne

From: Brenner, Eliot
Sent: Friday, April 15, 2011 11:42 AM
To: Couret, Ivonne
Subject: FW: Markey: NRC Directing Secrecy in the Wake of Fukushima Meltdown

From: Burnell, Scott
Sent: Friday, April 15, 2011 10:45 AM
To: Harrington, Holly; McIntyre, David; Screnci, Diane; Sheehan, Neil; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Chandrathil, Prema; Dricks, Victor; Uselding, Lara; Stuckle, Elizabeth
Cc: Brenner, Eliot
Subject: RE: Markey: NRC Directing Secrecy in the Wake of Fukushima Meltdown

All – just wanted to make sure you have HQ's response in case you get local questions.

Hi Steve;

The NRC always documents any inspection findings of importance, although reports dealing with security-related information are not made public. The NRC will take any regulatory actions deemed necessary in our ongoing response to events in Japan.

As we've pointed out repeatedly, the NRC's response goes far beyond resident inspector activities at operating reactors. The residents' work is meant to ensure the plants have in place the means to deal with design-basis events. The residents are also ensuring the plants adhere to the NRC's post-9/11 requirements to have additional resources for dealing with beyond design-basis events. The residents are well-positioned to monitor how the plants use their corrective action programs to deal with any discrepancies in these areas.

The overall review effort, including the 90-day examination of potential actions for reactors and spent-fuel pools, will include regular public meetings and its results will be publicly available. Thanks.

Scott

From: Dolley, Steven [mailto:Steven_Dolley@platts.com]
Sent: Friday, April 15, 2011 10:16 AM
To: Burnell, Scott
Subject: FW: Markey: NRC Directing Secrecy in the Wake of Fukushima Meltdown

111/542

Hi Scott, writing a short item for our wire service, following for Inside NRC next Weds.

Any initial comment from the agency for my story today? I'll be filing in about an hour or so.

Thanks,
Steve

From: Barry, Giselle [mailto:Giselle.Barry@mail.house.gov]
Sent: Friday, April 15, 2011 10:03 AM
To: Barry, Giselle
Subject: Markey: NRC Directing Secrecy in the Wake of Fukushima Meltdown

FOR IMMEDIATE RELEASE

Contact: Giselle Barry 202-225-2836, Eben Burnham-Snyder 202-225-6065

Markey: NRC Directing Secrecy in the Wake of Fukushima Meltdown

Limits Placed on Time, Scope, Transparency of Inspections Designed to Assess U.S. Vulnerability

WASHINGTON (April 15, 2011) – In the wake of the Fukushima disaster, the Nuclear Regulatory Commission (NRC) set out to inspect the U.S. fleet of nuclear reactors to ensure their safety and report publicly on its findings. Yet today, Rep. Edward J. Markey (D-Mass.) revealed that significant limits may be imposed on the inspections, and that inspectors also have been directed to keep many of the most serious vulnerabilities secret.

In a letter sent to Greg Jaczko, the Chairman of the Nuclear Regulatory Commission, Rep. Markey notes that he has been informed that inspectors are limited to 40 hours to check a nuclear power plant with only one unit, and 50-60 hours to check a plant with multiple units. Inspectors were also initially instructed to limit their inspections only to the adequacy of safety measures needed to respond to "Design Basis Events." These inspections were therefore looking at the vulnerabilities to events that have already been contemplated and analyzed by the NRC, but not to many of the events that occurred in Fukushima which were previously considered to be impossible and therefore not subject to regulation. When NRC's own inspectors complained about this limitation, it was removed, but inspectors were then directed not to record any observations or findings of vulnerabilities that went beyond design-basis events in any document that would eventually become public as part of the NRC's review.

"These limitations, if true, severely undermine my confidence in the Commission's interests in conducting a full and transparent assessment of the ability of U.S. nuclear power plants to be kept safe in the event of an incident that exceeds the current design basis assumptions regarding earthquakes or electricity outages -- such as the ones that occurred in Japan," wrote

Rep. Markey, who is the top Democrat on the Natural Resources Committee and a senior member of the Energy and Commerce Committee. "This also seems entirely at odds with the Commission-approved direction to study the implications of the Fukushima meltdown on U.S. facilities and report publicly on the findings of the study. We should stand prepared to learn from the catastrophe in Japan and plan ahead to address what was unforeseen but occurred anyway, rather than attempting to hide our vulnerabilities from public view and, potentially, use the fact that the information will be kept secret to avoid taking all necessary regulatory action."

"The fact that they plan to keep the most serious vulnerabilities secret raises questions about whether the Nuclear Regulatory Commission is more interested in public relations than public safety," said Rep. Markey in additional comments.

In the letter, Rep. Markey asks Chairman Jaczko and the NRC to respond to these reports, and ensure that the decision to hide some of the results from public view is reversed. Rep. Markey also asks whether U.S. nuclear power plants' vulnerability to events that are known or thought to have occurred in Japan – such as more severe earthquakes and tsunamis than expected, the melting of core nuclear fuel rods through the reactor pressure vessel, hydrogen explosions in reactor cores and spent nuclear fuel areas, long electricity outages and losses of cooling to reactor cores and spent nuclear fuel storage areas, and the failure of multiple safety systems and diagnostic capabilities – will be both analyzed and reported on publicly as the Commission was supposed to do.

The full letter is available HERE.

###

From: Couret, Ivonne
To: WBarber@snl.com
Subject: NRC REPLY Information found by NRC Historian - RE: Trade press request: Yankee Rowe and license renewals
Date: Friday, April 15, 2011 8:16:00 AM

Dear Wayne,
I asked the NRC Historian Tom Wellock to look into your questions. Below you can find current information and links to further resources toward resolving your query. Ivonne

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

"Has the NRC approved 61 20-year nuclear plant license renewals and rejected none under the current system?"

I count 63 units approved and none rejected, but check my math at http://nrc.gov/reactors/operating/licensing/renewal/applications.html
See also, http://nrc.gov/reading-rm/doc-collections/fact-sheets/fs-reactor-license-renewal.html

"Did the NRC reject a license renewal for Yankee Rowe around 1991? Were the rules rewritten after Yankee Rowe (which is now decommissioned)."

From what I can find, I believe they withdrew their application.

Were the rules rewritten? Yes. See, http://nrc.gov/reading-rm/doc-collections/fact-sheets/fs-reactor-license-renewal.html

A brief history of Rowe can be found at: http://www.wmsym.org/archives/2001/50/50-1.pdf

Here is a synopsis of what happened in 1991 that I found online. **"NRC Staff, Yankee Atomic Continue Reactor Safety Debate," The Energy Daily, Oct. 4, 1991, p. 4.**

"Although shutdown request by the Union of Concerned Scientists was denied, the NRC initiated a review of the plant's PRA, which ultimately found that because of the uncertainties, the risk may have been greater than previously estimated.2 The NRC revised its analysis to reflect the postulated detrimental effects of the vessel's metal cladding and made more conservative assumptions of potential cracks and the density of flaws in the vessel and welds. The NRC staff recommended shutting the plant until testing of actual plant conditions could be performed and the uncertainties resolved. This testing would involve applying specialized methods for obtaining samples of the weld materials,

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and for positioning ultrasonic testing equipment in the 2-inch gap between the vessel and cladding. Yankee Atomic Electric Co. concluded that the novel testing methods necessary to verify the integrity of the reactor vessel, estimated to cost $23 million, were not economically justified and voluntarily removed the plant from service and officially retired it 4 months later."

http://www.princeton.edu/~ota/disk1/1993/9305/930504.PDF

Tom

From: Wayne Barber (SNL: 703-373-0160) [mailto:WBarber@snl.com]
Sent: Thursday, April 14, 2011 4:28 PM
To: OPA Resource
Subject: Trade press request: Yankee Rowe and license renewals

Has the NRC approved 61 20-year nuclear plant license renewals and rejected none under the current system?

Did the NRC reject a license renewal for Yankee Rowe around 1991? Were the rules rewritten after Yankee Rowe (which is now decommissioned).

This all came up in the context of a Natl Press Club panel discussion earlier today.

Many thanks.

Wayne B.

Wayne Barber
Generation Markets Week Editor
SNL Energy
703-373-0160 p
703-373-0159 f
wbarber@snl.com<mailto:wbarber@snl.com>

From: Garland, Stephanie
Sent: Friday, April 15, 2011 5:13 PM
To: Cianci, Sandra
Subject: Forward to OPA

Sandy,

A call came in for Marty at 5:05 p.m. on Friday from Hannah Northey 202-446-0468 with Greenwire. She was requesting to speak with Marty regarding his testimony on the hill re: Nuclear Issues. I am pretty sure this should go to OPA, but I couldn't remember the email address they gave us. Could you please forward on Monday? I appreciate your help.

Stephanie Garland
Administrative Assistant to Darren Ash, DEDCM
Office of the Executive Director for Operations
O-17 H15
301-415-8704
stephanie.garland@nrc.gov

LL/544

From:	Stuckle, Elizabeth
To:	Stuckle, Elizabeth; Brenner, Eliot; Hayden, Elizabeth; Harrington, Holly; McIntyre, David; Burnell, Scott; Couret, Ivonne
Subject:	RE: Updated list of inaccuracies and concerning verbiage
Date:	Friday, April 15, 2011 2:38:06 PM
Attachments:	Thematic Concerns Repeatedly Expressed after Japanese Nuclear Incident.doc

I have marked where the new list ends and the old list begins on this copy

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From: Stuckle, Elizabeth
Sent: Friday, April 15, 2011 2:17 PM
To: Brenner, Eliot; Hayden, Elizabeth; Harrington, Holly; McIntyre, David; Burnell, Scott; Couret, Ivonne
Subject: Updated list of inaccuracies and concerning verbiage

Attached is the latest version of my log of inaccuracies and concerning verbiage. Covers 13 days (through today).

Elizabeth M. Stuckle
Office of Public Affairs
U.S. Nuclear Regulatory Commission
301-415-2169
elizabeth.stuckle@nrc.gov

EDO-645

Thematic Concerns Repeatedly Expressed after Japanese Nuclear Incident

1. How can you guarantee that it's not going to happen here?
2. The NRC should do more to protect the public
3. Safety of spent fuel pools versus dry cask storage
4. Re-examination of evacuation zones (EPZs) – are they adequate. Many recommend expanding the EPZs.
5. Re-examination of whether there's sufficient backup power to reactors and to spent fuel pools
6. Fuel pools should be constructed with more safeguards and protection like reactors are.
7. Should there be a moratorium on the construction of new nuclear power plants?
8. Re-examination of what is the safety threshold for radiation amounts. Major fear and misunderstanding of radiation.
9. NRC is in bed with the industry since licensees pay fees to the NRC. They are more concerned about profit than safety.
10. How adequate are the backup plans to keep reactor cooling systems running if power is knocked out? Battery length is way too short, etc.

Inaccuracies and/or Concerning Verbiage from 3/30 through 4/15 clips (13 days)

California Lawmakers Press NRC to Halt Relicensing Work Pending Seismic Studies (AP 4/15)

Sen. Sam Blakeslee, whose district includes Diablo Canyon, says the commission sees earthquake risk through rose-colored glasses.

(KEYT-TV Santa Barbara, 4/14)

California State Senator Same Blakeslee said that the NRC sees earthquake risk through rose colored glasses.

NRC Said To Be Too Close To Nuclear Industry (ProPublica 4/14)

Examining the 2002 incident at Davis-Besse station, when NRC regulators agreed to delay an emergency order to shut down for inspection, only to later find a football-sized hole in the reactor vessel's steel side, ProPublica (4/14, Sullivan) reports that according to an NRC inspector general's report, senior officials at the agency held off in part because they did not want to hurt the plant's bottom line. NRC critics say the problems at Davis Besse, are prime examples of the agency's deference to industry.

Gundersen Discusses Fukushima Plant Crisis (Huntington News Network 4/14)
Arnie Gunderson, Fairwinds Associate

Gunderson also tells how governments limit public access to radiation dose data

Lochbaum Faults Spent Fuel Storage Management (Palm Beach Post 4/13)
David Lochbaum, Union of Concerned Scientists

. .spent fuel pools are among the most vulnerable spots at a nuclear plant, housed as they are in structures that aren't as strong as reactors containment buildings. It would be hard to manage this hazard (more) foolishly. The federal government's ineptitude in disposing of spent fuel has left Americans across the country exposed to elevated and undue risks,' Lochbaum said.

Critics Fault Rule for 10-Mile Evacuation Zone (Cape Cod Times, 4/140
Mary Lampert, Pilgrim Watch

. . says the zones (10-mile EPZ) are arbitrary.

Asbury Park Press Calls For New Tritium Release Penalties (Asbury Park NJ Press, 4/13)

When it comes to the release of carcinogenic tritium, the Nuclear Regulatory Commission clearly has failed in its role to ensure the safety of a public at the mercy of nuclear power plants, an Asbury Park Press investigation published Sunday found. The Press says that current regulations don't provide for penalties for tritiated water releases at nuclear plants, which are threatening water supplies in New Jersey and other states.

Jaczko Defends Monitoring Mode Authority (Forbes "Ingenuity of the Commons blog, 4/13)
Senator James Inhofe (R-Okla)

Sen. James Inhofe (R-Okla.) accused NRC Chairman Gregory Jaczko of "invoking emergency powers without cause and taking authority away from other members of the NRC." Inhofe said "Jazcko has evoked emergency authority and transferred commission functions to himself in the wake of the earthquake in Japan." Inhofe called for transparency and suggested Jaczko may have overstepped his authority. Jaczko said the "NRC went into „monitoring mode " on March 11," allowing it to "deploy a 24-hour assistance team to Japan. ... „That ' s an authority the chairman has. "

(E&E News, 4/14)

Sen. Inhofe said NRC Chairman Jaczko "used emergency authority and transferred commission functions to himself in the wake of the Japanese events and failed to inform the committee," and said the "law confers emergency authority on the chairman in the wake of an emergency at a particular facility or materials regulated by NRC. But Inhofe said at present he is not aware that an emergency condition exists at any US facility." Jaczko said he has been "acting within his current authority, and NRC officials said Inhofe had sent a letter to the agency earlier expressing his concerns, although that letter has not yet been made public."

Spent Fuel Storage Problems Spread Concerns About Nuclear Power (McClatachy 4/13)
David Lochbaum, Union of Concerned Scientists

"The irrefutable bottom line is that we have utterly failed to properly manage the risk from irradiated fuel stored at our nation ' s nuclear power plants."

NRC Criticized For Reaffirming 10-Mile Evacuation Zone (Middletown NY Times Herald-Record, 4/10)

NRC critics "have long claimed that it sees itself as a part of the nuclear industry, not as the buffer between the interests of that industry and the safety of the nation. At a time when people are skeptical with good reason . . . the NRC has become the boy who won't cry wolf even if the wolf is in the room."

NRC Oversight Faulted As "Weak" And "Complacent" (Stamford CT Advocate 4/9)

New England Center for Investigative Reporting

"Internal government watchdogs and outside experts alike say the US Nuclear Regulatory Commission is too lenient on the industry it is charged with regulating, often making decisions based on the industry's profit margins rather than public safety. The article likens the charges to those made about the Mine Health Safety Administration and the Minerals Management Service after disasters last year at the Upper Big Branch Mine and the Deepwater Horizon spill, and while the nuclear industry maintains the NRC is a tough regulator that asks tough questions, critics counter that the agency might ask tough questions, but is all too willing to accept easy answers.

WCVB-TV Boston 4/10
David Lochbaum, Union of Concerned Scientists

Concerns that the Nuclear Regulatory Commission is weak are nothing new, according to former nuclear engineer, David Lochbaum. In the wake of the Fukushima plant crisis questions about safety concerns are increasing. Lochbaum said, "The NRC is complacent . . ."

Group Says NRC May Not Have Learned From Davis Besse Experience (WPTZ-TV Burlington VT. 4/11)
Hearst Connecticut / New England Center for Investigative Reporting

. .the NRC allowed First Energy to keep the Davis Besse plant operating for 45 days beyond a required inspection date, during which time workers found a pineapple-sized cavity in the reactor's vessel head caused by leaking boric acid. Shay Totten, a reporter from the station working with the broader investigative journalism team, terms that fairly shocking and says the Hearst Media/NECIR report also raises questions about whether or not the regulatory agency built on the Ohio experience.

UCS Suspects NRC Skewed SOARCA Results (Union of Concerned Scientists "All Things Nuclear" blog, 4/9)
Ed Lyman

UCS has long been concerned that the NRC imposed constraints on the SOARCA program that would significantly skew its results to ensure an outcome suggesting the public has little to fear from severe nuclear plant accidents. In 2006, UCS requested that the NRC publicly release its guidelines for the program, the constraints it imposed on it, and the assumptions underlying the program's assessment of accident scenarios, but the NRC refused to release that information, despite the fact that the NRC plans to make SOARCA's results public and, earlier in 2006, NRC Commissioner Gregory Jaczko—now the agency's chairman—called for the agency to release the material UCS requested.

Tritium Leaks Said To Be Increasing At Plants (Asbury Park NJ Press, 4/10)
Asbury Park Press

Millions of gallons of radioactive water have leaked from nuclear power plants throughout the US since the 1970s, threatening water supplies in New Jersey and other states, an Asbury Park Press investigation found. Even though some of the massive leaks have polluted groundwater, the NRC has never fined a violator even plant operators that repeatedly leaked tritium, of which there was an average of one per year in the 1990s. That average increased to five leaks or spills reported in 2010, five in 2009 and three in 2008, according to an NRC document.

Fears Over Spent Nuclear Fuel Increasing (Chattanooga TN Times Free Press, 4/11)
David Lochbaum, Union of Concerned Scientists

David Lochbaum, who once worked at TVA's Browns Ferry Nuclear Plant and for the Nuclear Regulatory Commission (NRC), noted that the spent fuel pools at the TVA plants and around the country are not cooled by an array of highly reliable emergency systems that can be powered from the grid, diesel generators or batteries.

- - - - - - - - - End of new list - - - - - - - - - -

Potassium Iodide Tablets Distributed In Delaware (Wilmington DE News Journal 4/7)

. .in a report released Wednesday, the Union of Concerned Scientists cited Nuclear Regulatory Commission documents that they believe show NRC analysts' concern about the reliability of a study of reactor accident consequences.// In that study, some NRC analysts questioned the ability of some American reactors to avert severe damage under scenarios that involve problems seen in Japan.

Lawmakers Say NRC Study Points To Vulnerabilities At US Plants (AFP 4/8)
Congresswoman Diana Degette

. .a study conducted last year by the Nuclear Regulatory Committee (NRC) raised grave questions about US preparedness to address reactor accidents.'// DeGette cited an NRC study which examined what would happen at Peach Bottom Station in Pennsylvania, and a number of other plants, in the event that the reactors lost both [main] power and back-up generators after an extreme event such as a quake, flood or fire. AFP says the Peach Bottom reactor came —perilously close to meltdown in the simulations.

Time's "Swampland" blog (4/8)
Henry Waxman (D-CA)

Committee Ranking Member Henry Waxman (D-Calif.) said yesterday. That result raises questions about whether our reactors may be as vulnerable as those in Fukushima,' he said.
The Peach Bottom plant came within one hour of core damage in a severe loss-of-power scenario,'

"All things Nuclear" Blog (4/7)
Ed Lyman, Union of Concerned Scientists

. .contrary to its assertions that —US nuclear plants are better prepared to withstand a catastrophic event like the March 11 earthquake and tsunami than Japanese plants, according to internal NRC documents, —there is no consensus within the NRC that US plants are sufficiently protected. The documents indicate that technical staff members doubt the effectiveness of key safety measures adopted after the September 11, 2001, terrorist attacks.

Group Wants NRC to Reconsider Approval Of AP1000 Design (WUNC-Radio 4/7)
John Runkle, AP1000 Oversight Group

The group argues that the AP-1000 reactor design is flawed and should not be used at Shearon-Harris and other sites. Attorney John Runkle says the group is troubled that the NRC seems poised on approving reactor designs that have not been fully reviewed nor fully resolved.

Op-Ed: Former Senator: Dry Storage Safest Option For Nuclear Waste (Reno News and Review 4/7)
Former Senator: Dry Storage Safest Option For Nuclear Waste

"Unlike a repository-at Yucca Mountain or elsewhere-dry storage can be done immediately, as opposed to waiting decades before a disposal or storage location could be ready." Bryan argues that this hasn't already been done.

NRC Focused On VY Safety, Not Shutdown (Bratboro Reformer VT 4/6)
Robert Bady, Vermont coordinator of the Safe and Green Campaign

Bady said the problem is financial, however. "The NRC tries to maintain the safety of the nuclear reactor while also maintaining the profitability of the nuclear industry," Bady said. "The profitability shouldn't be the NRC's concern. If the NRC put safety before profit, they wouldn't allow a spent fuel pool to be stored seven feet above ground."
He added that through activism, he hopes to effect a change in the NRC that safety be on equal footing of profits. "The NRC is not focusing on the decommissioning of the plant at this time but rather on its continued safe operation," Neil Sheehan, spokesman for NRC said.

NRC: Japanese Crisis Doesn't Support Pulling Oyster Creek's License. (AP 4/6))
Jeff Tittel, director of the New Jersey Sierra Club

"The New Jersey Sierra Club says the NRC has not learned anything from the Japanese disaster," and the group's director, Jeff Tittel, called the NRC "a cheerleader for industry" that "looks the other way when it comes to relicensing."

Concerns Expressed Over NRC Allowing Plants To Increase Output. KVNO-FM Omaha 4/4

Some groups like the Advisory Committee on Reactor Safeguards have voiced concerns at the ease in which the NRC grants permission to increase power. Questions have also been raised about financial motives possibly outweighing safety factors. But Mitlyng said modifications are put into place at the plants in order to accommodate the power increase in several forms.

Professor Calls For End of Nuclear Power. (The Independent 4/5)
Chris Williams, professor at Pace University

. .23 of the 104 operational nuclear reactors in the US "are built on the same 1960s design by the same company, General Electric, as the reactors at Fukushima," they "have been recognized to have serious design faults," and "design vulnerabilities...are routinely discovered." Furthermore, many nuclear plants are "on geologically active faults, in coastal locations or close to large sources of fresh water." Finally, Williams argues that nuclear power requires subsidies to be economically practical. Williams argues the reason for nuclear power is to be a justification for researching "the power to destroy life on a planetary scale" and producing plutonium for bombs. He calls for pressuring the government to not new nuclear plants or relicense old ones.

Nuclear Power Said To Not Make Economic Sense (Forbes 4/5)
Cato Institute senior fellows Jerry Taylor and Peter Van Doren

. .the current "relatively unshaken" political faith in nuclear power is "unfortunate," as "nuclear power makes no sense from an economic perspective." The electricity produces "is not even remotely competitive in power markets with gas-fired or coal-fired electricity now or in the foreseeable future." Furthermore, there is a high risk of cost overruns. The authors argue, "The political campaign to ram these plants down the market's throat threatens catastrophic harm to both taxpayers and ratepayers."

"Common Ground "program (KCRA-TV Sacramento 4/2)
Rochelle Becker of the Alliance for Nuclear Responsibility

calls the Japanese disaster "a huge game changer for California's nuclear industry," and the segment adds that "critics of the other nuclear industry say that Diablo Canyon and the state's other twin reactors San Onofre in San Diego County are just as vulnerable to earthquakes and tsunami damage as the plants in Japan."

Some Fear 10-Mile Evacuation Zone Plans Do Not Reflect Real-World Risks (Miami Herald 4/3)

Activists and some political leaders say the NRC's evacuation plans "don't reflect real-world risks"

WCBS-TV (New York 4/2)
Tom Syracuse, noted protester

"The Indian Point Power Plant is located near the intersection of two earthquake faults. Nuclear energy cannot be safe. Plutonium can contaminate the environment for hundreds of years. Studies show that New York City could not be evacuated in time."

Indian Point Plant Called Too Dangerous To Continue Operating (Westchester NY 4/2)
Gary Shaw, Indian Point Safe Energy Coalition

. .asserts mistakenly that "Indian Point 3 has just been named by the US Nuclear Regulatory Commission as the nuclear reactor in the US that is most likely to suffer reactor core damage due to an earthquake and the stated odds of that happening in any given year are higher than the odds of winning $100 in the Powerball lottery." Shaw says he is not saying a "catastrophic event will definitely occur," but that one could happen, and "if the worst case happens, the consequences are simply too awful to imagine."

Pasadena CA Weekly (4/1)

Grula, PhD, Southern California Federation of Scientists

"The unfolding nuclear disaster in Japan should put an end, once and for all, to recent calls for a nuclear power 'renaissance' in the US." The crisis instead demonstrates that "nuclear power should be phased out completely." Grula added that it will take "many years" to determine how many deaths and cancers will be caused by radiation releases from the apparent Fukushima plant meltdowns, but the casualties may "eventually exceed those caused by the 1986 nuclear accident at the Chernobyl plant in Ukraine." Grula closes by saying that further development of nuclear power should to be "stopped in its tracks."

The Connecticut Post (4/1)

". .should something cause water to drain from a cooling pool, well, one doomsday scenario has a fire at the Millstone Nuclear Power Station in Waterford causing 29,000 square miles of land to become uninhabitable.."

WVUE-TV (New Orleans, 3/31)

the NRC "issued a report to Congress today suggesting it has concerns with" the natural disaster preparedness of "only three plants in the US." WVUE-TV adds that, according to the NRC, "those plants are in South Carolina, Kansas and Nebraska. NRC workers say the plants are operating safety but they want to conduct a more intense study of them."

Lawmakers, Medical Groups Support Expanding KI Distribution Radius (AP, 3/31)

The American Thyroid Association

. .the "American Thyroid Association, whose mission is to promote thyroid health, wants to go further - urging that potassium iodide be made available within 200 miles of a nuclear plant."

Columnist Dismisses Claims That Nuclear Power Is Safer Than Coal (Bluefield WV Daily Telegraph, 3/31)

Charles Owen, columnist

"given all of the distressing headlines coming out of Japan over the past two weeks, it seemed a little odd for someone to be saying that nuclear energy was 'safer' than coal - go green movement or not." Mentioning the possible contamination of radiation from one of the plants in Japan, Owens says, "I guess the point I'm trying to make is that coal isn't radioactive. It doesn't have the potential to sicken or kill thousands - if not millions,

KFOX-TV El Paso TX (3/29)

"separate report out today by a consumer interest group found several u-s nuclear power plants had close calls similar to the Japanese crisis - in the past 20 years.

NRDC Wants Obama To Order An "Independent" Investigation Of Nuclear Safety (Huffington Post, 3/29)
Frances Beinecke, Natural Resources Defense Council president

Beinecke adds that an "autonomous investigation, similar to the Kemeny Commission" should be conducted. Such a review would be "especially challenging for the NRC, which has long been viewed as a weak regulator with insufficient separation from the industry it oversees."

From: Brenner, Eliot
To: Couret, Ivonne
Subject: FW: Markey: NRC Directing Secrecy in the Wake of Fukushima Meltdown
Date: Friday, April 15, 2011 11:42:27 AM

From: Burnell, Scott
Sent: Friday, April 15, 2011 10:45 AM
To: Harrington, Holly; McIntyre, David; Screnci, Diane; Sheehan, Neil; Hannah, Roger; Ledford, Joey; Mitlyng, Viktoria; Chandrathil, Prema; Dricks, Victor; Uselding, Lara; Stuckle, Elizabeth
Cc: Brenner, Eliot
Subject: RE: Markey: NRC Directing Secrecy in the Wake of Fukushima Meltdown

All – just wanted to make sure you have HQ's response in case you get local questions.

Hi Steve;

The NRC always documents any inspection findings of importance, although reports dealing with security-related information are not made public. The NRC will take any regulatory actions deemed necessary in our ongoing response to events in Japan.

As we've pointed out repeatedly, the NRC's response goes far beyond resident inspector activities at operating reactors. The residents' work is meant to ensure the plants have in place the means to deal with design-basis events. The residents are also ensuring the plants adhere to the NRC's post-9/11 requirements to have additional resources for dealing with beyond design-basis events. The residents are well-positioned to monitor how the plants use their corrective action programs to deal with any discrepancies in these areas.

The overall review effort, including the 90-day examination of potential actions for reactors and spent-fuel pools, will include regular public meetings and its results will be publicly available. Thanks.

Scott

From: Dolley, Steven [mailto:Steven_Dolley@platts.com]
Sent: Friday, April 15, 2011 10:16 AM
To: Burnell, Scott
Subject: FW: Markey: NRC Directing Secrecy in the Wake of Fukushima Meltdown

Hi Scott, writing a short item for our wire service, following for Inside NRC next Weds.

Any initial comment from the agency for my story today? I'll be filing in about an hour or so.

Thanks,
Steve

546

From: Barry, Giselle [mailto:Giselle.Barry@mail.house.gov]
Sent: Friday, April 15, 2011 10:03 AM
To: Barry, Giselle
Subject: Markey: NRC Directing Secrecy in the Wake of Fukushima Meltdown

FOR IMMEDIATE RELEASE

Contact: Giselle Barry 202-225-2836, Eben Burnham-Snyder 202-225-6065

Markey: NRC Directing Secrecy in the Wake of Fukushima Meltdown

Limits Placed on Time, Scope, Transparency of Inspections Designed to Assess U.S. Vulnerability

WASHINGTON (April 15, 2011) – In the wake of the Fukushima disaster, the Nuclear Regulatory Commission (NRC) set out to inspect the U.S. fleet of nuclear reactors to ensure their safety and report publicly on its findings. Yet today, Rep. Edward J. Markey (D-Mass.) revealed that significant limits may be imposed on the inspections, and that inspectors also have been directed to keep many of the most serious vulnerabilities secret.

In a letter sent to Greg Jaczko, the Chairman of the Nuclear Regulatory Commission, Rep. Markey notes that he has been informed that inspectors are limited to 40 hours to check a nuclear power plant with only one unit, and 50-60 hours to check a plant with multiple units. Inspectors were also initially instructed to limit their inspections only to the adequacy of safety measures needed to respond to "Design Basis Events." These inspections were therefore looking at the vulnerabilities to events that have already been contemplated and analyzed by the NRC, but not to many of the events that occurred in Fukushima which were previously considered to be impossible and therefore not subject to regulation. When NRC's own inspectors complained about this limitation, it was removed, but inspectors were then directed not to record any observations or findings of vulnerabilities that went beyond design-basis events in any document that would eventually become public as part of the NRC's review.

"These limitations, if true, severely undermine my confidence in the Commission's interests in conducting a full and transparent assessment of the ability of U.S. nuclear power plants to be kept safe in the event of an incident that exceeds the current design basis assumptions regarding earthquakes or electricity outages -- such as the ones that occurred in Japan," wrote Rep. Markey, who is the top Democrat on the Natural Resources Committee and a senior member of the Energy and Commerce Committee. "This also seems entirely at odds with the Commission-approved direction to study the implications of the Fukushima meltdown on U.S. facilities and report publicly on the findings of the study. We should stand prepared to learn from the catastrophe in Japan and plan ahead to address what was unforeseen but occurred anyway, rather than attempting to hide our vulnerabilities from public view and, potentially, use the fact that the information will be kept secret to avoid taking all necessary regulatory action."

"The fact that they plan to keep the most serious vulnerabilities secret raises questions about whether the Nuclear Regulatory Commission is more interested in public relations than public safety," said Rep. Markey in additional comments.

In the letter, Rep. Markey asks Chairman Jaczko and the NRC to respond to these reports, and ensure that the decision to hide some of the results from public view is reversed. Rep. Markey also asks whether U.S. nuclear power plants' vulnerability to events that are known or thought to have occurred in Japan – such as more severe earthquakes and tsunamis than expected, the melting of core nuclear fuel rods through the reactor pressure vessel, hydrogen explosions in reactor cores and spent nuclear fuel areas, long electricity outages and losses of cooling to reactor cores and spent nuclear fuel storage areas, and the failure of multiple safety systems and diagnostic capabilities – will be both analyzed and reported on publicly as the Commission was supposed to do.

The full letter is available HERE.

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From: OST01 HOC
Sent: Friday, April 15, 2011 7:41 PM
To: LIA08 Hoc
Subject: RE: Recurring Daily Actions and Calls Rev 31

Added inWebEOC

From: LIA08 Hoc
Sent: Friday, April 15, 2011 7:14 PM
To: OST01 HOC
Subject: RE: Recurring Daily Actions and Calls Rev 31

I fixed some chronic typos; otherwise the attached is identical to what you sent us an hour ago.

Please upload the attached onto the WebEOC site (ET Misc. Document Collection).

Thanks!

Clyde

Liaison Team Coordinator
US Nuclear Regulatory Commission
email: lia08.hoc@nrc.gov
Desk Ph: 301-816-5185

From: OST01 HOC
Sent: Friday, April 15, 2011 6:10 PM
To: LIA08 Hoc; RST01 Hoc; Hoc, PMT12; Boger, Bruce
Subject: Reoccurring Daily Actions and Calls Rev 31 (2)

Current updated copy on WebEOC

LL/547

From: OST01 HOC
Sent: Friday, April 15, 2011 9:31 PM
To: Boger, Bruce
Subject: FW: New Tasker

From: OST01 HOC
Sent: Friday, April 15, 2011 9:30 PM
To: Boger, Bruce
Subject: RE: New Tasker

Has been added and an email has been sent to Mike Dudak and Trish Milligan

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From: Boger, Bruce
Sent: Friday, April 15, 2011 7:16 PM
To: OST01 HOC
Cc: Hoc, PMT12; RST01 Hoc
Subject: New Tasker

Please create a new tasker for NSIR to provide the latest version of the composite document to Marty Virgilio by 0900 Monday morning, 4/18. High priority. Send to NSIR POC Mike Dudak and Trish Milligan.

LLL548

From: OST01 HOC
Sent: Friday, April 15, 2011 7:45 PM
To: Holahan, Patricia; Dudek, Michael
Subject: FW: New Tasker

An high priority tasker has been assigned for your review and due by Monday

---

From: Boger, Bruce
Sent: Friday, April 15, 2011 7:16 PM
To: OST01 HOC
Cc: Hoc, PMT12; RST01 Hoc
Subject: New Tasker

Please create a new tasker for NSIR to provide the latest version of the composite document to Marty Virgilio by 0900 Monday morning, 4/18. High priority. Send to NSIR POC Mike Dudak and Trish Milligan.

From: Google Alerts
To: Couret, Ivonne
Subject: Google Alert - Nuclear Regulatory Commission
Date: Saturday, April 16, 2011 11:16:29 PM

News **9** new results for **Nuclear Regulatory Commission**

Prairie Island makes improvements
Republican Eagle
Prairie Island nuclear plant is operating safely and has made improvements, though there are still some areas of concern, US **Nuclear Regulatory Commission** officials said Thursday. Prairie Island nuclear plant is operating safely and has made **...**
See all stories on this topic »

NRC Confident in San Onofre's Responses to Emergency Simulations
Patch.com
At a meeting in San Juan Capistrano on Friday, officials from the Federal Emergency Management Agency and the US **Nuclear Regulatory Commission** presented their early observations on disaster responses. "The performance we observed gives us continuing **...**
See all stories on this topic »

More than 100 people protest Diablo Canyon **Nuclear** Power Plant
KSBY San Luis Obispo News
A local activist group hit the beach Saturday, demanding the **Nuclear Regulatory Commission** suspend the licensing operations for all 104 nuclear power plants in the US until it has better studied the Fukushima crisis. The group Mothers for Peace hosted **...**
See all stories on this topic »

New York City's Deadly Game of **Nuclear** Roulette
Forbes (blog)
A month before the 9.0 magnitude earthquake in Japan triggered the crisis at the Fukushima nuclear power reactors, New York Attorney General Eric Schneiderman sued the federal **Nuclear Regulatory Commission** (**NRC**) for approving a regulation that would **...**
See all stories on this topic »

Forbes (blog)

NRC: MSNBC's review of seismic threat to nuke plants questionable
Daily Local News
By JOE BUONANNO, Special to the Local News The **Nuclear Regulatory Commission** is disputing an MSNBC analysis that ranked US nuclear power plants in terms of the likelihood their reactor cores would be damaged by an earthquake. **...**
See all stories on this topic »

Ed Markey blasts **nuclear** watchdog
Boston Herald
Edward Markey, D-Mass., is questioning the response of the **Nuclear Regulatory Commission** to the ongoing nuclear crisis in Japan, including claims that the agency is keeping important information about potential safety issues secret. **...**
See all stories on this topic »

Two **nuclear** power plants within 50 miles of RI
Providence Journal
Harold Denton, a retired official at the US **Nuclear Regulatory Commission** who led the response to the partial meltdown at Pennsylvania's Three Mile Island in

Providence Journal

LLL549

1979, said the disaster in Japan demonstrates that nuclear plants must have plenty of back-up **...**
See all stories on this topic »

Accident in Japan begs for context to stress safety of atomic power

The Augusta Chronicle
If we ever do have a fatality in the nuclear industry, there will be an outcry from some to shut down the plants, congressmen will hold hearings and the **Nuclear Regulatory Commission** will likely introduce new regulations -- all in response to the **...**
See all stories on this topic »

Radioactivity rises in sea off Japan **nuclear** plant

Salon
"This is going to be inevitably a much more challenging decommissioning than we have experience with," said Peter Bradford, a former commissioner on the **Nuclear Regulatory Commission**. Explosions in the first few days of the crisis at Fukushima showered **...**
See all stories on this topic »

Salon

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

Remove this alert.
Create another alert.
Manage your alerts.

From:	News - Kyodo News
Date:	Saturday, April 16, 2011 2:46:57 AM
Posted At:	Deleted Items
Conversation:	Brazil may mull scrapping import curbs on Japan food: minister
Subject:	Brazil may mull scrapping import curbs on Japan food: minister

---

TOKYO - Brazil will consider eliminating restrictions on food imported from Japan if the crisis at a nuclear...

View article...

111/650

From: News - Kyodo News
Date: Saturday, April 16, 2011 6:00:29 AM
Posted At: Deleted Items
Conversation: Fukuyama apologizes to Iitate villagers for anxieties
Subject: Fukuyama apologizes to Iitate villagers for anxieties

---

IITATE, Japan - Deputy Chief Cabinet Secretary Tetsuro Fukuyama apologized Saturday to residents of Iitate whose vil...

View article...

LL1557

From: Google Alerts
To: Couret, Ivonne
Subject: Google Alert - Nuclear Regulatory Commission
Date: Saturday, April 16, 2011 11:10:40 AM

Blogs **1** new result for **Nuclear Regulatory Commission**

Groups ask **NRC** to halt nuclear licensing | Michigan Messenger
By Eartha Jane Melzer
Dozens of groups and individuals are asking the U.S. **Nuclear Regulatory Commission** to suspend licensing and other activities at 21 nuclear plants until the agency completes an investigation of the Fukushima nuclear crisis.
Michigan Messenger - http://michiganmessenger.com/

Tip: Use a minus sign (-) in front of terms in your query that you want to exclude. Learn more.

Remove this alert.
Create another alert.
Manage your alerts.

111/552

From:	News - Kyodo News
Date:	Saturday, April 16, 2011 8:16:27 AM
Posted At:	Deleted Items
Conversation:	New cooling systems may be installed outside Fukushima reactor buildings
Subject:	New cooling systems may be installed outside Fukushima reactor buildings

TOKYO - Tokyo Electric Power Co. is considering installing circulating water cooling systems for nuclear rea...

View article...

111/553

From: Google Alerts
To: Couret, Ivonne
Subject: Google Alert - Nuclear Regulatory Commission
Date: Sunday, April 17, 2011 11:16:30 PM

News **10** new results for **Nuclear Regulatory Commission**

US is increasing **nuclear** power through uprating
Los Angeles Times
As a result, the nuclear reactions generate more heat, which boils more water into steam to drive the turbines that make electricity. Tiny uprates have long been common. But nuclear watchdogs and the US **Nuclear Regulatory Commission's** own safety **...**
See all stories on this topic »


Los Angeles Times

Tornado Cuts Power to Surry **Nuclear** Plant
Williamsburg Yorktown Daily
By WYDaily Staff Sunday, April 17, 2011 The US **Nuclear Regulatory Commission** staff is monitoring the situation at the Surry nuclear power plant after the site lost offsite power early Saturday evening due to a tornado affecting an electrical switchyard **...**
See all stories on this topic »

Progress Energy emerges as one of most troubled **nuclear** plant operators in US
Winston-Salem Journal
The **Nuclear Regulatory Commission** is widely expected to impose stricter safety standards in the wake of the Japanese crisis. The changes would make nuclear plants more costly to operate in this country. Progress executives acknowledge they are facing **...**
See all stories on this topic »

Hundreds Protest California Power Plant
CBS 47
The **Nuclear Regulatory Commission** shuts down Diablo Canyon if ever it determines that it's not safe to operate." The licensing process is ongoing. PG&E has asked for a delay in the final renewal procedures until seismic studies are done. **...**
See all stories on this topic »

Nuclear disaster: Who's at risk in York County the day after an event?
York Daily Record
York, PA - Despite the crisis that has unfolded at the Fukushima Dai-ichi Nuclear Power Station in Japan, the US **Nuclear Regulatory Commission** will continue to mandate that the emergency planning zone around a plant will hold to 10 miles, said Darrell **...**
See all stories on this topic »

Are we ready? **Nuclear** emergency plans in York County
York Daily Record
And US **Nuclear Regulatory Commission** meetings are held to better inform the public. One improvement discussed at a meeting there last week was that the plant hopes to have a battery backup system for its emergency sirens in place by 2013, because Peach **...**
See all stories on this topic »

Storage of spent fuel rods at New England **nuclear** power plants generates fear
MassLive.com
The dramatic increases in the number of rods per pool have been approved by the

LLL/554

federal **Nuclear Regulatory Commission**, partly because a national disposal site for nuclear waste has not been established. Experts say this federally sanctioned **...**

MassLive.com

See all stories on this topic »

Japan crisis raises doubts about **nuclear** fuels plant at SRS

Greenville News

Environmental groups opposed to the MOX factory at SRS likely will use the accident to request more studies from the US **Nuclear Regulatory Commission**, which must license the plant and the use of the fuel, an official with one of the groups said. **...**

See all stories on this topic »

Guy W. Farmer: Japan's **nuclear** disaster and Yucca Mountain

Nevada Appeal

And President Obama has directed the **Nuclear Regulatory Commission** to comprehensively review nuclear plant safety in the US Obama, Energy Secretary Steven Chu and Senate Majority Leader Harry Reid (D-Nev.) delivered a crippling blow to Yucca Mountain **...**

See all stories on this topic »

Severe storms kill at least 45

USA Today

The company reported no release of radioactive material and notified the **Nuclear Regulatory Commission**. "They shut down exactly as they are designed to do," **NRC** spokesman Joey Ledford said. "There is no danger." The Surry power station in southeastern **...**

USA Today

See all stories on this topic »

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

Remove this alert.
Create another alert.
Manage your alerts.

From: News - Kyodo News
Date: Monday, April 18, 2011 8:20:18 AM
Posted At: Deleted Items
Conversation: Japanese automakers measure radiation levels of vehicles for export
Subject: Japanese automakers measure radiation levels of vehicles for export

---

TOKYO - Japanese automakers have begun to measure the radiation levels of their vehicles for export in a bid...

View article...

111555

From:	News - Kyodo News
Date:	Monday, April 18, 2011 6:37:54 AM
Posted At:	Deleted Items
Conversation:	UPDATE1: Gov"t bans shiitake mushroom shipments from Fukushima city
Subject:	UPDATE1: Gov"t bans shiitake mushroom shipments from Fukushima city

TOKYO - The government has banned shipments of shiitake mushrooms grown outdoors in the city of Fukushima be...

View article...

LLL5886

From: Couret, Ivonne
To: Sheehan, Neil
Cc: Burnell, Scott
Subject: FW: request for an interview
Date: Monday, April 18, 2011 9:28:00 AM

Neil - I'm working under the assumption you are managing this. Ivonne

-----Original Message-----
From: Don Argott [mailto:dargott@914pictures.com]
Sent: Monday, April 18, 2011 9:08 AM
To: Sheehan, Neil
Cc: Burnell, Scott; Couret, Ivonne; Sheena Joyce
Subject: Re: request for an interview

Neil,

Just wanted to follow back up. Looks like you had to go back to work after all. Would love to get on your schedule for an interview asap and also follow along with an inspector or any other behind the scenes activities you would allow us to shoot.

By the way, I couldn't find the Syracuse piece that you had mentioned.

Hope to hear from you soon.

Don

Don Argott
Director
9.14 Pictures, Inc.
215-238-0707
http://914pictures.com/

On Apr 7, 2011, at 2:54 PM, Sheehan, Neil wrote:

> Don,
>
> Please give me a call tomorrow.
>
> Neil Sheehan
> NRC Public Affairs
> (610) 337-5331
>
>
>
> -----Original Message-----
> From: Don Argott [mailto:dargott@914pictures.com]
> Sent: Thursday, April 07, 2011 2:43 PM
> To: Sheehan, Neil
> Cc: Burnell, Scott; Couret, Ivonne; Sheena Joyce
> Subject: Re: request for an interview
>
> Neil,
>
> Wanted to get back in touch. How is May looking for us to do an

> interview?
>
> Hope things have calmed down a bit for you.
>
> Don
>
> Don Argott
> Director
> 9.14 Pictures, Inc.
> 215-238-0707
> http://914pictures.com/
>
> On Mar 24, 2011, at 4:10 PM, Sheehan, Neil wrote:
>
>> Don,
>>
>> Since you're based in Philly, Region I (King of Prussia) would
>> probably be able to help you. That would be me or Diane Screnci.
>> Again, that would be in a few weeks when things are a bit quieter.
>>
>> Neil Sheehan
>> NRC Public Affairs
>> (610) 337-5331
>>
>>
>>
>> -----Original Message-----
>> From: Don Argott [mailto:dargott@914pictures.com]
>> Sent: Thursday, March 24, 2011 4:08 PM
>> To: Burnell, Scott
>> Cc: Sheehan, Neil; Couret, Ivonne; Sheena Joyce
>> Subject: Re: request for an interview
>>
>> Scott,
>>
>> I totally understand. No, I was asking who the best person to speak
>> with was. I'll follow up with you in a few weeks as I know how busy
>> everyone is.
>>
>> Thanks.
>> Don
>>
>> Don Argott
>> Director
>> 9.14 Pictures, Inc.
>> 215-238-0707
>> http://914pictures.com/
>>
>> On Mar 24, 2011, at 4:03 PM, Burnell, Scott wrote:
>>
>>> Hello Don;
>>>
>>> I've been just as swamped as Neil and everyone in public affairs --
>>> did you ask me directly about a Japan-related interview?? In any
>>> case, we're consolidating all those requests here at HQ and we'll
>>> figure them out once the situation calms down. Thanks.
>>>
>>> Scott
>>>
>>> -----Original Message-----

>>> From: Don Argott [mailto:dargott@914pictures.com]
>>> Sent: Thursday, March 24, 2011 4:01 PM
>>> To: Burnell, Scott
>>> Cc: Sheena Joyce
>>> Subject: request for an interview
>>>
>>> Scott,
>>>
>>> How are you? Wanted to get back in touch to see if you could help
>>> put
>>> us in touch with some NRC spokespeople that we may be able to
>>> interview for our documentary? Specifically people who can speak to
>>> how the Japan crisis is affecting US nuclear policy. We already
>>> reached out to Neil Sheehan and have yet to hear, but I'm sure there
>>> are other people who are just as qualified to speak to us.
>>>
>>> Please let me know.
>>>
>>> Best,
>>>
>>> Don
>>>
>>> Don Argott
>>> Director
>>> 9.14 Pictures, Inc.
>>> 215-238-0707
>>> http://914pictures.com/
>>>
>>
>

From: CommPRO.biz
To: ivonne.couret@
Subject: Japan crisis catalyzes CSR, women in PR earn 14% less, Facebook's stealth ads, is PR a dirty word?
Date: Monday, April 18, 2011 5:30:57 AM

CommPRO.biz

Monday, April 18, 2011

This Issue:

.BIZ BLOGS

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Japan's Tragedy Is PR's Wakeup Call: It's Time to Put Corporate Responsibility into Practice

By Chad Tragakis, Senior Vice President, Hill & Knowlton, Washington

It seems that nearly every industry trade publication these days contains an article or two about the tragedy in Japan, and with good reason. There have been so many important learnings for communications professionals - around crisis outreach, risk communications, stakeholder engagement, and integrated strategic public relations to name just a few. Another relevant takeaway for our industry - whether on the agency or the client side - is that there is an opportunity for everyone to do something in response. If you need a communications bucket to put that into, try corporate responsibility, because this is the perfect opportunity to put it into practice. Let me explain:

10 to Watch: The Warriors, Instigators, and Curmudgeons of Social Voice

Social Media Zone...By Vicki Flaugher, aka @Smartwoman, a digital marketing consultant

Sometimes, just for fun, I google random thoughts and see what comes up. I find it amusing and enlightening. I like to not only see how the players in our industry are using SEO, but I also like to stumble across new stuff that is at the periphery of my status quo. For your viewing pleasure, here's 10 to watch - they might not be people you know, but I picked them to share some examples of how to find your social voice. Whether you're a warrior, instigator, or curmudgeon (butcher, baker, candle stick maker?) you can craft a voice in social that works well for your brand and your audience.

Public Relations News

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Applebee`s, Olive Garden Face PR Problem after Serving Alchohol to Kids

USA Today

This week, two of the nation`s largest casual dining chains--Applebee`s and Olive Garden--found themselves very uncomfortably trying to explain how alcohol ended up in kids` drinks. Last Friday, at an Applebee`s in Madison Heights, Mich., a 15-month-old boy`s sippy cup was supposed to be filled with apple juice but was filled with margarita mix and alcohol. On March 31, at an Olive Garden in Lakeland,

44/558

Fla., a 2-year-old was served alcoholic sangria, not orange juice. While both kids have recovered, the $604 billion restaurant industry has not. The media has feasted on these stories at a time the industry is just starting to rebound. "The problem is, it's too good a story," says PR consultant Katherine Paine. "It's got babies, alcohol and food." Leaders at Applebee's, Olive Garden and the National Restaurant Association all declined interviews on Thursday, deferring to public relations departments and statements. Applebee's cited pending litigation. "In an industry that serves more than 150 million meals every day, these are two extremely rare occurrences," the NRA statement read. "However, we believe that even one incident like this is too many." Restaurant and PR consultants say the chains also must: * Retrain staff. "Every employee is a PR rep," says crisis guru Jonathan Bernstein. "These incidents prove how many crises start with line workers." * Be forthcoming. The chains should clearly post their new policies on their websites, Facebook pages and Twitter accounts, Paine says. * Involve folks. Encourage social media comment on the policies, Paine says. "People want to talk about it." ...

Ogilvy Public Relations Worldwide Bolsters New York Consumer and 360-Degree Digital Practices with Three New Hires
PR Newswire

Law Firm PR Jobs Bring in the Dough, Salaries Rise 18%
ABA Journal

Monday's Good News: 10 Things PR Pros Do Right
ereleases

Marketing News

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Google's Search Engine Marketing Faces New Legal Complaint
Click Through-Marketing

SEC Settles with Former Zales Marketing Manager
Dallas Morning News

Cisco Takes Pre-Orders for New B2B and Enterprise-Focused Tablet
Digital Trends

Worth Reading: Business Insider Launches "Marketing Monday" Online Newsletter
Digital Trends

IR News

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New Study: Top Cities for Investor Relations Named (Is Yours on the List?)
Philly.com

A University of Illinois at Chicago survey finds Philadelphia among the 12 best cities at providing investors with financial information online. It may seem odd to think of cities needing to provide investor relations services in addition to picking up the trash, putting out fires, and arresting criminals. But the U.S. municipal bond market is estimated to be $3 trillion. So you'd hope the issuers of all that debt would

be diligent in keeping the buyers of that paper informed. Wrong. Yonghong Wu, an assistant professor of public administration at UIC, surveyed 75 of the nation's largest cities. Just 22 were posting detailed, timely financials online. Only 12 went above and beyond that standard. The survey didn't rank cities in terms of disclosure. But San Diego was held up as "an exemplary city investor relations website," according to a copy of the survey's report on MuniNetGuide.com. Philadelphia won praise for providing not only archived and current financial information about the city's finances, but also links to documents related to future bond issues and its policies on debt management and the uses of swaps, which are financial derivatives. The other cities earning praise were Albuquerque, N.M.; Jacksonville, Fla.; Los Angeles; Miami; Chicago; Nashville; New York; Oakland, Calif.; Portland, Ore.; and San Francisco ...

The Five Things Investors Most Want from Corporate IR
Business Insider

It Lives! Nasdaq Takeover of NYSE Not Dead with $1.3 Billion Looming
Bloomberg

Positive Economic Reports Offset Earnings on Wall Street
New York Times

CorpComm News

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Crisis Communications News: Crisis Expert Grades Microsoft's Phone 7 Update Mae Culpa
Computerworld

Microsoft's latest explanation of its Windows Phone 7 update fiasco gets an A for effort, but a B+ for its timing, a crisis communications expert said today. "I'd give them an A for the apology, but a B+ on the timing and the audience," said Andy Stoltzfus, a digital strategist with Levick Strategic Communications, a Washington, D.C. firm that helps companies deal with public relations emergencies. "They should have gotten their act together earlier," Stoltzfus said. Stoltzfus graded the performance of Joe Belfiore, Microsoft's top executive for Windows Phone, who on Wednesday gave the most detailed explanation yet why promised updates for Windows Phone 7 haven't reached customers. Microsoft has struggled to explain the delays for more than a month. Several weeks ago, Belfiore said that most users had gotten a February update, a claim he admitted on Wednesday "was wrong." Before that, Microsoft CEO Steve Ballmer had said that a larger update, nicknamed "NoDo," would be released in the first half of March. Shortly afterward, however, a Windows Phone 7 manager retracted Ballmer's pledge, saying NoDo would arrive later ...

Social Media in Heavily Regulated Industrys: Lessons from Pharma Social Media
PR-USA.net

Is PR a Dirty Word? PR's Biggest Problem May Be Its Own Image
Walkersands

Social Media Policy Alert: How to Avoid a Chrysler-Like Communications Disaster
Business Insider

Advertising News

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US Internet Ad Revenue Hit Record Highs

The Associated Press
U.S. Internet advertising revenue hit a record $26 billion in 2010, boosted by the popularity of online videos and social media. A PricewaterhouseCoopers report commissioned by the Interactive Advertising Bureau found that last year's ad revenue grew 15 percent from 2009. The previous record was in 2008, when full-year revenue hit $23.4 billion. The report, released Wednesday, said fourth-quarter advertising revenue also hit a record, at $7.4 billion. That's up 19 percent from the fourth quarter of 2009. The previous record was in the third quarter of 2010, at $6.5 billion. The most popular ad format was search, which represented 46 percent, or $12 billion, of the year's total revenue. Display-related ads accounted for 38 percent, or $9.9 billion, of 2010 ad revenue. That category includes banner ads, digital video ads and sponsorships. The third-largest Internet ad category is classifieds, which accounted for $2.6 billion, or 10 percent of 2010 revenue. PricewaterhouseCoopers partner David Silverman said more time spent online, fueled by the popularity of digital videos and social media, has helped fuel the ongoing advertising growth ...

Covario Study: Global Search Ad Spend Way Up as Q1 Surpasses Q4 for First Time
Covario

Anti Nuke Power Ads Air: Ads Include Powerful Fukushima Images
Chicago Tribune

Facebook Becoming an Advertising Giant
UPI

Top Blogs

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YouTube Streams Live Video: This Week in Social Media
Social Media Examiner
Marketing

PR, Not Communications
Richard Edelman - 6 A.M.
Public Relations

Engage 2.0 is Now Online and in a Bookstore Near You
Brian Solis
Public Relations

Living Walls Architecture
Cool Business Ideas
Marketing

Attractive Opportunities in the Agricultural Chemical Space
Small Cap Voice
Investor Relations

From: News - Kyodo News
Date: Monday, April 18, 2011 9:25:29 AM
Posted At: Deleted Items
Conversation: UPDATE2: Radiation inside Nos. 1, 3 reactor buildings up to 57 millisieverts
Subject: UPDATE2: Radiation inside Nos. 1, 3 reactor buildings up to 57 millisieverts

---

TOKYO - The radiation level inside the Nos. 1 and 3 reactor buildings at the crippled Fukushima Daiichi nucl...

View article...

LLL559

From:	News - Kyodo News
Date:	Monday, April 18, 2011 4:58:22 AM
Posted At:	Deleted Items
Conversation:	Gov"t bans shiitake mushroom shipment from Fukushima city
Subject:	Gov"t bans shiitake mushroom shipment from Fukushima city

TOKYO - The government has banned shipments of shiitake mushrooms grown outdoors in the city of Fukushima be...

View article...

111/560

From:	News - Kyodo News
Date:	Monday, April 18, 2011 11:02:39 AM
Posted At:	Deleted Items
Conversation:	*Gov"t aims to establish reconstruction task force, nuclear crisis panel*
Subject:	Gov"t aims to establish reconstruction task force, nuclear crisis panel

TOKYO - The government is aiming to set up a task force within the Cabinet to lead reconstruction efforts fo...

View article...

LLL/561

From:	News - Kyodo News
Date:	Monday, April 18, 2011 9:19:54 AM
Posted At:	Deleted Items
Conversation:	Gov"t panel releases 2 of over 2,000 radiation dispersal estimates
Subject:	Gov"t panel releases 2 of over 2,000 radiation dispersal estimates

TOKYO - The Nuclear Safety Commission of Japan has released only two computer-simulated estimates of radioac...

View article...

111562

From:	Hayden, Elizabeth
To:	Chandrathil, Prema; Clark, Kenneth; Screnci, Diane; Ledford, Joey; Sheehan, Neil; Hannah, Roger; Strasma, Jan; Uselding, Lara; Dricks, Victor; Mitlyng, Viktoria; McIntyre, David; Brenner, Eliot; Harrington, Holly; Couret, Ivonne; Janbergs, Holly; Burnell, Scott
Subject:	FW: Response from "Contact the NRC Web Site Staff"
Date:	Monday, April 18, 2011 2:46:27 PM

"We're done here!" If Dave is happy, nobody else counts!

Beth

-----Original Message-----
From: NRCWEB Resource
Sent: Monday, April 18, 2011 2:05 PM
To: Hayden, Elizabeth
Cc: Hardy, Sally; Main, Jeffrey; Holonich, Joseph; Rasouli, Houman; Partlow, Benjamin; Lee, Jun; Garrity, Paula
Subject: FW: Response from "Contact the NRC Web Site Staff"

Wow, now we can rest easy. If you recall after the last redesign, Mr. Lochbaum told us "we should put the redesign back in the box it came in and send it back." Congratulations everyone!!!

Joan

-----Original Message-----
From: Dave Lochbaum [mailto:dlochbaum@ucsusa.org]
Sent: Monday, April 18, 2011 1:12 PM
To: NRCWEB Resource
Subject: Response from "Contact the NRC Web Site Staff"

Below is the result of your feedback form. It was submitted by

Dave Lochbaum (dlochbaum@ucsusa.org) on Monday, April 18, 2011 at 13:12:06
---

organization: Union of Concerned Scientists

address1:

address2:

city:

state: ---

zip:

country:

phone:

comments: The redesigned website has a better look than the former website and is as good or better to navigate. Thanks for the effort.

LIU563

From: Wertz, Trent
To: Couret, Ivonne
Subject: FW: Phone Interview
Date: Tuesday, April 19, 2011 1:12:23 PM

From: Chadi Letayf [mailto:c.letayf@lek.com]
Sent: Tuesday, April 19, 2011 1:06 PM
To: Wertz, Trent
Subject: Phone Interview

Dear Sir,

As per our discussion, I am sending you this e-mail to introduce myself, the purpose of my request, and to try to schedule an interview with anyone in the Office of Nuclear Reactor Regulation.

My name is Chadi Letayf and I work for a strategy consulting firm in Paris, in France called L.E.K. Consulting (www.lek.com).

We are currently conducting a research project on electricity generation and fuel mix evolution in the United States. Our objective is to understand how they are likely to evolve in the long term and why (especially in the current context of shale gas and nuclear buzz).

We are currently contacting main industry experts in order to get a clear understanding of the different dynamics and we are currently focusing on the future of the nuclear power generation in the US. We will also contact power generating companies to get their view on the subject.

Among the different topics we would like to discuss with you; we would like to understand :
- the rationale for the low development of new nuclear capacity additions in the past decades (growth of electricity consumption too slow?)
- the possible impact of Fukushima on US nuclear regulation
- the impact of low gas prices on plans

Of course, we'd be glad to share the conclusions of our study with you once it is complete.

Thanks again for your help.

Best regards,

Chadi

CHADI LETAYF - L.E.K. CONSULTING
63, Avenue des Champs-Elysees - 75008 Paris - France
Ligne directe : +33 (0)1 47 03 19 42
- c.letayf@lek.com -
www.lek.com

LL564

From: Hayden, Elizabeth
To: Couret, Ivonne
Subject: RE: Current FAQs on Web translated to Spanish
Date: Tuesday, April 19, 2011 10:05:58 AM

Thanks. I saw them on the web, so I decided to leave the English version there and add the "expanded Qs and Qs"

Beth

From: Couret, Ivonne
Sent: Wednesday, March 30, 2011 1:28 PM
To: Uselding, Lara; Dricks, Victor; Chandrathil, Prema; Mitlyng, Viktoria; Screnci, Diane; Sheehan, Neil; Hannah, Roger; Ledford, Joey
Cc: Hayden, Elizabeth
Subject: Current FAQs on Web translated to Spanish

Here are the Spanish language translations to the FAQs located on the NRC Japan Web pages. You can forward these to Spanish Language media. Ivonne

LLL/566

From: Couret, Ivonne
To: Szabo, John
Subject: RE: MEDIA INQUIRY - AP Reporter -- Background Questions
Date: Tuesday, April 19, 2011 1:10:00 PM

Thanks John,
I found the information on our website under ethics and provided this link http://www.nrc.gov/about-nrc/employment/ethics/major-ethics-rules/post-employ.html to the reporter. Will keep the write up in the OPA Question's folder. Thanks, again. Ivonne

---

From: Szabo, John
Sent: Tuesday, April 19, 2011 1:07 PM
To: Couret, Ivonne
Subject: RE: MEDIA INQUIRY - AP Reporter -- Background Questions

Ivonne,

All former NRC employees, regardless of their position or grade, are subject to the government-wide post-employment law (18 USC 207). That statute prohibits any former Federal employee from representing another person (other than the United States), with intent to influence, to any current Federal employee or agency on any particular matter involving parties that the former employee participated personally and substantially while employed by the Government. It does not prevent any services that do not include representation to the Government. The ban is for life.

A prohibited representation could be a physical appearance before or a communication to a Federal employee, such as phone calls, letters, or e-mails. A prohibited particular matter is a specific matter, such as a licensing or enforcement action, inspection, application, or contract; however, the former employee must have been personally and substantially involved in that matter to constitute a violation. Generic matters, such as rulemakings or policy matters, are not included.

Former NRC supervisors are also prohibited for two years after leaving service from representing non-government parties to the Government on particular matters involving parties that were under their official responsibility during the last year of their government service.

Certain former NRC senior employees (such as most SES and above) are prohibited for a year after termination from representing any party back to the NRC on any particular matter, including generic matters, even if they had nothing to do with that matter while at the NRC.

From: Couret, Ivonne
Sent: Monday, April 18, 2011 4:22 PM
To: Szabo, John
Subject: MEDIA INQUIRY - AP Reporter -- Background Questions
Importance: High

Reporter Question - ¶ -- **RESTRICTIONS:** What restrictions are placed by the agency or broader federal policy on NRC employees who leave for private sector work in the

nuclear industry (whether as engineers, lobbyists, executives, etc.)? I understand that there are broad restrictions on not profiting from work you did for the government. Are there specific time periods that a departing NRC employee cannot do certain work for a company regulated by NRC? Other restrictions, such as that employee not being able to work on an issue that the employee worked on directly for the NRC?

Can you assist is there a specific document to share? Thanks, Ivonne

AP Associated Press

Justin Pritchard

Associated Press Reporter

Based in AP's Los Angeles Bureau

From: Couret, Ivonne
To: Parks, Benjamin; Steger (Tucci), Christine; Burnell, Scott
Subject: NOTES from meeting - RE: Revised AREVA Methods Comm Plan
Date: Tuesday, April 19, 2011 2:56:00 PM

Here are some of my notes from meeting –

The AREVA methods in question under estimate how hot the core can get. There is adequate provisions for defense-in-depth (margins) that do not constitute an immediate safety concern at any NRC-licensed facility.

Situational AREVA developed three specific analysis methods, specific to AREVA fuel in the course of several licensee request for licensing actions, the NRC has identified various issue with the plant-specific implementation of the AREVA safety analysis methods. These methods were found to be less conservative as desired.

Keeping in mind the current environment, the NRC is in a position to make a reasonable regulatory/administrative action? The RIS serves to make all licensing aware of the need to make adjustment and suspend using the AREVA analysis methods from this point on.
What specific licensing action need to avoid using these methods? Or What are licensees using these AREVA methods for?
What are NRC's commitment moving forward to the licensing action to be satisfied?
What does AREVA have to do in order to get these methods up to higher level of safety margin?

Calvert Cliffs, Harris, St. Lucie use these methods and how did NRC respond to resolve the use of these methods.

Suggested Standard Question for NRR Com Plan Templates-

Did this regulatory issue result from any lessons from Japan's March 11, 2011 Earthquake and Tsunami event?

No this regulatory issue has been in development for many years as part of NRC licensing actions and ongoing safety analysis. The NRC is in the process of following and reviewing the events in Japan. This review will undoubtedly lead to the identification of issues that warrant further study. A complete understanding of lessons learned will require more information than is currently available to NRC staff.

Will continue to work on the Key Messages and Q/As with Scott. Regards, Ivonne

---

From: Parks, Benjamin
Sent: Tuesday, April 19, 2011 9:41 AM
To: Steger (Tucci), Christine; Couret, Ivonne; Burnell, Scott
Subject: Revised AREVA Methods Comm Plan

Based on Christine's feedback, I have added some information to the comm. plan as attached.

Thanks,
Ben

Benjamin T. Parks
Reactor Systems Branch, NRR
O10-D2 415-6472

From: Couret, Ivonne
To: Brenner, Eliot
Subject: RE: Pls Advise - Greenwire want to interview Marty Virgilio ref Congressional Hearing
Date: Tuesday, April 19, 2011 9:03:00 AM

Sorry if I was unclear on this matter, NRC and Japan. Marty spoke to Congress on the "NRC RESPONSE TO RECENT NUCLEAR EVENTS IN JAPAN AND THE CONTINUINGSAFETY OF THE U.S. COMMERCIAL NUCLEAR REACTOR FLEET". I can ask her for specific question, just wanted to know if we are handling this request any different than before I left on Leave. Thanks, Ivonne

---

From: Brenner, Eliot
Sent: Tuesday, April 19, 2011 8:57 AM
To: Couret, Ivonne
Subject: RE: Pls Advise - Greenwire want to interview Marty Virgilio ref Congressional Hearing

And the topic areas are ....?

From: Couret, Ivonne
Sent: Tuesday, April 19, 2011 8:37 AM
To: Brenner, Eliot
Subject: Pls Advise - Greenwire want to interview Marty Virgilio ref Congressional Hearing
Importance: High

Just spoke with Hannah, she want to actually ask questions/interview Marty Virgilio. How do you want me to proceed on this request. Hannah's email is Hnorthey@eenews.net?

From: OPA Resource
Sent: Tuesday, April 19, 2011 8:30 AM
To: Couret, Ivonne
Subject: FW: Forward to OPA

From: Cianci, Sandra
Sent: Tuesday, April 19, 2011 7:44 AM
To: OPA Resource
Subject: FW: Forward to OPA

Please see message below. Thank you

Sandy Cianci
Administrative Assistant to Marty Virgilio, DEDR
Office of the Executive Director for Operations
O-17 H13
301-415-1714
sandra.cianci@nrc.gov

LL/568

From: News - Kyodo News
Date: Tuesday, April 19, 2011 8:26:55 AM
Posted At: Deleted Items
Conversation: Japan mulls hiking power charges to help cover damages payments
Subject: Japan mulls hiking power charges to help cover damages payments

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TOKYO - The government is considering increasing electricity charges to help cover damages payments to peopl...

View article...

111/5269

From: News - Kyodo News
Date: Tuesday, April 19, 2011 10:38:21 AM
Posted At: Deleted Items
Conversation: Kan apologizes to head of village in expanded evacuation zone
Subject: Kan apologizes to head of village in expanded evacuation zone

---

TOKYO - Prime Minister Naoto Kan apologized Tuesday to the mayor of Iitate, a village included in the recent...

View article...

111/570

From: Burnell, Scott
To: Hannah Northey
Cc: Brenner, Eliot; Couret, Ivonne
Subject: RE: Your interview request
Date: Tuesday, April 19, 2011 9:26:02 AM

Hi Hannah;

As I understand it, you're asking to speak to Marty Virgilio regarding his testimony back on the 6th – do I have that right? Please let me know the specific issues you'd like to discuss and your deadline. By the way, it's always better if you start with me or another Public Affairs person, particularly these days when there's so much on the staff's plate. Thanks.

Scott

LL/571

To: c.letayf@lek.com
Subject: FW: Phone Interview
Date: Tuesday, April 19, 2011 1:20:00 PM

Dear Mr. Letayf,

Based on the questions you are asking, I would refer you to the U.S. Energy Information Administration (EIA) who collects, analyzes, and disseminates independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding of energy and its interaction with the economy and the environment. Visit at http://www.eia.gov/

The EIA's nuclear experts can be found at http://www.eia.gov/about/contact/nuclear.cfm.

The NRC's statement on our role and the impact on the U.S. commercial nuclear reactor fleet can be reaposition on the situation .

From: Chadi Letayf [mailto:c.letayf@lek.com]
Sent: Tuesday, April 19, 2011 1:06 PM
To: Wertz, Trent
Subject: Phone Interview

Dear Sir,

As per our discussion, I am sending you this e-mail to introduce myself, the purpose of my request, and to try to schedule an interview with anyone in the Office of Nuclear Reactor Regulation.

My name is Chadi Letayf and I work for a strategy consulting firm in Paris, in France called L.E.K. Consulting (www.lek.com).

We are currently conducting a research project on electricity generation and fuel mix evolution in the United States. Our objective is to understand how they are likely to evolve in the long term and why (especially in the current context of shale gas and nuclear buzz).

We are currently contacting main industry experts in order to get a clear understanding of the different dynamics and we are currently focusing on the future of the nuclear power generation in the US. We will also contact power generating companies to get their view on the subject.

Among the different topics we would like to discuss with you; we would like to understand :
- the rationale for the low development of new nuclear capacity additions in the past decades (growth of electricity consumption too slow?)
- the possible impact of Fukushima on US nuclear regulation
- the impact of low gas prices on plans

LL/572

Of course, we'd be glad to share the conclusions of our study with you once it is complete.

Thanks again for your help.

Best regards,

Chadi

CHADI LETAYF - L.E.K. CONSULTING
63, Avenue des Champs-Elysees - 75008 Paris - France
Ligne directe : +33 (0)1 47 03 19 42
- c.letayf@lek.com -
www.lek.com

From: Brenner, Eliot
To: Couret, Ivonne
Subject: RE: Pls Advise - Greenwire want to interview Marty Virgilio ref Congressional Hearing
Date: Tuesday, April 19, 2011 9:04:28 AM

No. I was unaware of it until you brought it up. I will give her a call and talk with her.

eliot

From: Couret, Ivonne
Sent: Tuesday, April 19, 2011 9:04 AM
To: Brenner, Eliot
Subject: RE: Pls Advise - Greenwire want to interview Marty Virgilio ref Congressional Hearing

Sorry if I was unclear on this matter, NRC and Japan. Marty spoke to Congress on the "NRC RESPONSE TO RECENT NUCLEAR EVENTS IN JAPAN AND THE CONTINUINGSAFETY OF THE U.S. COMMERCIAL NUCLEAR REACTOR FLEET". I can ask her for specific question, just wanted to know if we are handling this request any different than before I left on Leave. Thanks, Ivonne

---

From: Brenner, Eliot
Sent: Tuesday, April 19, 2011 8:57 AM
To: Couret, Ivonne
Subject: RE: Pls Advise - Greenwire want to interview Marty Virgilio ref Congressional Hearing

And the topic areas are ....?

From: Couret, Ivonne
Sent: Tuesday, April 19, 2011 8:37 AM
To: Brenner, Eliot
Subject: Pls Advise - Greenwire want to interview Marty Virgilio ref Congressional Hearing
Importance: High

Just spoke with Hannah, she want to actually ask questions/interview Marty Virgilio. How do you want me to proceed on this request. Hannah's email is Hnorthey@eenews.net?

From: OPA Resource
Sent: Tuesday, April 19, 2011 8:30 AM
To: Couret, Ivonne
Subject: FW: Forward to OPA

LL/573

From: Cianci, Sandra
Sent: Tuesday, April 19, 2011 7:44 AM
To: OPA Resource
Subject: FW: Forward to OPA

Please see message below. Thank you

Sandy Cianci
Administrative Assistant to Marty Virgilio, DEDR
Office of the Executive Director for Operations
O-17 H13
301-415-1714
sandra.cianci@nrc.gov

From: Garland, Stephanie
Sent: Friday, April 15, 2011 5:13 PM
To: Cianci, Sandra
Subject: Forward to OPA

Sandy,

A call came in for Marty at 5:05 p.m. on Friday from Hannah Northey 202-446-0468 with Greenwire. She was requesting to speak with Marty regarding his testimony on the hill re: Nuclear Issues. I am pretty sure this should go to OPA, but I couldn't remember the email address they gave us. Could you please forward on Monday? I appreciate your help.

Stephanie Garland
Administrative Assistant to Darren Ash, DEDCM
Office of the Executive Director for Operations
O-17 H15
301-415-8704
stephanie.garland@nrc.gov

From: Burnell, Scott
To: JessicaJordanlive@gmail.com
Cc: Couret, Ivonne
Subject: RE: Your interview request
Date: Wednesday, April 20, 2011 7:34:37 AM

Good morning, Jessica;

Could you be more specific on the topics you'd like to discuss? Thanks.

Scott Burnell
Public Affairs Officer
Nuclear Regulatory Commission

ML574

From: Couret, Ivonne
To: Burnell, Scott; McIntyre, David
Subject: FW: media inquiry regarding Charles Casto
Date: Wednesday, April 20, 2011 3:47:00 PM

Who is working with ieee on story? In no one, who want to respond? Ivonne

---

From: e.strickland@ieee.org [mailto:e.strickland@ieee.org]
Sent: Wednesday, April 20, 2011 3:46 PM
To: Couret, Ivonne
Subject: media inquiry regarding Charles Casto

Dear Ms. Couret,

I'm an editor with the technology magazine IEEE Spectrum. We corresponded briefly about a month ago when I was inquiring about the NRC team that had gone to Japan to provide assistance during the Fukushima Dai-1 crisis. I'm now wondering if the leader of that NRC team, Charles Casto, is back in the U.S., and if he's available for interviews.

In case you're not familiar with our publication, here's a quick overview. IEEE Spectrum is a monthly magazine that goes out to the 400,000 members of IEEE, the Institute of Electrical and Electronics Engineers. It's also a constantly updated website that's free and open to all: http://spectrum.ieee.org/ It's considered a publication for tech insiders. We're currently working on a special issue about nuclear power in response to the Fukushima Dai-1 incident -- the issue will cover exactly what went wrong, how the plant will be stabilized and cleaned up, and what the implications are for the nuclear power industry.

Please let me know if you need any further information.

Thanks, and best wishes,
Eliza

Eliza Strickland
Associate Editor
IEEE Spectrum
http://spectrum.ieee.org/
phone: 212-419-7505
email: e.strickland@ieee.org

LL/575

From: News - Kyodo News
Date: Wednesday, April 20, 2011 9:51:22 AM
Posted At: Deleted Items
Conversation: Small amounts of radioactive iodine found in breast milk
Subject: Small amounts of radioactive iodine found in breast milk

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FUKUSHIMA, Japan - A citizen's group concerned about the impact on mothers and babies of the radioactive leaks from a c...

View article...

LLL576

From:	News - Kyodo News
Date:	Wednesday, April 20, 2011 8:50:44 AM
Posted At:	Deleted Items
Conversation:	UPDATE1: Highly radioactive water removal continues, water level drops by 1 cm
Subject:	UPDATE1: Highly radioactive water removal continues, water level drops by 1 cm

TOKYO - The operator of the crippled Fukushima nuclear plant said Wednesday the level of highly radioactive ...

View article...

uu577

From: OST01 HOC
Sent: Wednesday, April 20, 2011 4:31 PM
To: Hoc, PMT12
Subject: FW: Composite Paper

From: Dudek, Michael
Sent: Wednesday, April 20, 2011 4:30 PM
To: OST01 HOC
Subject: Composite Paper

Executive Support Team:

Do you have a copy of the latest version of the Composite Paper?

Thanks!
Michael I. Dudek

Michael Dudek | Technical Assistant | NSIR/Division of Preparedness & Response | U.S. NRC
11555 Rockville Pike, Rockville, MD 20852 | ☎ (301) 415-6500 | ✉: Michael.Dudek@nrc.gov

LLL/578

From: Dudek, Michael
Sent: Wednesday, April 20, 2011 4:30 PM
To: OST01 HOC
Subject: Composite Paper

Executive Support Team:

Do you have a copy of the latest version of the Composite Paper?

Thanks!
Michael I. Dudek

Michael Dudek | Technical Assistant | NSIR/Division of Preparedness & Response | U.S. NRC
11555 Rockville Pike, Rockville, MD 20852 | ☎ (301) 415-6500 | ✉: Michael.Dudek@nrc.gov

LL/529

From: Burnell, Scott
To: Couret, Ivonne; McIntyre, David
Subject: RE: media inquiry regarding Charles Casto
Date: Wednesday, April 20, 2011 3:50:14 PM

I haven't dealt with Ms. Strickland...

From: Couret, Ivonne
Sent: Wednesday, April 20, 2011 3:48 PM
To: Burnell, Scott; McIntyre, David
Subject: FW: media inquiry regarding Charles Casto

Who is working with ieee on story? In no one, who want to respond? Ivonne

---

From: e.strickland@ieee.org [mailto:e.strickland@ieee.org]
Sent: Wednesday, April 20, 2011 3:46 PM
To: Couret, Ivonne
Subject: media inquiry regarding Charles Casto

Dear Ms. Couret,

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Please let me know if you need any further information.

Thanks, and best wishes,
Eliza

Eliza Strickland
Associate Editor
IEEE Spectrum
http://spectrum.ieee.org/
phone: 212-419-7505
email: e.strickland@ieee.org

LLL/580

From: McIntyre, David
To: Couret, Ivonne; Burnell, Scott
Subject: RE: media inquiry regarding Charles Casto
Date: Wednesday, April 20, 2011 3:49:55 PM

Ask Eliot if Chuck is back.

From: Couret, Ivonne
Sent: Wednesday, April 20, 2011 3:47 PM
To: Burnell, Scott; McIntyre, David
Subject: FW: media inquiry regarding Charles Casto

Who is working with ieee on story? In no one, who want to respond? Ivonne

From: e.strickland@ieee.org [mailto:e.strickland@ieee.org]
Sent: Wednesday, April 20, 2011 3:46 PM
To: Couret, Ivonne
Subject: media inquiry regarding Charles Casto

Dear Ms. Couret,

I'm an editor with the technology magazine IEEE Spectrum. We corresponded briefly about a month ago when I was inquiring about the NRC team that had gone to Japan to provide assistance during the Fukushima Dai-1 crisis. I'm now wondering if the leader of that NRC team, Charles Casto, is back in the U.S., and if he's available for interviews.

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Thanks, and best wishes,
Eliza

Eliza Strickland
Associate Editor
IEEE Spectrum
http://spectrum.ieee.org/
phone: 212-419-7505
email: e.strickland@ieee.org

From: OST01 HOC
Sent: Thursday, April 21, 2011 5:10 PM
To: RST01 Hoc
Subject: RE: TASK 4706 Rev. 2

closed

From: RST01 Hoc
Sent: Thursday, April 21, 2011 4:33 PM
To: OST01 HOC
Subject: FW: TASK 4706 Rev. 2
Importance: High

FYI

From: Hiland, Patrick
Sent: Thursday, April 21, 2011 9:55 AM
To: Riley (OCA), Timothy
Cc: RST01 Hoc; Lubinski, John; Skeen, David
Subject: TASK 4706 Rev. 2
Importance: High

Tim, attached is the final response to the subject task. It includes the information sent to you by John Lubinski and was reviewed by the RST. Please communicate response.

RST01, NRR considers TASK 4706 Closed.

LLL/587

From: RST01 Hoc
Sent: Thursday, April 21, 2011 4:33 PM
To: OST01 HOC
Subject: FW: TASK 4706 Rev. 2
Attachments: 04-20-11 answers to Cong. Markey Questions Rev 2.docx

Importance: High

FYI

From: Hiland, Patrick
Sent: Thursday, April 21, 2011 9:55 AM
To: Riley (OCA), Timothy
Cc: RST01 Hoc; Lubinski, John; Skeen, David
Subject: TASK 4706 Rev. 2
Importance: High

Tim, attached is the final response to the subject task. It includes the information sent to you by John Lubinski and was reviewed by the RST. Please communicate response.

RST01, NRR considers TASK 4706 Closed.

LLL582

From: Casto, Greg
Sent: Tuesday, April 26, 2011 11:07 PM
To: OST01 HOC
Subject: FW: PMT Staffing for Fukushima to 5-28
Attachments: Japan Roster May 28 (4).xlsx

From: Brandon, Lou
Sent: Tuesday, April 26, 2011 6:02 PM
To: Brock, Kathryn; Foster, Jack; Hardesty, Duane; Harris, Tim; Rosenberg, Stacey; Hart, Michelle; Casto, Greg; Kratchman, Jessica; Lou Brandon
Cc: Gambone, Kimberly; Hardin, Leroy; Barr, Cynthia; Schmidt, Duane; Sun, Casper; Parillo, John; Grant, Jeffery; Marshall, Jane
Subject: PMT Staffing for Fukushima to 5-28

PMT Japan Staff filling the PAAD position:

Please see the attached updated roster. I was just informed that we can eliminate the night shift effectively now. Greg, Jessica, you can work or not for the rest of the week, as desired, or planned, as you like.

That frees up three of us on the night shift to provide breaks for others. I've filled the schedule out based on past rotational schedules, providing relief to Stacy after mid May, as requested, by myself and Greg Casto (let me know if this is a problem Greg). If others need a break on weekend days or otherwise, those of us who were on the night shift, or others, can likely assist.

Keep me informed of conflicts please.

Thanks,

Lou

Planned staffing (and backups):

Morning	Afternoon	Evening
Kathy Brock	Tim Harris	Greg Casto
Jack Foster	Stacy Rosenberg	Jessica Kratchman
Duane Hardesty	Michelle Hart	Lou Brandon
(Kimberly Gambone)	(Casper Sun)	(John Parillo)
(Leroy Hardin)		
(Cynthia Barr)		
(Duane Schmidt)		

LLL/583

Protective Measures Team - PAAD			
Sat-Sun	5/7-5/8	11pm - 7am	NA
Sun	5/8	7am - 3pm	Kathy Brock
Sun	5/8	3pm-11pm	Tim Harris
Sun-Mon	5/8-5/9	11pm - 7am	NA
Mon	5/9	7am - 3pm	Kathy Brock
Mon	5/9	3pm-11pm	Tim Harris
Mon-Tue	5/9-5/10	11pm - 7am	NA
Tue	5/10	7am - 3pm	Kathy Brock
Tue	5/10	3pm-11pm	Tim Harris
Tue-Wed	5/10-5/11	11pm - 7am	NA
Wed	5/11	7am - 3pm	Kathy Brock
Wed	5/11	3pm-11pm	Tim Harris
Wed-Thur	5/11	11pm - 7am	NA
Thur	5/12	7am - 3pm	Duane Hardesty
Thur	5/12	3pm-11pm	Michelle Hart
Thur-Fri	5/12-5/13	11pm - 7am	NA
Fri	5/13	7am - 3pm	Duane Hardesty
Fri	5/13	3pm-11pm	Michelle Hart
Fri-Sat	5/13-5/14	11pm-7am	NA
Sat	5/14	7am - 3pm	Duane Hardesty
Sat	5/14	3pm-11pm	Michelle Hart
Sat	5/14-5/15	11pm - 7am	NA

Protective Measures Team - PAAD			
Sat-Sun	5/14-5/15	11pm - 7am	NA
Sun	5/15	7am - 3pm	Jack Foster
Sun	5/15	3pm-11pm	Lou Brandon
Sun-Mon	5/15-5/16	11pm - 7am	NA
Mon	5/16	7am - 3pm	Jack Foster
Mon	5/16	3pm-11pm	Lou Brandon
Mon-Tue	5/16-5/17	11pm - 7am	NA
Tue	5/17	7am - 3pm	Jack Foster
Tue	5/17	3pm-11pm	Lou Brandon
Tue-Wed	5/17-5/18	11pm - 7am	NA
Wed	5/18	7am - 3pm	Jack Foster
Wed	5/18	3pm-11pm	Lou Brandon
Wed-Thur	5/18-5/19	11pm - 7am	NA
Thur	5/19	7am - 3pm	Kathy Brock
Thur	5/19	3pm-11pm	Tim Harris
Thur-Fri	5/19-5/20	11pm - 7am	NA
Fri	5/20	7am - 3pm	Kathy Brock
Fri	5/20	3pm-11pm	Tim Harris
Fri-Sat	5/20-5/21	11pm-7am	NA
Sat	5/21	7am - 3pm	Kathy Brock
Sat	5/21	3pm-11pm	Tim Harris
Sat	5/21-5/22	11pm - 7am	NA

Protective Measures Team - PAAD			
Sat-Sun	5/21-5/22	11pm - 7am	NA
Sun	5/22	7am - 3pm	Duane Hardesty
Sun	5/22	3pm-11pm	Michelle Hart
Sun-Mon	5/22-5/23	11pm - 7am	NA
Mon	5/23	7am - 3pm	Duane Hardesty
Mon	5/23	3pm-11pm	Michelle Hart
Mon-Tue	5/23-5/24	11pm - 7am	NA
Tue	5/24	7am - 3pm	Duane Hardesty
Tue	5/24	3pm-11pm	Michelle Hart
Tue-Wed	5/24-5/25	11pm - 7am	NA
Wed	5/25	7am - 3pm	Duane Hardesty
Wed	5/25	3pm-11pm	Michelle Hart
Wed-Thur	5/25-5/26	11pm - 7am	NA
Thur	5/26	7am - 3pm	Jack Foster
Thur	5/26	3pm-11pm	Greg Casto
Thur-Fri	5/26-5/27	11pm - 7am	NA
Fri	5/27	7am - 3pm	Jack Foster
Fri	5/27	3pm-11pm	Greg Casto
Fri-Sat	5/27-5/28	11pm-7am	NA
Sat	5/28	7am - 3pm	Jack Foster
Sat	5/28	3pm-11pm	Greg Casto
Sat	5/28-5/29	11pm - 7am	NA

From: OST01 HOC
Sent: Thursday, April 28, 2011 6:12 AM
To: FOIA Response.hoc Resource
Subject: FW: how is this???

From: RST01 Hoc
Sent: Thursday, April 28, 2011 5:35 AM
To: OST01 HOC
Subject: RE: how is this???

Perfect!!!!

From: OST01 HOC
Sent: Thursday, April 28, 2011 5:35 AM
To: RST01 Hoc
Subject: RE: how is this???

Gotcha...how about

- As a result of their mass balance calculations, TEPCO indicated publicly that a potential leak in spent fuel pool Unit 4 may exist.

From: RST01 Hoc
Sent: Thursday, April 28, 2011 5:31 AM
To: OST01 HOC
Subject: RE: how is this???

It's okay. I don't think that they told the public the source of their information was the mass balance.

From: OST01 HOC
Sent: Thursday, April 28, 2011 5:30 AM
To: RST01 Hoc
Subject: how is this???

- TEPCO indicated publicly that a potential leak in spent fuel pool Unit 4 may exist based on their mass balance calculations.

111/584

From: Weber, Michael
Sent: Friday, April 29, 2011 4:58 PM
To: Correia, Richard; OST01 HOC
Cc: Hoc, PMT12; LIA08 Hoc; Virgilio, Martin; Merzke, Daniel; Brock, Kathryn; Burnell, Scott; Casto, Chuck; Reynolds, Steven
Subject: FYI - ASAHI-SHIMBUN ARTICLE ON ACADEMIA ENGAGEMENT IN MAPPING RADIOACTIVE CONTAMINATION NEAR FUKUSHIMA-DAIICHI

Good afternoon. Just wanted to be sure that you are aware of this article from the Japanese media on plans to use academia in Japan to assist in mapping radioactive contamination in the vicinity of Fukushima-Daiichi.

Scientists to map radioactive contamination in Fukushima

2011/04/29

Researchers are planning to create a detailed map showing levels of radioactive contamination around the Fukushima No. 1 nuclear power plant.

About 300 experts from Osaka University, Hiroshima University, the University of Tokyo and other academic and research institutions will start collecting soil samples in May at up to 10,000 locations in 1,500 designated areas, mainly in Fukushima Prefecture, to create a soil-pollution map.

The map will be designed primarily to help designate evacuation areas.

The science ministry intends to use the map as a picture of the situation concerning radioactive pollution in areas around the crippled plant

The project was formed on the initiative of three scientists: Mamoru Fujiwara, associate professor, Osaka University Research Center for Nuclear Physics; Masaharu Hoshi, professor, Hiroshima University Research Institute for Nuclear Medicine and Biology; and Takaharu Otsuka, professor, University of Tokyo Center for Nuclear Study.

In response to a call by the researchers, experts nationwide in nuclear physics, environmental radioactivity and meteorology have offered to help.

The group will also receive support from a Russian research institute of radiation medicine, which carried out environmental surveys in areas contaminated by the 1986 Chernobyl accident.

Around mid-May, the team will start its work by dividing the area around the stricken nuclear power plant spanning 100 kilometers north-south and 60 kilometers east-west

into 1,500 2-kilometer square zones. The researchers will collect soil samples at five to seven points in each zone to measure levels of such radioactive isotopes as iodine-131, cesium-137 and strontium-90. The level of radiation in each zone will be shown on the pollution map.

The group also plans to conduct a radiation survey in the 20-kilometer off-limits zone around the plant, and is holding talks with the government for the survey.

Levels of soil pollution are affected by such factors as topographical and meteorological conditions. Measurements at two points in the same area can differ widely.

Detailed pollution data are essential for careful planning of evacuation zones.

The group plans to carry out the survey every few months to update the map.

Regular updates are important because, compared with the areas around the Chernobyl plant, those around the Fukushima plant are more undulating and rainy, according to the researchers. Rain causes soil drainage and significant changes in radiation levels over time.

The group will also study the effects of soil contamination on human health by using data from health checkups of local residents.

It was three years after the Chernobyl accident that a detailed map of cesium-137 contamination was completed.

Since the measurements of iodine-131, which has a short half life of about eight days, in areas around the Chernobyl plant were not sufficient, it was impossible to make an accurate assessment of the effects of this radioactive material on the health of local residents, in particular the correlation between levels of iodine-131 contamination and the incidence of thyroid cancer. Exposure to iodine-131, which is concentrated in the thyroid when absorbed by the body, is believed to increase the risk of thyroid cancer.

The science ministry is also developing its own soil pollution map, but it is currently measuring radiation levels at only 53 locations.

"We hope to work with the researchers and make effective use of the map," said an official at the ministry.

"An early radiation survey is indispensable for accurately estimating the risk of developing cancer due to exposure to radioactive materials," said Osaka University's Fujiwara. "Basic data about soil pollution will also help develop convincing evacuation plans for local residents."

Mike

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

301-415-1705
Mail Stop O16E15

From:	Weber, Michael
Sent:	Saturday, April 30, 2011 9:54 AM
To:	Skeen, David
Cc:	Virgilio, Martin; Borchardt, Bill; Doane, Margaret; Mamish, Nader; OST01 HOC; FOIA Response.hoc Resource
Subject:	Response - Summary of 8:30 Call - 4/30/11

Thanks, Dave. Do you understand NR's reluctance to reduce the exclusion zone?

From: Skeen, David
To: Virgilio, Martin; Doane, Margaret; Borchardt, Bill; Weber, Michael; Evans, Michele; McDermott, Brian
Cc: Correia, Richard; Tracy, Glenn
Sent: Sat Apr 30 09:22:59 2011
Subject: Summary of 8:30 Call - 4/30/11

Good morning, All!

I just got off the phone with Chuck Casto and wanted to provide a brief update to all of you.

1. The draft travel advisory: He said that NR was concerned about reducing the evacuation zone from 80 km to 30 km. They are going back to discussing the potential to allow for travel corridors and access to cities, which is where they were on Thursday. This issue is still in flux. Chuck will provide more information when he hears something.

2. The Embassy has drafted a paper to address the 6 issues concerning the potential GOJ/TEPCO/USG Steering Committee. Chuck will mark it up with his comments this evening (this morning here) and pass it along to NRC-HQ for review **(Marty and Margie will need to review and comment). He needs comments by Sunday evening EDT.** I will provide his mark up to you as soon as I receive it.

3. Plant Status: Unit 1 Reactor – TEPCO decreased cooling water flow to previous flow rate (from 10 m^3/hr to 5.7 m^3/hr) to keep from going sub-atmospheric in containment, and the temperature increased about 25 degrees C at the lower RPV head (where it was before).

4. I asked Chuck if TEPCO had installed temperature sensors in the 1F4 SFP, as we had heard, and he confirmed that a string of temperature elements had been placed in the pool. This will increase our confidence in the information that TEPCO provides for the pool temperature.

The Chairman did not call in for a briefing this morning. I asked the Ops Center to call me and patch me in to the Chairman if he does call in to the Ops Center for a briefing today.

Please let me know if you have any questions or comments.

LL/686