
Subject: May Communications Council Meeting
Location: O17B4

Start: Tue 5/17/2011 10:00 AM
End: Tue 5/17/2011 11:00 AM
Show Time As: Tentative

Recurrence: (none)

Meeting Status: Not yet responded

Organizer: Rakovan, Lance
Required Attendees: Barkley, Richard; Bonaccorso, Amy; Cai, June; Croston, Sean; Culp, Lisa; Ellmers, Glenn; Farnholtz, Thomas; Gold, Meg; Goldberg, Francine; Hayden, Elizabeth; Heck, Jared; Jasinski, Robert; Joosten, Sandy; Landau, Mindy; Loyd, Susan; Medina, Veronika; Montes, David; Mroz (Sahm), Sara; Pedersen, Renee; Rakovan, Lance; Rihm, Roger; Robbins, Emily; Ryan, Michelle; Sall, Basia; Salter, Susan; Shane, Raeann; Steger (Tucci), Christine; Virgilio, Rosetta; Woodruff, Gena; Wright, Lisa (Gibney); Screnci, Diane; Mitlyng, Viktoria; Couret, Ivonne

When: Tuesday, May 17, 2011 10:00 AM-11:00 AM (GMT-05:00) Eastern Time (US & Canada).
Where: O17B4

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*

As usual, please let me know if you have any agenda topics you would like to recommend.

-Lance

From: Montes, David
Sent: Wednesday, April 27, 2011 10:35 AM
To: Coggins, Angela
Subject: Japan

Any input from Marty re: Japan messaging?

From: Montes, David
Sent: Wednesday, April 27, 2011 8:20 AM
To: Batkin, Joshua; Loyd, Susan
Cc: Coggins, Angela
Subject: RE: PC

It's coming along, will shoot it around later this am.

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

From: Batkin, Joshua
Sent: Wednesday, April 27, 2011 8:19 AM
To: Loyd, Susan; Montes, David
Cc: Coggins, Angela
Subject: PC

Howdie. How's the public citizen speech looking?

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

From: E&E Publishing, LLC <ealerts@eenews.net>
Sent: Friday, April 29, 2011 8:17 AM
To: Virgilio, Martin
Subject: April 29 -- ClimateWire is ready



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CLIMATEWIRE -- FRI., APRIL 29, 2011 -- [Read the full edition](#)

1. **NUCLEAR:** Why older nuclear power plants remain 'cash cows' despite Fukushima

There are no new nuclear plants in the foreseeable future for Exelon Corp., the largest U.S. reactor operator. Old plants, though, are a different story. Exelon's proposed acquisition of Baltimore-based Constellation Energy, announced yesterday, would add five nuclear reactors at three plants to the 17 reactors at 10 plants that the Chicago-based company already runs. Exelon's total nuclear capacity would climb from 17,047 megawatts to nearly 19,000 if the projected \$7.9 billion deal is completed.

2. **ENERGY:** Exelon-Constellation deal could create 'clean energy' giant

Exelon Corp.'s \$7.9 billion bid to buy Constellation Energy builds on a series of recent deals meant to create profitable electric power companies that burn less coal, use more natural gas and combine existing nuclear fleets.

TODAY'S STORIES

3. **DEFORESTATION:** Study shows how coca production drives deforestation in Colombia
4. **RENEWABLE ENERGY:** Clean energy finance can be thwarted by a lack of structure
5. **EMISSIONS TRADING:** Dutch embassy in Washington blazes a trail for the 'average Joe'
6. **NATIONS:** Russia shuns 'fast-track' climate funds
7. **LOBBYING:** Business Roundtable asks EPA to drop greenhouse gas regulations
8. **NEGOTIATIONS:** Durban climate deal is impossible, say envoys
9. **OFFSHORE WIND:** Fukushima accident quickly turns Germany to wind

10. **WATER:** Spain's desalination plant stranded amid political firefight

11. **NUCLEAR:** India pushes back approval of four nuclear reactors

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From: Earl Lane <elane@aaas.org>
Sent: Wednesday, April 27, 2011 3:35 PM
To: Montes, David
Subject: RE: Chairman Jaczko's speech at the AAAS Forum on S&T Policy

Thanks, David, that will do the trick. Thanks for the quick response. -- Earl

>>> "Montes, David" <David.Montes@nrc.gov> 4/27/2011 3:31 PM >>>

Hello Earl,

In his speech entitled "Science and Nuclear Safety," Chairman Jaczko will discuss the role of science in developing sound and effective safety and security regulations for nuclear technology. During his remarks, he will discuss a number of the agency's regulatory priorities, including the NRC's response to the nuclear situation in Japan.

David

From: Earl Lane [mailto:elane@aaas.org]
Sent: Wednesday, April 27, 2011 1:55 PM
To: Montes, David; Loyd, Susan
Subject: Chairman Jaczko's speech at the AAAS Forum on S&T Policy

Hello: I'm preparing a media advisory on the upcoming AAAS Forum on Science & Technology Policy. I want to highlight the fact the Chairman Jaczko will be speaking at lunch on Friday, May 6. Do you have the general topic he will be discussing or any other details? I assume he'll discuss the nuclear situation in Japan and what it might mean for the future of nuclear power. Anything you can provide would be appreciated. I'll be putting out the advisory tomorrow. Sincerely,

Earl Lane
Senior Communications Officer
AAAS Office of Public Programs
202-326-6431
elane@aaas.org

From: PR News <eletters@email.prnewsonlineproducts.com>
Sent: Wednesday, April 27, 2011 2:41 PM
To: Montes, David
Subject: Integrating Facebook into Your Communications Plan

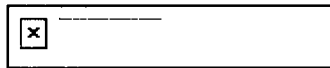
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From: Batkin, Joshua
Sent: Wednesday, April 27, 2011 7:10 PM
To: Montes, David
Subject: Out of Office: Draft Speech

I am out of the office until May 2nd. Please contact Angela Coggins or John Monninger in the Chairman's office if you need assistance before I return. Thank you, Josh

From: Hipschman, Thomas
Sent: Thursday, April 28, 2011 8:49 AM
To: Susan Loyd; Montes, David
Subject: Opening remarks

Importance: High

See highlighted on the G drive. Feel free to modify as your genius desires.

Thomas Hipschman
Policy Advisor for Reactors
Office of Chairman Gregory B. Jaczko
301-415-1832

From: Batkin, Joshua
Sent: Thursday, April 28, 2011 9:16 AM
To: Montes, David; Loyd, Susan
Subject: Trying

To call you in 15 before my flight

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

From: Hipschman, Thomas
Sent: Thursday, April 28, 2011 9:47 AM
To: Montes, David
Subject: Re:

Either of first two

From: Montes, David
To: Hipschman, Thomas
Sent: Thu Apr 28 09:45:55 2011
Subject:

Is it cool-down condition, cooled-down condition, or cold-down condition?

From: Sieracki, Diane
Sent: Thursday, April 28, 2011 9:50 AM
To: Montes, David
Subject: Out of Office: Information request

Thank you for your email message. I will be out of the office April 28-May6. I will, however, be working from home and available May 3-5. If you need immediate assistance, please contact Dave Solorio, Branch Chief, CRB, OE, at 301-415-0149 or via email. Thank you.



From: PR Skinny <eletters@email.prnewsonlineproducts.com>
Sent: Thursday, April 28, 2011 12:58 PM
To: Montes, David
Subject: PR's ROI: Still Elusive, But New Methods, Metrics on the Way, Bridging the IR/PR Crisis Disconnect



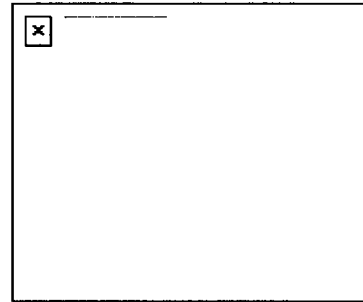
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From: Montes, David
Sent: Thursday, April 28, 2011 2:31 PM
To: Marshall, Michael
Subject: RE: Link to Past Seminars

Thanks!

From: Marshall, Michael
Sent: Thursday, April 28, 2011 2:19 PM
To: Montes, David
Subject: Link to Past Seminars

<http://www.internal.nrc.gov/RES/communication/Seminar/completed.html>

The video is not available yet.

From: Speiser, Herald
Sent: Friday, April 29, 2011 10:10 AM
To: Batkin, Joshua; Bradford, Anna; Clark, Lisa; Coggins, Angela; Dhir, Neha; Fopma, Melody; Hipschman, Thomas; Loyd, Susan; Marshall, Michael; Monninger, John; Montes, David; Warren, Roberta
Subject: Action item report

As of **Friday, April 29, 2011**, the following Action Items have at least one Commissioner vote, or are other action items due:

=====

Angela

SRM due 12/27

COMWDM-10-0001 – Commission policy formulation – staff activities related to the continuing resolution and follow-on congressional guidance

Lisa

SECY-11-0017 – Legislative Proposals for the 112th Congress (1)

SRM Due 4/11

Briefing on Adjudicatory Issues (M110331B)

SRM Due 4/27

SECY-11-0042- Revisions to Internal Commission Procedures Section on Mandatory Hearings

James

SRM Version B Comments due 5/11

COMSECY-08-0031-Internal Commission Procedures

Tom

CORR-11-0048-Letter to REP Richard Blumenthal, Responds to Ltr. Re: the Recent Events in Japan and their Implications for the Continuing Safety of Nuclear Power Plants in the U.S. (4)

CORR-11-0050-Letter to Sandy Galef, NY State Assemblywoman, Responds to Ltr. Raising a Number of Questions Re: Recent Events at the Fukushima Daiich Nuclear Station in Japan (4)

STATUS SUMMARY
As of April 15, 2011

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|                   |           |
|-------------------|-----------|
| <b>SRMs</b>       | <b>5</b>  |
| <b>SECYs</b>      | <b>3</b>  |
| <b>COMS</b>       | <b>0</b>  |
| <b>CORRs</b>      | <b>6</b>  |
| <b>Dir. Decs</b>  | <b>0</b>  |
| <b>FOIAs</b>      | <b>18</b> |
| <b>Congr. Doc</b> | <b>1</b>  |

---

**TOTAL: 33**

**CORR-11-0051**-Letter to SEN Frank Lautenberg, Responds to Letter Regarding Nuclear Power Plants in NJ in Light of Recent Events in Japan (4)

**CORR-11-0052**-Letter to SENs Patrick Leahy and Bernard Sanders; and REP Peter Welch, Responds to Ltr. And Mtg., Re: How the Process of Decommissioning could be Conducted at Vermont Yankee when it Ceases to Operate (4)

**CORR-11-0053**-Letter to REP John Olver, Responds to Ltr. Re: Decommissioning at Vermont Yankee and his Strong Support for the Views of the Vermont Congressional Delegation on this Matter (4)

-----  
**Michael**

**CORR-11-0033**-Letter to REP Edward Markey, Responds to Questions Regarding Safety Concerns with the AP1000 Reactor Design (4)

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**Anna**

**SECY-11-0039** – Final Rule: Definition of Construction in 10 CFR Parts, 30, 36, 39, 40, 51, 70, and 150 (1)

**SRM Due 4/27**

**SECY-11-0049** – Advisory Committee on the Medical Uses of Isotopes Reporting Structure: Options, Analysis, and Proposed Implementation Plans

-----  
**All**

**Comments Due 5/2/11**

**Congressional Document Request**

-----  
**Lisa**

**SECY-11-0052** – EnergySolutions’ applications for low-level radioactive waste import and export licenses (1)

**FOIA-2011-0040** – Request for records of meetings, other oral or written communications since 1/1/08 between current NRC Commissioners or their staffs and the following individuals or entities: Sen. Inhofe, Sen. Reid, Approp. Comm., Chrm David Obey or his staff and Ranking Member Jerry Lewis or his staff, Members or their staffs of the Energy and Water Development subcommittee of the House Approp. Comm, etc.

**FOIA-2011-0083** – Documents and records, including SECY papers, Commission records and guidance, technical reports, etc; related to the state-of-the-art reactor consequences (SOARCA) program (2006-current)

**FOIA-2011-0091** – Request for NRC Staff, Commission, ACRS Records Concerning Leakage of Radioactivity Contaminated Water at the Millstone Nuclear Plant After 7/1/10

**FOIA-2011-0118** - Communications between NRC, DOE, GE Energy and Hitachi-GE re nuclear incidents in Japan

**FOIA-2011-0119** - Internal communication within NRC re nuclear incidents in Japan.pdf

**FOIA-2011-0120** - Communications between NRC and government counterparts in Japan re nuclear incidents

**FOIA-2011-0121** - Correspondence, email, etc containing words Vogtle and Japan or Summer and Japan

**FOIA-2011-0130** – Correspondence and other information requested by or provided to Senator Scott Brown from 2/4/10 to 3/21/11

**FOIA-2011-0136** – Daily Calendar/Schedule of Chairman and each Commissioner – January 1, 2010 through March 23, 2011

**FOIA-2011-0139** - All e-mail or electronic messages sent or received etc from 12:00 am ET on Friday, March 11, 2011 through 11:59 pm on Friday, March 18, 2011

**FOIA-2011-0147**-Any and all documentation regarding ongoing nuclear crisis in Japan from 3/11-3/24/11 only). Requester Greenpeace

**FOIA-2011-0161**- Correspondence between members of Congress and the NRC involving the Yucca Mountain storage project, **(Period from 2008 – present [4/1/11])** Requester – Center for Public Integrity

**FOIA-11-0166** - All communications sent or received since March 11, 2011 re: situation at Fukushima nuclear power plants (Covers period from 3/11/11 to 4/4/11) - Requester - USA Today

**FOIA-11-0142** - detailed list of assumptions used in calculating radioactive release rates, details of hypothetical dose rate profile for 2, 5, 10 and 5 mile radius around Fukushima & other factors considered by Commission in recommending 50 mi. evacuation - Requester – Jim Wheeler

**FOIA-11-0184** – Copies of documents regarding nuclear crisis in Japan after march 10<sup>th</sup>, including emails, faxes, written correspondence, meeting minutes, memos, studies, analyses – Requester Kyodo News

**FOIA-11-0189** – Request for Communications Concerning the Nuclear Crisis in Japan (Ref: FOIA-11-0184) (Covers Periods 3/11-4/15/11)

**FOIA-11-0191** – Request for for NRC Staff, Commission, ACRS Records Concerning Leakage of Radioactively Contaminated Water at the Millstone Nuclear Plant After July 1, 2010

**FOIA-11-0195** – Request for Communications Concerning the Nuclear Crisis in Japan (Covers Periods 3/10-4/20/11)

\*\*\*\*\*

**Herald M. Speiser - (301) 415-1830**  
**Administrative Assistant**  
**Office of the Chairman**  
**Nuclear Regulatory Commission**  
**11555 Rockville Pike**  
**Mailstop: O-16G4**  
**Rockville, MD 20852**



---

**From:** Hipschman, Thomas  
**Sent:** Thursday, April 28, 2011 8:49 AM  
**To:** Susan Loyd; Montes, David  
**Subject:** Opening remarks

**Importance:** High

See highlighted on the G drive. Feel free to modify as your genius desires.

Thomas Hipschman  
Policy Advisor for Reactors  
Office of Chairman Gregory B. Jaczko  
301-415-1832

**From:** E&E Publishing, LLC <ealerts@eenews.net>  
**Sent:** Friday, April 29, 2011 4:49 PM  
**To:** Schmidt, Rebecca  
**Subject:** April 29 -- E&ENews PM is ready



## AN E&E PUBLISHING SERVICE

E&ENEWS PM -- FRI., APRIL 29, 2011 -- [Read the full edition](#)

### 1. **CLIMATE:** D.C. Circuit rejects challenge to Calif. auto waiver

Rejecting a lawsuit from the U.S. Chamber of Commerce and a trade group representing car dealers, a federal appeals court has upheld a U.S. EPA waiver allowing California to set standards for greenhouse gas emissions from cars and light-duty trucks. The challengers failed to show that they would be hurt by the waiver, a panel of judges from the U.S. Circuit Court of Appeals for the District of Columbia said today in a unanimous opinion. Their claims are now moot because California has agreed to synchronize its own rules with the federal fuel economy standards for model year 2012 and beyond, the decision says.

### THIS AFTERNOON'S STORIES

2. **INTERIOR:** Utah sues to block 'wild lands' policy
3. **OFFSHORE DRILLING:** Hastings' bill would net \$40M for Treasury -- CBO
4. **URANIUM:** Groups sue over streamlined federal review of uranium project
5. **WETLANDS:** Miss. agency asks court to toss EPA veto of flood project
6. **COAL:** Wash. finalizes deal to close its only coal-burning power plant
7. **CLIMATE:** Prince Charles, Sen. Shaheen plan meeting on energy issues
8. **PESTICIDES:** 'Save the Frogs' activists rally at EPA headquarters

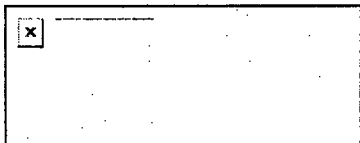
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**From:** Hipschman, Thomas  
**Sent:** Thursday, April 28, 2011 9:47 AM  
**To:** Montes, David  
**Subject:** Re:

Either of first two

---

**From:** Montes, David  
**To:** Hipschman, Thomas  
**Sent:** Thu Apr 28 09:45:55 2011  
**Subject:**

Is it cool-down condition, cooled-down condition, or cold-down condition?

---

**From:** Gibbs, Catina  
**Sent:** Thursday, April 28, 2011 1:32 PM  
**To:** Adler, James; Bradford, Anna; Clark, Lisa; Dhir, Neha; Fopma, Melody; Gibbs, Catina; Hipschman, Thomas; Marshall, Michael; Montes, David; Speiser, Herald; Warren, Roberta; Batkin, Joshua; Coggins, Angela; Loyd, Susan; Monninger, John; Gibbs, Catina  
**Subject:** Material Requested: Friday April 29, 2011

Dear Staff,

Please provide input for the following:

**Friday April 29, 2011**

8:45 AM - 9:00 AM ET Status Briefing -- HOO to call Chairman

11:00 AM - 12:00 PM Periodic: RIV Plant Status (Leeds & Gitter, NRR) --  
O18B11 **Tom**

2:00 PM - 2:30 PM Long Term Scheduling -- O17D01  
**Patti**

2:30 PM - 2:45 PM Call Time -- no calls scheduled

3:00 PM - 3:30 PM Chairman Blog Time -- O17D01  
**Susan**

5:00 PM - 6:30 PM Travel time to Japanese Ambassador's Residence

6:30 PM - 7:30 PM Meeting and Reception at Japanese Ambassador's  
Residence -- 4000 Nebraska Ave NW, Washington, DC  
**John**

**Thanks!**

Patti Pace  
Assistant to Chairman Gregory B. Jaczko  
U.S. Nuclear Regulatory Commission  
301-415-1820 (office)  
301-415-3504 (fax)

---

**From:** Montes, David  
**Sent:** Thursday, April 28, 2011 4:00 PM  
**To:** Wellock, Thomas  
**Subject:** RE: Question

That's right. Don't spend too much time on this. If you find something relatively quickly, great. If not, no worries.

Thanks,  
David

---

**From:** Wellock, Thomas  
**Sent:** Thursday, April 28, 2011 3:59 PM  
**To:** Montes, David  
**Subject:** Question

David,

Just want to be clear about what you need. I can find plenty of human errors, but what you are looking for is an example like Browns Ferry where personnel were doing some operation that was considered normal practice, but turned out to be dangerous, right? That is proving a bit difficult. Still working on it.

Tom

Thomas Wellock  
Historian  
U.S. Nuclear Regulatory Commission  
O16G4  
11555 Rockville Pike  
Rockville, MD 20852  
301-415-1965

---

**Subject:** May Communications Council Meeting  
**Location:** O17B4

**Start:** Tue 5/17/2011 10:00 AM  
**End:** Tue 5/17/2011 11:00 AM  
**Show Time As:** Tentative

**Recurrence:** (none)

**Meeting Status:** Not yet responded

**Organizer:** Rakovan, Lance  
**Required Attendees:** Barkley, Richard; Bonaccorso, Amy; Cai, June; Croston, Sean; Culp, Lisa; Ellmers, Glenn; Farnholtz, Thomas; Gold, Meg; Goldberg, Francine; Hayden, Elizabeth; Heck, Jared; Jasinski, Robert; Joosten, Sandy; Landau, Mindy; Loyd, Susan; Medina, Veronika; Montes, David; Mroz (Sahm), Sara; Pedersen, Renee; Rakovan, Lance; Rihm, Roger; Robbins, Emily; Ryan, Michelle; Sall, Basia; Salter, Susan; Shane, Raeann; Steger (Tucci), Christine; Virgilio, Rosetta; Woodruff, Gena; Wright, Lisa (Gibney); Screnci, Diane; Mitlyng, Viktoria; Couret, Ivonne

When: Tuesday, May 17, 2011 10:00 AM-11:00 AM (GMT-05:00) Eastern Time (US & Canada).  
Where: O17B4

Note: The GMT offset above does not reflect daylight saving time adjustments.

\*~\*~\*~\*~\*~\*~\*~\*~\*~\*

As usual, please let me know if you have any agenda topics you would like to recommend.

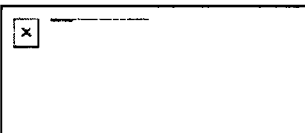
-Lance

**From:** E&E Publishing, LLC <ealerts@eenews.net>  
**Sent:** Monday, March 21, 2011 4:49 PM  
**To:** Virgilio, Martin  
**Subject:** March 21 -- E&ENews PM is ready



## AN E&E PUBLISHING SERVICE

### NUCLEAR CRISIS: JAPAN & THE FUTURE OF ENERGY POLICY



The devastating earthquake and tsunami in Japan has spawned a major nuclear disaster. E&E examines the implications for energy, the environment, security and public health. [Click here](#) to go to the report.

E&ENEWS PM -- MON., MARCH 21, 2011 -- [Read the full edition](#)

#### **1. AIR POLLUTION: Texans create task force to fight EPA intervention**

Angry with U.S. EPA for rejecting several Texas air quality programs and pushing the state aside on greenhouse gas emissions, Rep. Joe Barton (R-Texas) and other top lawmakers from the Lone Star State have created a new task force to strike back. For the past two years, EPA officials and their Texas counterparts have been locked in a power struggle over conventional air pollution, as well as the federal climate change regulations that took effect in January.

#### **THIS AFTERNOON'S STORIES**

2. ENERGY POLICY: Bingaman, Murkowski request input on CES specifics
3. OFFSHORE DRILLING: Interior approves first deepwater exploration plan since BP spill
4. NUCLEAR CRISIS: Japan disaster exposed outdated int'l response network, U.N. nuclear chief says
5. NUCLEAR ENERGY: NRC renews license for Vermont Yankee
6. NUCLEAR: House Dems probe FDA on safety of Japanese imports
7. CALIFORNIA: Former utilities commissioner joins law firm; state climate expert to WRI

#### **E&ETV'S ONPOINT**

CM/120



## 8. **EFFICIENCY**: Alliance to Save Energy's Callahan weighs in on light bulb debate

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**From:** E&E Publishing, LLC <ealerts@eenews.net>  
**Sent:** Tuesday, March 22, 2011 10:08 AM  
**To:** Schmidt, Rebecca  
**Subject:** E&ETV -- Nuclear Crisis: Former CEQ Chairman Frampton says Japanese disaster worse than Three Mile Island



## AN E&E PUBLISHING SERVICE

ONPOINT -- TUE., MARCH 22, 2011 -- [Go to www.eenews.tv](http://www.eenews.tv)

### AN E&ETV ENCORE PRESENTATION

*Originally aired: March 17, 2011*

#### **NUCLEAR CRISIS: Former CEQ Chairman Frampton says Japanese disaster worse than Three Mile Island**

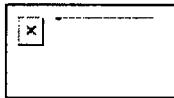


How does Japan's Fukushima nuclear event compare to the United States' Three Mile Island incident? During today's OnPoint, George Frampton, the deputy director and chief of staff for the Nuclear Regulatory Commission's special inquiry group

into the Three Mile Island accident, explains why Fukushima is a more serious event than Three Mile Island. Frampton, also the former chairman of the White House Council on Environmental Quality and currently senior of counsel and a member of the clean energy and climate industry group at Covington & Burling, also explains how Fukushima will affect the U.S. nuclear industry.

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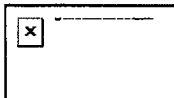
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Center for American Progress' Daniel Weiss says tapping into reserve could help lower gas prices.

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**From:** E&E Publishing, LLC <ealerts@eenews.net>  
**Sent:** Tuesday, March 22, 2011 12:58 PM  
**To:** Schmidt, Rebecca  
**Subject:** March 22 -- Greenwire is ready



## AN E&E PUBLISHING SERVICE

### NUCLEAR CRISIS: JAPAN & THE FUTURE OF ENERGY POLICY



The devastating earthquake and tsunami in Japan has spawned a major nuclear disaster. E&E examines the implications for energy, the environment, security and public health. [Click here](#) to go to the report.

GREENWIRE -- TUE., MARCH 22, 2011 -- [Read the full edition](#)

#### **1. WATER POLLUTION: Ocean dumpers sail home leaving EPA agents in their wake**

To hear Rick Stickle tell it, John Karayannides was the mastermind behind the dumping of 440 tons of oil-soaked grain from a U.S. cargo ship into the South China Sea in 1999. Though Stickle owned the Iowa-based Sabine Transportation Co., Karayannides ran the company's shipping operations. And when a problem on a cargo vessel led to the contamination of a shipment of relief supplies bound for Bangladesh, Stickle said Karayannides came up with the plan and gave orders to throw the ruined grain overboard. But a federal jury did not buy his story. Stickle was convicted in 2005 of ordering the illegal dumping and in obstructing an investigation by the U.S. Coast Guard. Stickle said in a recent interview that he dreams of the day he will cross paths with Karayannides. And that is one area where Stickle and U.S. EPA are in agreement.

#### **TOP STORIES**

2. **NUCLEAR WASTE:** Court hints Yucca lawsuit may be premature
3. **BUDGET:** Congress' failure to pass spending bill creates chaos in agencies
4. **DEFENSE:** Marine Corps unveils plan to cut frontline energy use

#### **JAPAN EARTHQUAKE**

5. **NUCLEAR CRISIS:** Japan disaster creates new hurdles for Midwest reactor plans

6. **NUCLEAR CRISIS:** Tokyo Electric is no stranger to power-supply problems
7. **NUCLEAR CRISIS:** A turning point and setbacks at crippled Japanese plant
8. **RADIATION:** Plume detected over East Coast and as far as Iceland
9. **NUCLEAR CRISIS:** Japanese regulators extended reactor's life despite safety warnings
10. **UTILITIES:** Japanese nuclear operator slammed for lack of openness
11. **BUSINESS:** Japan quake sends ripples through global industries

## **POLITICS**

12. **MINING:** MSHA 'a different agency' in wake of W.Va. disaster -- Main

## **ENERGY**

13. **COAL:** Interior, Wyo. expected to announce Powder River Basin deal
14. **RENEWABLE ENERGY:** BLM, Colo. ink agreement on geothermal leasing
15. **NATURAL GAS:** Utilities must embrace long-term contracts, market forces -- report
16. **NATURAL GAS:** Haynesville may have surpassed Barnett as top shale play
17. **NUCLEAR:** Changes expected at N.Y.'s Indian Point
18. **NUCLEAR:** Texas plant stalled while NRC investigates Japan accident
19. **NUCLEAR SAFETY:** Court requires Exelon, NRC to review licensing of Oyster Creek plant
20. **MINING:** Resurrected Australian deal is rare bright spot for uranium markets
21. **NATURAL GAS:** Industry poised for resurgence after nuclear, oil crises

## **LAW AND LOBBYING**

22. **CHEMICALS:** 5 pesticide industry groups support Obama admin in ESA lawsuit
23. **BIOTECH:** Bayer ordered to pay \$136M for rice contamination

## **AIR AND WATER**

24. **WATER:** Amid international tumult, World Water Day struggles to make a splash
25. **WATER:** Most Americans clueless about water sources -- poll
26. **WATER:** Mauritania, Kuwait, Jordan have least secure supplies -- report

## STATES

### 27. TRANSPORTATION: N.C. strikes deal with freight company to advance passenger rail

## SOCIETY

### 28. SPORTS: Northwest pro teams form green alliance

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**From:** Virgilio, Martin  
**Sent:** Wednesday, March 23, 2011 6:24 AM  
**To:** Virgilio, Martin  
**Subject:** FW: NRR Actions: near-term

**Importance:** High

**From:** Leeds, Eric  
**Sent:** Wednesday, March 16, 2011 1:14 PM  
**To:** Virgilio, Martin; Weber, Michael  
**Cc:** Borchardt, Bill; Boger, Bruce; Grobe, Jack; Ruland, William; Johnson, Michael; Sheron, Brian; Evans, Michele  
**Subject:** NRR Actions: near-term  
**Importance:** High

Please see below. NRR has assembled a team, led by an SES manager to evaluate near term actions for the agency's response to the Japanese event. At this time, we are considering inspection as well as a generic communication and a review of "sensitive" licensing actions". I will keep you informed as we go forward. I have discussed the current situation in Japan with the RAs and our preliminary thoughts for regulatory actions going forward.

We have also prepared a scheduling note for the commission meeting for next week. We will send it to you.

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

**From:** Brown, Frederick  
**Sent:** Wednesday, March 16, 2011 11:32 AM  
**To:** Leeds, Eric; Boger, Bruce; Grobe, Jack  
**Subject:** FW: Action: Consider potential on-site activities in near-term  
**Importance:** High

FYI

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**From:** Brown, Frederick  
**Sent:** Wednesday, March 16, 2011 11:17 AM  
**To:** Roberts, Darrell; Clifford, James; Croteau, Rick; Jones, William; Croteau, Rick; Darrell Roberts; James Clifford; Jones, William; Kennedy, Kriss; Shear, Gary; Troy Pruett; West, Steven  
**Cc:** Vogel, Anton; Wilson, Peter; Miller, Chris; Weerakkody, Sunil; O'Brien, Kenneth; Reynolds, Steven; Munday, Joel; Moorman, James; Christensen, Harold; Westreich, Barry  
**Subject:** Action: Consider potential on-site activities in near-term  
**Importance:** High

On the DRA call today, I'm going to float the potential for either a smart sample or a TI to look at the following areas:

- Licensee verification of 50.54(hh)(2) current status and readiness;
- Licensee verification of SBO current status and readiness consistent with their coping strategy;

- Licensee verification of Internal and External Flooding design features consistency with their licensing basis; and
- Licensee verification that their 50.54(hh)(2) equipment would survive a seismic event undamaged.

If you have thoughts, I'd like to hear them, and you may want to prep your DRAs.

Thanks,  
Fred



**From:** E&E Publishing, LLC <ealerts@eenews.net>  
**Sent:** Wednesday, March 23, 2011 1:13 PM  
**To:** Virgilio, Martin  
**Subject:** March 23 -- Greenwire is ready



## AN E&E PUBLISHING SERVICE

GREENWIRE -- WED., MARCH 23, 2011 -- [Read the full edition](#)

### 1. **NUCLEAR CRISIS:** NRC chairman takes center stage as U.S. eyes reactor security

The March 11 earthquake and tsunami in Japan that triggered widespread fears over nuclear security have thrust an unfamiliar face into the national spotlight: Gregory Jaczko, head of the U.S. Nuclear Regulatory Commission. And the chairman will only grow in prominence as he leads a nationwide security check on the country's 104 nuclear reactors at the behest of President Obama.

#### TOP STORIES

2. **ENDANGERED SPECIES:** Obama plan to cap funding for ESA petitions angers litigants
3. **WILDERNESS:** Utah counties file lawsuit over BLM policy
4. **EPA:** Watchdog sinks teeth into nuclear crisis, Hill budget brawl

#### JAPAN EARTHQUAKE

5. **DRINKING WATER:** Tokyo's tap water not safe for infants
6. **NUCLEAR CRISIS:** FDA orders halt to Japanese imports of dairy and produce
7. **NUCLEAR WASTE:** U.S. storage sites are at full capacity
8. **NUCLEAR:** TVA says its reactors could withstand earthquake
9. **NUCLEAR SAFETY:** Russia touts reactors made safer by Chernobyl

#### POLITICS

10. **REGULATIONS:** Bush's rulemaking czar blasts EPA's use of 'guidance'
11. **ENERGY POLICY:** As Ill. senator, Obama balanced nuclear views with Exelon contributions

## ENERGY

12. **ETHANOL**: Small-engine groups ask EPA to continue sales of 10% fuel blends
13. **OIL SPILL**: Houston company accepts responsibility for new Gulf slick
14. **NUCLEAR**: N.Y. governor pushes to close Indian Point reactors
15. **NATURAL GAS**: Permit for site near Cowboys Stadium approved

## FEDERAL AGENCIES

16. **INTERIOR**: NPS scientist 'acted improperly' in review of Calif. oyster farm - audit
17. **WORK FORCE**: Budget experts offer sympathy but little else for federal employees

## LAW AND LOBBYING

18. **CLIMATE**: Court sets schedule for litigation over EPA emission rules
19. **MINING**: Former Upper Big Branch foreman charged with faking credentials
20. **NATURAL GAS**: Judge approves \$22M Marcellus Shale settlement

## AIR AND WATER

21. **WATER POLLUTION**: GenOn Power faces millions in fines over Pa. discharges

## NATURAL RESOURCES

22. **OIL SPILL**: South Atlantic slick threatens endangered penguins

## STATES

23. **CALIFORNIA**: Brown picks former bank exec for utilities post

## E&TV'S ONPOINT

24. **EPA**: Clean Energy Group's Bradley discusses 'Utility MACT' proposal

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**From:** Rihm, Roger  
**Sent:** Wednesday, March 23, 2011 3:40 PM  
**To:** Borchardt, Bill; Virgilio, Martin; Weber, Michael; Muessle, Mary; Ash, Darren  
**Cc:** Landau, Mindy; Taylor, Renee  
**Subject:** FYR: Draft Statement for EDO @ 3/29 Senate Energy "Briefing"  
**Attachments:** Testimony\_March29\_2011.docx  
  
**Importance:** High

Per OCA, we have been asked to prepare a written statement for the record (draft attached) and a shorter oral statement (that will be based on the "approved" written statement). The attachment is basically a re-working of Bill's presentation at the recent Commission meeting. The discussion of the SRM will be revised, as necessary, once we have the final SRM.

To allow for OCA and Commission review, I would like to get your comments by COB Thursday.

cm/125

## **NRC Response to Recent Nuclear Events in Japan and the Continuing Safety of the U.S. Commercial Nuclear Reactor Fleet**

Thank you, and good morning. Before I begin, I would like to join in your expressions of condolences to the people of Japan. I and many of my colleagues on the NRC staff have had many years of very close and personal interaction with our regulatory counterparts and we would like to extend our condolences to them.

### **Introduction**

We at the NRC are mindful that our primary responsibility is to ensure adequate protection of the public health and safety of the American people. We have been very closely monitoring the activities in Japan and reviewing all available information to allow us to conclude that the U.S. plants continue to operate safely. There has been no reduction in the licensing or oversight function of the NRC as it relates to any of the U.S. licensees.

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

Notwithstanding the very high level of support being provided as a result of events in Japan, we continue to maintain our focus on our domestic responsibilities.

I'd like to begin with a brief overview of the recent events in Japan and our immediate and continuing response. I then want to spend the bulk of my time discussing the reasons for our continuing confidence in the safety of the US commercial nuclear reactor fleet, and the path forward for the NRC in light of the events in Japan.

### **Overview of Events and the NRC's immediate and Continuing Response**

On Friday, March 11th an earthquake hit Japan, resulting in the shutdown of more than 10 reactors. From what we know now, it appears that the reactors' response to the

earthquake went according to design. The ensuing tsunami, however, caused the loss of emergency AC power to six units at the Fukushima Daiichi site; and it is those six units that have received the majority of our attention since that time. Units One, Two, and Three, at that six unit site, were in operation at the time. Units Four, Five, and Six were in previously scheduled outages.

Immediately after the tsunami, it appears that there was no injection capability into the reactor vessels on Units One, Two, and Three. On Saturday, March 12th, a hydrogen explosion occurred in Unit One; and then the following Monday, March 14th, a hydrogen explosion in Unit Three. On Tuesday, the 15th of March, there were explosions in Unit Two and in Unit Four from hydrogen originating, we believe, from overheated fuel in the spent fuel pool. [Briefly summarize period of March 16 – 29]

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

On that same day, Friday, March 11th, we dispatched two experts to Japan to help at the embassy and begin interactions with our Japanese regulatory counterparts. By Monday, we had dispatched a total of 11 staff to Japan. We have subsequently rotated in a different group of staff to continue our on-the-ground assistance in Japan. The areas of focus for this team are: 1) to assist the Japanese government and respond to requests from our regulatory counterpart, NISA; 2) to support the U.S. ambassador and his understanding of the nuclear impacts of this event; and 3) to facilitate the information flow from Japan to the U.S. NRC so that we can assess the implications on the U.S. fleet in as timely a manner as possible.

We have an extensive range of stakeholders with whom we have ongoing interaction, including the White House, Congressional staff, our state regulatory counterparts, a number of

other federal agencies, and the international regulatory bodies around the world.

The NRC Emergency Operations Center remains in a 24/7 posture. This has involved the efforts of over 250 NRC staff on a rotating basis. The entire agency is coordinating and pulling together in response to this event so that we can provide assistance in Japan while continuing the normal activities necessary to fulfill our domestic responsibilities.

Let me also just note here in concluding this section of my remarks that the U.S. government has an extensive network of radiation monitors across the country. EPA's system has not identified any radiation levels of concern in this country. In fact, natural background from things like rocks, the sun, and buildings, is 100,000 times more than any level that has been detected to date. We feel confident in our conclusion that there is no reason for concern in the United States regarding radioactive releases from Japan.

#### **Continuing Confidence in the Safety of the U.S. Fleet**

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

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

We've taken advantage of the lessons learned from previous operating experience, to implement a program of continuous improvement for the U.S. reactor fleet. We have learned

from experience across a wide range of situations, including most significantly, the Three Mile Island accident in the late 1970s. As a result of those lessons learned, we have significantly revised emergency planning requirements and emergency operating procedures. We've addressed many human factors issues regarding how control room employees operate the plant, we added new requirements for hydrogen control to help prevent explosions inside of containment, and we also created requirements for enhanced control room displays of the status of pumps and valves.

We have a post-accident sampling system that requires the monitoring of radioactive material release and possible fuel degradation. And, one of the most significant changes after Three Mile Island was creation of the Resident Inspector Program, which has at least two full-time NRC inspectors on site at each facility who have unfettered access to all licensees' activities 24 hours a day, seven days a week.

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

As a result of the events of September 11, 2001, we did a similar evaluation, and identified important pieces of equipment that, regardless of the cause of a significant fire or explosion at a plant, we want to have staged in advance, as well as new procedures and policies that would help deal with a severe situation.

Our program of continuous improvement based on operating experience will now include evaluation of the significant events in Japan and what we can learn from them. We already have begun enhancing inspection activities through temporary instructions to our inspection



staff, including the resident inspectors and the region-based inspectors in our four Regional offices, to look at licensees' readiness to deal with both the design basis accidents and the beyond-design basis accidents.

We've also issued an information notice to the licensees to make them aware of the events in Japan, and the kinds of activities we believe they should be engaged in to verify their readiness. Specifically, we have directed them to verify that their capabilities to mitigate conditions that result from severe accidents, including the loss of significant operational and safety systems, are in effect and operational. They're verifying the capability to mitigate a total loss of electric power to the nuclear plant. They're verifying the capability to mitigate problems associated with flooding, and the impact of floods on systems both inside and outside of the plant. And they're identifying the equipment that's needed for the potential loss of equipment due to seismic events appropriate for the site, because each site has its own unique seismic profiles. The information that we gather from this temporary inspection will be used to evaluate the industry's readiness for similar events, and will aid in our understanding of whether additional regulatory actions need to be taken in the immediate term.

The industry also is independently performing many verification activities at this time to confirm that all of these processes and procedures and rules that have been implemented are still valid.

Over the last 15 or 20 years, there have been a number of new rulemakings that have enhanced the domestic fleet against some of the problems we are seeing in Japan. The station blackout rule requires every plant in this country to analyze what the plant response would be if it were to lose all alternating current so that it could respond using batteries for a period of time, and then have procedures in place to restore alternating current to the site and provide cooling to the core.

The hydrogen rule requires modifications to reduce the impacts of hydrogen generated for beyond-design basis events and core damage. There are equipment

qualification rules that require equipment, including pumps and valves, to remain operable under the kinds of environmental temperature and radiation conditions that you would see under a design basis accident. And then, regarding the type of containment design used by the most heavily damaged plants in Japan, we've had a Boiling Water Reactor Mark I Containment Improvement Program since the late 1980s, which has required installation of hardened vent systems for containment cooling and fission product scrubbing, as well as enhanced reliability of the automatic depressurization system.

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

### **The Path Ahead**

Beyond the initial steps to address the experience from the events in Japan that I've described to you, we have received direction from the Commission to establish a senior level agency task force to conduct a methodical and systematic review of our processes and regulations to determine whether the agency should make additional improvements to our regulatory system and make recommendations to the Commission for its policy direction. This activity will have both near-term and longer-term objectives.

For the near term effort, we are beginning a 90-day review. This review will evaluate all of the currently available information from the Japanese events to identify immediate or near-term operational or regulatory issues potentially affecting the 104 operating reactors in the U.S., including their spent fuel pools. Areas of investigation will include the ability to protect against natural disasters, response to station blackouts, severe accidents and spent fuel accident progression, radiological consequence analysis, and severe accident management issues regarding equipment. Over this 90-day period, we will develop

recommendations, as appropriate, for changes to inspection procedures and licensing review guidance, and recommend whether generic communications, orders, or other regulatory requirements are needed.

This 90-day effort will include a 30-day Quick Look Report to the Commission to provide a snapshot of the regulatory response and the condition of the U.S. fleet based on information we have available at that time. Preparing a Quick Look Report also will ensure that the Commission is both kept informed of ongoing efforts and prepared to resolve any policy recommendations that surface. I believe we will have limited stakeholder involvement in the first 30 days to accomplish this, but over the 90-day and longer-term efforts we will seek additional stakeholder input. These near-term activities will be carried out independent of any industry efforts that might be ongoing. At the end of the 90-day period, a report will be provided to the Commission and, once approved, released to the public.

The task force's longer-term review will begin as soon as the NRC has sufficient technical information from the events in Japan, with a goal of commencing no later than the completion of the 90-day near-term report.

The task force will evaluate all technical and policy issues related to the event to identify additional potential research, generic issues, changes to the reactor oversight process, rulemakings, and adjustments to the regulatory framework that should be pursued by the NRC. We also expect to evaluate potential interagency issues, such as emergency preparedness, and examine the applicability of any lessons learned to non-operating reactors and materials licensees. We expect to seek input from all key stakeholders during this process. A report with appropriate recommendations will be provided to the Commission within 6 months of the start of this evaluation, and made publicly available subsequent to its approval by the Commission.

## **Conclusion**

In conclusion, I want to reiterate that we continue to make our domestic responsibilities

for licensing and oversight of the U.S. licensees our top priority and that the U.S. plants continue to operate safely. In light of the events in Japan, there is a near-term evaluation of their relevance to the U.S. fleet underway, and we are continuing to gather together the information necessary for us to take a longer, more thorough look at the events in Japan and their lessons for us. Based on these efforts, we will take all appropriate actions necessary to ensure the continuing safety of the U.S. fleet. This concludes my presentation. I'd be happy to address any questions you have.

---

**From:** Holahan, Gary  
**Sent:** Thursday, March 24, 2011 12:49 PM  
**To:** Miller, Charles; Grobe, Jack; Sanfilippo, Nathan; Virgilio, Martin  
**Cc:** Johnson, Michael; Williams, Donna; Leeds, Eric  
**Subject:** FW: FUKUSHIMA AND MDEP  
**Attachments:** WENRA task force.doc; WENRA JAPAN STATEMENT.doc; Stress Tests.ppt; Finnish stress tests.DOC

Info sharing starting on new reactors ... more work needed for coordination on operating reactors

I will be forwarding the Commission tasking paper and later the Charter

Gary

---

**From:** Lawrence.BURKHART@oecd.org [mailto:Lawrence.BURKHART@oecd.org]  
**Sent:** Thursday, March 24, 2011 10:54 AM  
**To:** petteri.tiippana@stuk.fi; gclapiss@nnr.co.za; k210kig@kins.re.kr; Dave.Watson@hse.gsi.gov.uk; slee@kins.re.kr; Douglass.Miller@cncs-ccsn.gc.ca; abe-kiyoharu@jnes.go.jp; Lawrence.Burkhart@oecd.org; thomas.houdre@asn.fr; Rosales-Cooper, Cindy; yuichi.onoda@cao.go.jp; Holahan, Gary; Philippe.Gress@oecd.org; javier.reig@oecd.org; ohmura-tetsuo@meti.go.jp; jiangwei@mep.gov.cn; j.lyons@iaea.org; David.Newland@cncs-ccsn.gc.ca; i.sokolova@gosnadzor.ru; len.creswell@hse.gsi.gov.uk; M.Lipar@iaea.org; M.El-Shanawany@iaea.org; alejandro.huerta@oecd.org; Williams, Donna; bvs@gan.ru; sebastien.crombez@asn.fr  
**Cc:** adeline.clos@asn.fr; Geoffrey.Vaughan@hse.gsi.gov.uk; EuropaM@nnr.co.za; diane.jackson@oecd.org; yindejian@tsinghua.org.cn; byung-soon.kim@oecd.org; oshima-toshiyuki@meti.go.jp; Doane, Margaret; PBester@nnr.co.za; fujiensc@163.com; bogdan@secNRS.RU; Rosales-Cooper, Cindy; k076kbs@kins.re.kr; huliguang@tom.com; bannai-toshihiro@meti.go.jp; v.kolobov@gan.ru; olivier.gupta@asn.fr; Marcel.deVos@cncs-ccsn.gc.ca; akane.kawasue@cao.go.jp; akihide.hidaka@cao.go.jp; SRokita@nnr.co.za; sebastien.crombez@asn.fr  
**Subject:** FUKUSHIMA AND MDEP

Dear MDEP STC members,

Bonjour! In an effort to keep MDEP members as up to date as possible on what each national regulator is undertaking in response to the Fukushima events, the NEA MDEP technical secretariat is gathering information as provided to us and placing that information in the MDEP library at:

[https://www.mdep.oecd-nea.org/mdep/workspaces/sc/fukushima\\_info\\_shari/](https://www.mdep.oecd-nea.org/mdep/workspaces/sc/fukushima_info_shari/)

In the MDEP Library, subfolders have been set up under the STC folder and by country and organization (WENRA, IAEA, NEA).

**We encourage you to share information about what your national regulatory authority is doing** so that we can keep each other informed about the work that is going on. Of course the MDEP continues to recognize and support the independent work that each regulator is doing in response to these events and we hope that this continued sharing of information will help each regulator be stronger in its efforts. Exchanging information as part of MDEP has proven to be an invaluable resource when it comes to cooperating multilaterally on significant safety issues as well as communicating to our stakeholders.

Please find attached information about recent WENRA statements and intended actions as well as information from Finland. Mr. Laaksonen and Mr. Lacoste hosted a press conference yesterday to discuss WENRA's, Finland's, and France's activities in light of the recent events in Japan. The video of the press conference may be found at :

[http://gsb.webcast.fi/s/stuk/stuk\\_2011\\_0323\\_tiedotustilaisuus/](http://gsb.webcast.fi/s/stuk/stuk_2011_0323_tiedotustilaisuus/)

We anticipate that the NRC and ASN will be providing information to us soon about what each of their organizations will be doing over the short (30, 60, and 90 days or so) and long-terms to address these issues also. Task forces have been formed in these organizations to address Fukushima-related events. As soon as we receive relevant information, we will distribute to all MDEP STC members. If there are other members of your organizations that you would like copied on such emails in addition to yourselves, please let us know. Again, we will place all of these documents in the MDEP library so that you may access them when you like.

The issues brought up by the Fukushima events and how they may relate to MDEP activities are planned to be discussed in many upcoming MDEP meetings, including the STC meeting 27 – 29 April and the PG meeting 7 June. If working group chairs believe it is appropriate to discuss related issues in their WGs, please let your NEA technical secretariat and other WG members know. With that said, we also recognize that regulators will be taking steps in the very near future and that it probably is wise to share information prior to the meeting dates. So, if you have information that you think would be of interest to other MDEP regulators, please forward to us so that we can share with all.

Very Best Regards,

Larry Burkhart  
Project Officer  
Multinational Design Evaluation Programme  
OECD-Nuclear Energy Agency  
[www.oecd-nea.org](http://www.oecd-nea.org)

March 20, 2011

**A LIST OF ISSUES THAT STUK IS PLANNING TO ASSES TOGETHER WITH NPP LICENSE HOLDERS AND REPORT TO THE MINISTRY IN THE AFTERMATH OF FUKUSHIMA NPP**

1. Extreme weather and natural conditions at the plant site that can have effect on the reliability of plant's off-site or on-site power supply or on the functionality of the residual heat removal systems.
  - Design basis limits and assumptions regarding each weather and natural condition. Assessment of the suitability of these limits and assumptions compared to today's knowledge taking into account the historical information of the weather and natural phenomena, and the predicted development of these during the planned lifetime of the plant. Assessment of the possible needs to modify the previous design basis.
  - Short description of the design provisions against each weather and natural condition.
  - Assessment of the sufficiency of the provisions.
  - Potential possibilities to improve provisions if it is assessed to be necessary.
2. Earthquakes taken into account in the design
  - Design basis earthquake and the methods used to define it.
  - Summary of the safety analysis concerning earthquakes and of the measures done based on the analysis to ensure the safety.
  - Potential possibilities to improve provisions if it assessed to be necessary.
3. Other external threats that have been taken into account in the design. Threats shall include also the threats to the plant's electrical systems that are caused by disturbances in the national electric grid, plant's switchyard, transformers or main generator. Threats of lightning are assessed together with other threats to electrical systems. In addition, a short summary will be presented on how the reliability of the normal and emergency AC power systems of the plant has been evaluated and improved, taking into account reported operating experience from other nuclear power plants.
  - Assessment of the suitability of assumptions concerning each threat and the need to modify the assumptions.

- Short description of the provisions concerning each threat
  - Assessment of the sufficiency of the provisions
  - Potential possibilities to improve provisions if it is assessed to be necessary.
4. Under items 1-3 one should consider also the mutual dependencies of the external events and the possibility that they coincide. In addition, one should take into account the possible disturbances or loss of communications (traffic and data transfer).
5. Reliability of power supply in a situation of the loss of off-site power
- Short description of the reserve power sources designed in case of loss of off-site power and possibilities for crossed pinning between plant unit's safety divisions and different plant units. Assessment of the time required to make the crossed pinning.
  - Other AC power sources at the plant site or nearby that can be connected to supply power directly to the plant. Information of the time needed to connect each electricity source and information of the place where the connection can be performed. Information how these connections are protected against extreme weather conditions and external threats.
  - Possibilities to get portable AC power sources to the plant, and information on these devices concerning the maximum power, voltage levels, and capability to carry transient loads related to start-up of electrical motors. Assessment of the time needed to transport these devices and risks related to the transport in extreme conditions.
  - Information of the arrangements enabling the connection of the portable AC power sources to the plant's electric power supply system.
  - Assessment of the possibilities to improve the availability and connection possibilities of those AC power devices that would function as AC power sources in a situation where the on-site reserve power sources were lost.
6. A summary of the heat sinks suitable for the cooling of the reactor and spent fuel, their adequacy, and reliability. References to provisions described in Sections 1-3 can be used if necessary.
- Provisions in case the sea water intake tunnel is blocked.
  - Possibilities to remove the heat to the atmosphere.
  - Water storage tanks containing demineralized water that is available for feeding coolant into the reactor and the spent fuel pools. Possibilities and arrangements to fill these water tanks, taking into account also water of lower quality that is available in the neighborhood of the plant. Assessment of the need and possibilities to improve these arrangements.
  - Temporary provisions for feeding water directly from portable water sources (fire trucks) in extreme conditions into the reactor cooling



system, pressure water reactor secondary system or spent fuel storage pools. Assessment of the time needed to make these temporary arrangements and the availability of the personnel needed for this task. Assessment of the need and possibilities to improve the pipeline connections necessary to enable these temporary arrangements.

7. A summary of the alternative possibilities to remove the residual heat when the reactor is at a hot shutdown state.
  - Verification of the availability of skilled personnel and appropriate procedures for utilization of each possibility.
8. A summary of the alternative possibilities to get the reactor into cold shutdown state from the hot shutdown state.
  - Verification of the availability of skilled personnel and appropriate procedures for utilization of each possibility
9. A summary of the alternative possibilities to remove the residual heat from the containment so that the pressure and the temperature do not exceed the design basis values.
  - Verification of the availability of skilled personnel and appropriate procedures for utilization of each possibility.
10. A summary of the alternative possibilities to cool each of the spent fuel pools. Assessment of the largest possible heat power that can be released as a sum of the fuel assemblies in each spent fuel pool.
  - Verification of the availability of skilled personnel and appropriate procedures for utilization of each possibility.
11. Assessment of the adequacy of the available personnel for each of the relevant key tasks, taking into account potential accident situations lasting long and concerning more than one plant unit.

# **A LIST OF ISSUES SUGGESTED FOR ASSESSMENT IN THE AFTERMATH OF FUKUSHIMA NPP**

Jukka Laaksonen

## Summary

- Re-evaluation of external threats
  - emphasis in threats to AC power supply
  - coincident events / threats
  - damage to external infrastructure (roads, information transfer)
- On-site AC power supply and contingency measures
- Available heat sinks: designed systems and contingencies
- Decay heat removal possibilities
  - reactor core
  - spent fuel pools
  - Containment
- Availability of qualified people to handle accident in long-term

## **Extreme weather and natural conditions at the plant site: potential impact to off-site or on-site power supply or to the functionality of the decay heat removal systems.**

### **Design basis limits and assumptions**

- Assessment of the suitability of these limits and assumptions.
- Assessment of the possible needs to modify the previous design basis.

### **Short description of the design provisions against each weather and natural condition.**

- Assessment of the sufficiency of the provisions.
- Potential possibilities to improve provisions if it is assessed to be necessary.

## Earthquakes taken into account in the design

Design basis earthquake and the methods used to define it.

- Summary of the safety analysis concerning earthquakes and of the measures done based on the analysis to ensure the safety.
- Potential possibilities to improve provisions if it assessed to be necessary.

## **Other external threats that have been taken into account in the design.**

Include also the threats to the plant's electrical systems that are caused by disturbances in the national electric grid, plant's switchyard, transformers or main generator. Include also threats of lightning.

- A short summary on how the reliability of the normal and emergency AC power systems of the plant has been evaluated and improved, taking into account operating experience
- Assessment of the suitability of assumptions concerning each threat and the need to modify the assumptions.

Short description of the provisions concerning each threat

- Assessment of the sufficiency of the provisions
- Potential possibilities to improve provisions if it is assessed to be necessary.

Consider also the mutual dependencies of the external events and the possibility that they coincide.

Take into account the possible disturbances or loss of communications (traffic and data transfer).

## Reliability of power supply in a situation of the loss of off-site power

Reserve power sources designed for loss of off-site power

- Possibilities for crossed pinning between plant unit's safety divisions and different plant units. Assessment of the time required to make the crossed pinning.

Other AC power sources at the plant site or nearby that can be connected to supply power directly to the plant.

- Time needed to connect each electricity source
- How the power supply can be connected.
- How each connection is protected against extreme weather conditions and external threats.

Possibilities to get portable AC power sources to the plant

- Power, voltage levels, and capability to carry transient loads
- Assessment of the time needed to transport these devices and risks related to the transport in extreme conditions.
- Connection to the plant's electric power supply system.

Assessment of the possibilities to improve the availability and connection possibilities of the contingency AC power devices



## **A summary of the heat sinks suitable for the cooling of the reactor and spent fuel, their adequacy, and reliability.**

Provisions in case the sea water intake tunnel is blocked.

Possibilities to remove heat to the atmosphere.

Water storage tanks containing demineralized water

- Possibilities and arrangements to fill these water tanks, taking into account also water of lower quality that is available in the neighborhood of the plant.
- Assessment of the need and possibilities to improve these arrangements.

Temporary provisions for feeding water directly from portable water sources (fire trucks) in extreme conditions into the reactor cooling system, PWR secondary system or spent fuel storage pools.

- Time needed to make these temporary arrangements
- Availability of personnel needed for this task.
- Assessment of the need and possibilities to improve the pipeline connections necessary to enable these temporary arrangements.

**A summary of the alternative possibilities to remove the residual heat when the reactor is at a hot shutdown state.**

- Verification of the availability of skilled personnel and appropriate procedures for utilization of each possibility.

**A summary of the alternative possibilities to get the reactor into cold shutdown state from the hot shutdown state.**

- Verification of the availability of skilled personnel and appropriate procedures for utilization of each possibility

**A summary of the alternative possibilities to remove the residual heat from the containment so that the pressure and the temperature do not exceed the design basis values.**

- Verification of the availability of skilled personnel and appropriate procedures for utilization of each possibility.

**A summary of the alternative possibilities to cool each of the spent fuel pools.**

- Assessment of the largest possible heat power in each spent fuel pool.
- Verification of the availability of skilled personnel and appropriate procedures for utilization of each possibility.

**Assessment of the adequacy of the available personnel for each of the relevant key tasks, taking into account potential accident situations lasting long and concerning more than one plant unit.**

## **WENRA STATEMENT ON THE FUKUSHIMA NPP ACCIDENT**

The Heads of the nuclear regulatory bodies of European nations with nuclear power plants met in Helsinki on the 22 and 23 March 2011. During the meeting WENRA discussed the tragic events in Japan, and in particular the role of nuclear safety regulators in understanding the circumstances.

WENRA wishes to express its utmost sympathy for the plight of the Japanese people, its admiration of the dedication of those personnel in responding to the event on the site, and its desire to offer what ever help it could to assist in the response and learning from the event.

At the present time the event is still in progress and much difficult work is required to bring the plant under full control. Furthermore, continued vigilance will be required for weeks if not months to come and the management of the consequences may take decades.

WENRA recognises that, despite the high levels of safety for European nuclear plants, it is important to learn any immediate lessons from the Fukushima accident and to aim for the highest levels of safety in line with the fundamental principle of nuclear safety – continuous improvement.

To this end, in addition to national level initiatives, and in response to discussions at the Council of the European Union for Energy held on 21<sup>st</sup> March, a WENRA task force is working to provide urgently an independent regulatory technical definition of a “stress test” and how it should be applied to nuclear facilities across Europe. This will take account of the detailed work which WENRA has done for existing reactors (safety reference levels) and for new reactors (safety objectives for new nuclear power plants). A proposal for this work has been prepared.

The aim of the work is to see what improvements to nuclear safety may be appropriate in light of the Fukushima nuclear accident, as far as it is understood. It will be given to European Nuclear Safety ‘Regulators’ Group (ENSREG) to assist in its response to requests for advice from the Council of the European Union and European Commission.

Additionally, WENRA members will be offering to the IAEA to send nuclear experts to their response centre to assist them in responding to the ongoing event, and possible future events, to understand the circumstances and lessons to be learnt, and to provide real time authoritative information to regulatory bodies.

## **First proposal about European “stress tests” on nuclear power plants**

### **Definition and objective**

We define a “stress test” as a targeted reassessment of the safety margins of NPPs in the light of the events which occurred in Fukushima.

This reassessment will be based on the existing safety studies and engineering judgement to evaluate the behaviour of a nuclear power plant when facing a set of challenging situations (those envisaged under the following section “technical scope”).

For a given plant, the reassessment will report on the behaviour of the plant (most probable behaviour, with mention of potential cliff-edge effect) for each of the considered situations.

The results of the reassessment may indicate a need for additional safety provisions being technical or organisational (such as procedures, human resources, emergency response organisation, use of external resources).

It remains a national responsibility to take any appropriate measures resulting from the reassessment.

### **Technical scope**

The scope takes into account the issues that have been directly highlighted by the events that occurred in Fukushima and the possibility for combination of initiating events. The following situations will be envisaged:

#### Initiating events

1. Earthquake exceeding the design basis
2. Flooding exceeding the design basis
3. Other extreme external conditions challenging the specific site

#### Consequential loss of safety functions

4. Prolonged total loss of electrical power
5. Prolonged loss of the ultimate heat sink

#### Accident management issues

6. Core melt accident, including consequential effects such as hydrogen accumulation
7. Degraded conditions in the spent fuel storage, including consequential effects such as the loss of shielding of radiation

Consideration should be given to:

- automatic actions,
- operators actions specified in emergency operating procedures,

- any other planned measures of prevention, recovery and mitigation of accidents,
- the situation outside the plant
- the possibility of several units being affected at the same time.

Given the tight timeframe of the exercise, very clear guidance for each selected scenario will be developed by WENRA.

### **Methodology and timeframe**

The licensee has the prime responsibility for safety. Hence, it is up to the licensees to perform the reassessments, and to the regulatory bodies to independently review them.

A task force of WENRA should conduct discussions with the European nuclear industry and bring its proposal to the European Nuclear Safety Regulators Group (ENSREG) meeting scheduled on the 12<sup>th</sup> of May. This proposal will then be presented and further discussed at the European level.

Timeframe needs further consideration, taking into account the available resources for daily focus on safety. The following figures are just indications.

The licensees could be given 6 months to perform the reassessments as described above and to send the results and related documentation to their national regulator.

The regulator then would perform a review of the licensees' submissions. Interactions between European regulators will be necessary and could be managed through WENRA or ENSREG. Regulators will perform, within 3 months, the review and produce a report which should be published.

Results of the reviews could be discussed in a public seminar, to which other experts (from non nuclear field, from NGOs, etc) should be invited.

**From:** E&E Publishing, LLC <ealerts@eenews.net>  
**Sent:** Thursday, March 24, 2011 10:22 AM  
**To:** Virgilio, Martin  
**Subject:** E&ETV -- Energy Policy: Former Mich. Gov. Granholm makes case for clean energy standard



## AN E&E PUBLISHING SERVICE

ONPOINT -- THU., MARCH 24, 2011 -- [Go to www.eenews.tv](http://www.eenews.tv)

### **ENERGY POLICY: Former Mich. Gov. Granholm makes case for clean energy standard**

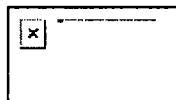


Can the United States revitalize its manufacturing sector through clean energy policies? During today's OnPoint, former Michigan Gov. Jennifer Granholm (D) makes the case for a clean energy standard, saying it will boost the United States' competitiveness and manufacturing base. Granholm, now a spokeswoman for the

Pew Charitable Trusts, also explains why she believes industry can continue to grow under U.S. EPA's air rules. She also explains how she plans to lobby members of Congress on the clean energy issue.

 [WATCH VIDEO](#)  [READ TRANSCRIPT](#)

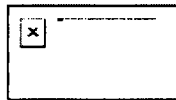
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Three Mile Island investigator George Frampton discusses severity of Fukushima event.

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### **EFFICIENCY: Alliance to Save Energy's Callahan weighs in on light bulb debate**

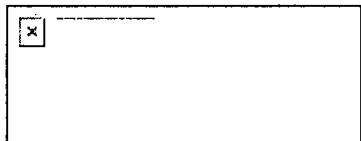
Alliance to Save Energy's Kateri Callahan discusses prospects for efficiency measures in energy legislation.

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**ENERGY**

**Nuclear Energy**

**Science Council  
Briefing on Fukushima  
Nuclear Plant Response**

*John E. Kelly  
Steve Binkley  
Steve Aoki*

**March 23, 2011**



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## **1 – Update on Effect of Salt on Coolability**



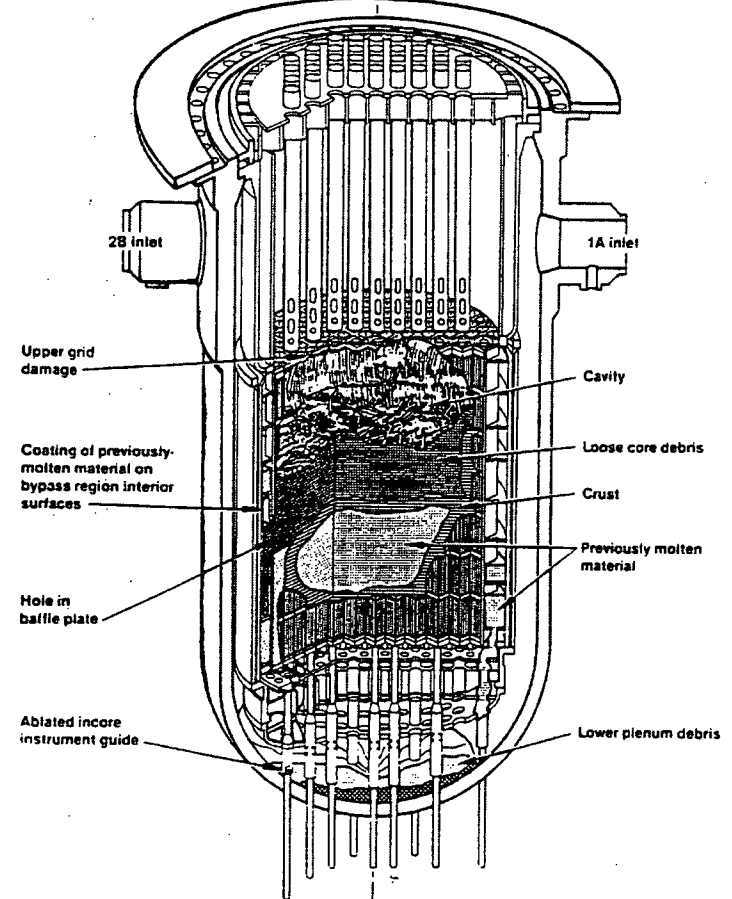
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# Core Melt Progression and Salt Impact

- Decay heat level now ~ 4 MW for Unit 1 and ~ 6.5 MW for units 2-3.
- If cooling is lost, boildown, dryout and exposure of the fuel will occur, causing core to remelt.
- Maximum adiabatic fuel melting rate is ~ 4.3 kg/sec. Given the fuel inventory of roughly 200 MT, the minimum time to melt the entire core is about 13 hours.
- Including heat sink effects do to residual water and steel structure inside the vessel, a more realistic time is about one day.
- GE and DOE Analyses agree total salt accumulation ~100 Tons of Salt based on solubility assessment – would fill lower plenum
- Also assessing best approach for providing alternate cooling; could take heroic efforts – strategies of labs similar to those of GE
- If melt relocates to lower head, any salt accumulation will be rapidly ablated though (salt melts at 801 C and the boiling point is 1413 C).

TMI-2 core debris distribution



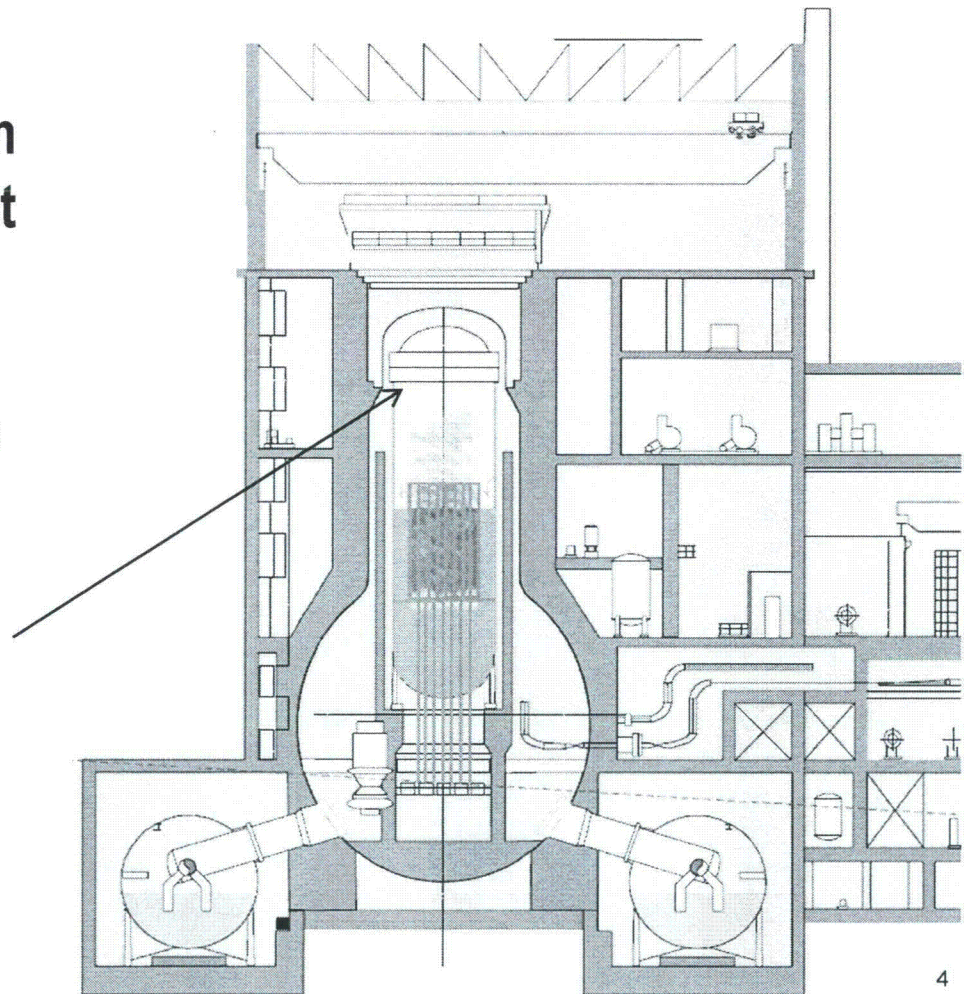


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# Transition to Fresh Water Cooling is Urgently Needed

- Delivery of fresh water from local reservoir via aqueduct is now available
- Plumbing into local plant system remains to be done





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## Seawater is a Complex Environment by Itself

| Element             | Reactor coolant<br>(BWR, HWC) | Seawater<br>(typical) |
|---------------------|-------------------------------|-----------------------|
| Calcium, ppm        | 0                             | 400                   |
| Magnesium,<br>ppm   | 0                             | 1272                  |
| Sodium, ppm         | 0                             | 10,561                |
| Potassium, ppm      | 0                             | 380                   |
| Lead, ppm           | 0                             | 0.2                   |
| Chloride, ppm       | <0.001                        | 18,980                |
| Bicarbonate,<br>ppm | 0                             | 132                   |
| Fluoride, ppm       | 0                             | 3.5                   |
| Bromide, ppm        | 0                             | 65                    |
| Sulfate, ppm        | <0.003                        | 2649                  |
| Silica, ppm         | 0                             | 0.01 to 7.0           |
| Carbon dioxide      | 0                             | 6                     |
| Oxygen, ppm         | <0.01                         | 5                     |



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## **Sea water contains a variety of minerals with different solubility limits**

- The solubility of NaCl in water can be up to 35% or 10x what is in typical sea water. While this may change with temperature, solubility is not a strong function over the range of interest.
- Before salt begins to saturate, you may get other elements coming out of solution
  - Calcium sulfates will come out at 2x sea water concentration
  - Gypsum will come out at 5x sea water concentration
  - Other calcium carbonate
  - Other salts
- NaCl is the predominant component of other minerals, but the others may be appreciable in very large volumes.





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## **Formation of deposits is highly dependent on local conditions**

- **Given the current assumptions on injection and flow (leaks through the bottom pumps into the torus), it is likely that the minerals in the sea water are concentrating in the reactor vessel as water boils off and condenses outside the vessel in the dry well. How concentrated will depend on lots of information we don't have.**
- **Salt and other mineral deposits make cake out in lots of forms depending on lots of variables. Local changes in temperature, pressure, flow, etc. will drive things into and out of solution very locally.**
- **Precipitation will ebb/flow with changes in local conditions.**
- **There was little concern about plugging of spray nozzles at the in-flow location. Temperatures, concentrations, and flow rates are not conducive to problems at the inlet.**





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## **Formation of deposits is highly dependent on local conditions**

- If the reactors are not being vented to the outside, then the vessel is likely filled with concentrated brine solution (and possible salt deposits at the bottom). The torus is likely filled with sea water, but lower salt concentration.
- if the reactors are being vented outside the dry well, the vessel is still likely filled with concentrated brine solution and the torus is filled with brackish water (mix of salt water and fresh water).
- As sea water coolant is sprayed in, it is likely evaporating before reaching the fuel/debris field. This would leave a salt dust that is filtering down to the bottom (and maybe going back into solution).
- Salt is likely deposited on every surface. At points, it may flake off and then filter down to the bottom of the vessel and go back into solution
- If water is still leaking out the seals on the pumps, it's unlikely that anything is currently blocked or packed with salt, although this could change.



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## Other Considerations

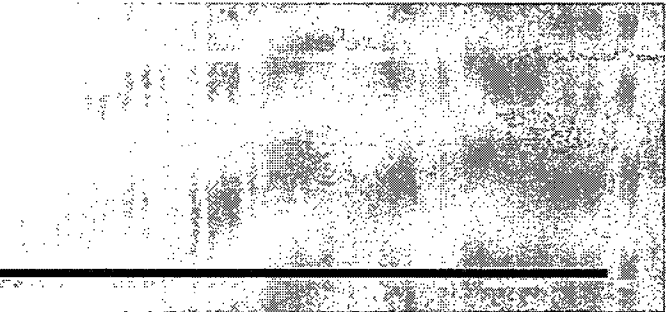
- Discussions were held on the RHR pumps. There was some caution about turning those on due to concerns about how long those would run in a brine solution that's very radioactive. It may not be worth the risk of flowing that coolant outside containment.
- Large, sudden cooling capacity (i.e., Putting brine solution in a subcooled environment may drive rapid precipitation.).
- Evaporative cooling of the drywell may be better than RHR pumping to mitigate chances of blockages (although this is a slower process for cooling)
- The sea water could have other interactions with fuel and drive formation of  $U_3O_8$ ,  $U_6^{++}$  (which will create other compounds) or even UF compounds.



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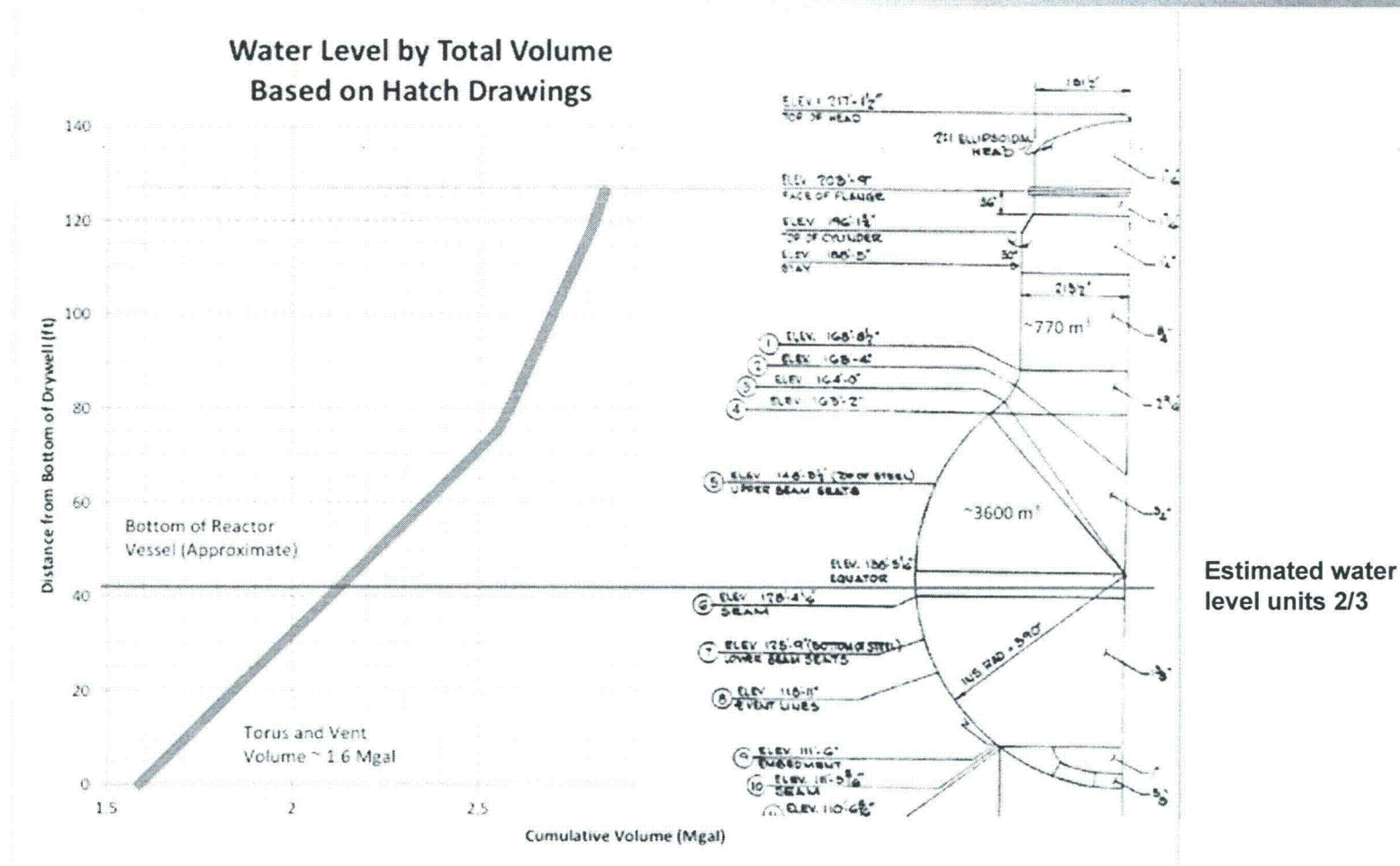
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## **2 – Measurement of Containment Water Level**



# Postulated Vessel Water Levels Based on Hatch NPP





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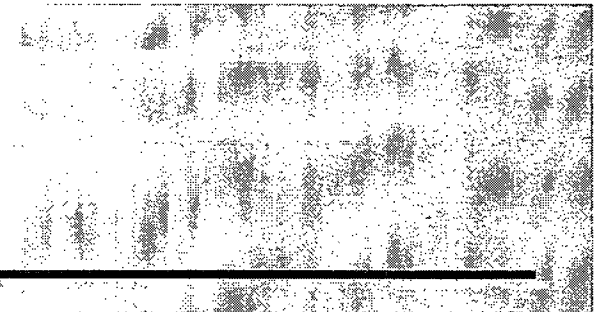
## **3 – RHR Shielding (Dose)**



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- The RHR pumps are not salt water pumps, it is the consensus that they will not last long if they are used to pump salt water. In addition, it is the consensus that they cannot take the radiation load.
- Pump bearings and seals could degrade rapidly. This would result in a leak path outside containment. (ORNL)
- Failure mode analysis and dose analysis pending.





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## **4 – Control Room Shielding/Habitability**





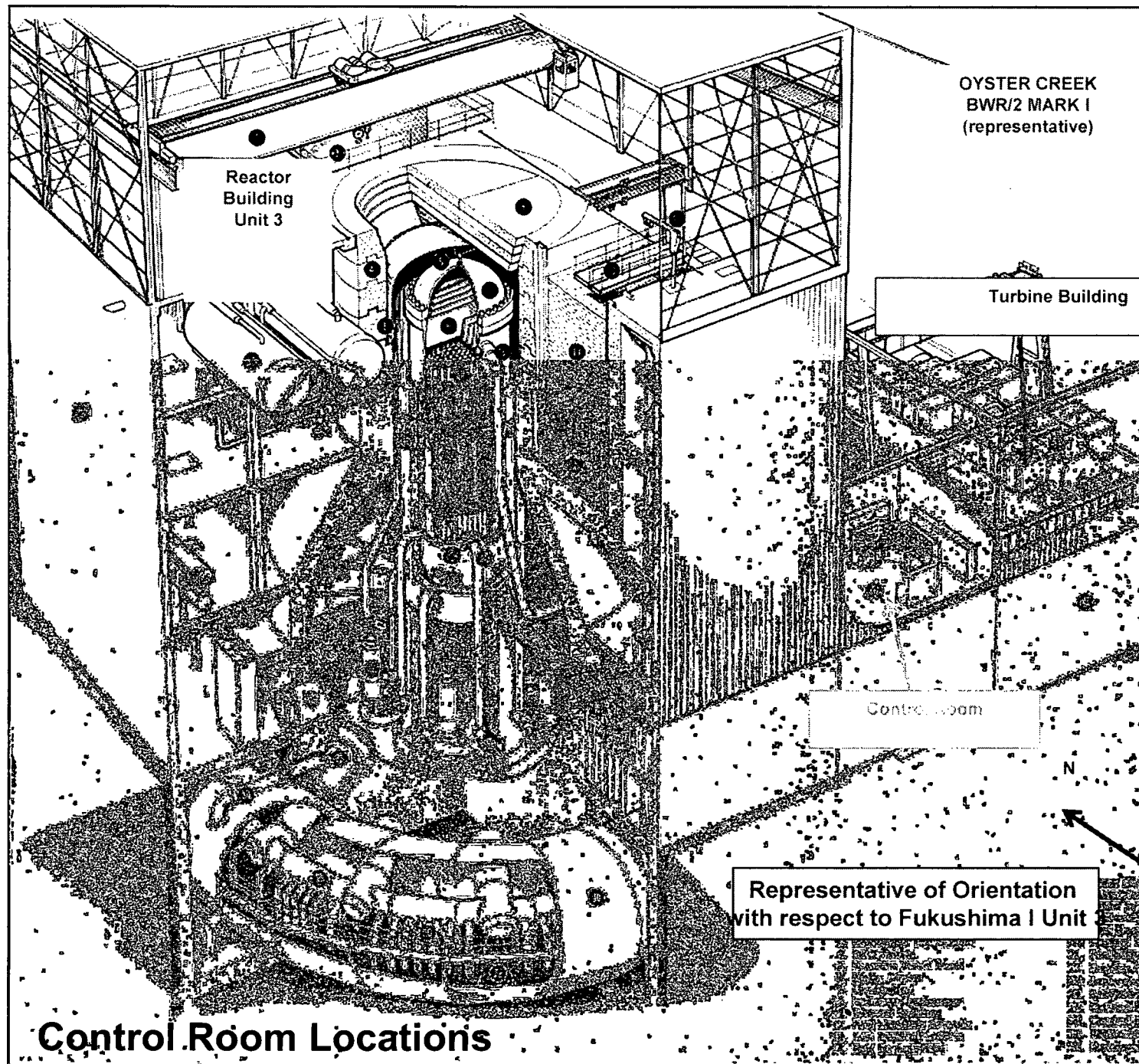
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**ENERGY**

Nuclear Energy

## Shielding

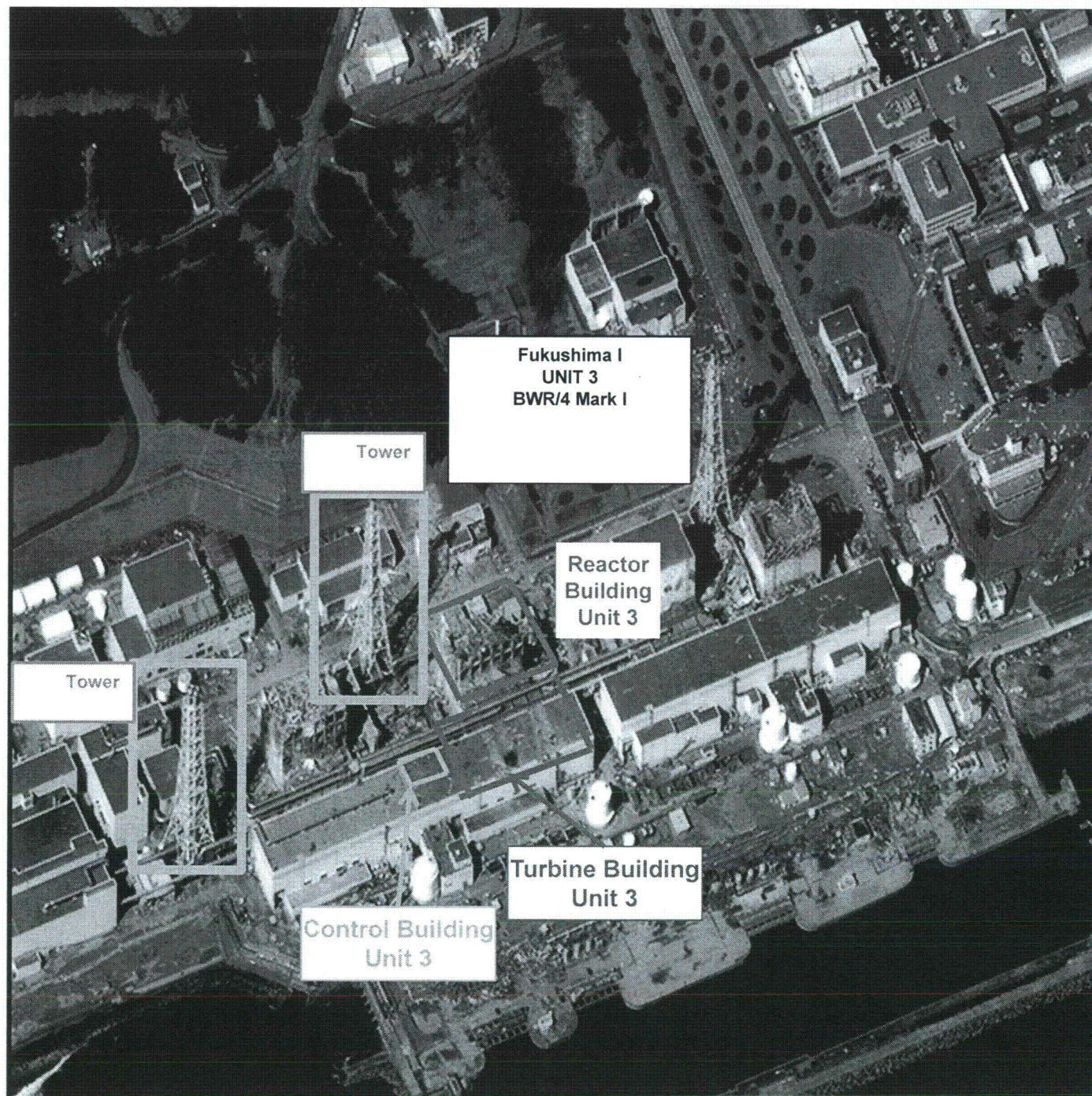
- Cs-137 gamma energy 0.662 MeV (actually from Ba-137m)
- Shielding half value thicknesses (Shultis & Faw, 1984, Pg 209) - thickness to reduce gamma intensity by  $\frac{1}{2}$ 
  - Lead 0.65 cm
  - Concrete 4.8 cm
  - Iron 1.6 cm
- Tenth value thicknesses (reduce gamma intensity to 1/10)
  - Lead 21.6 cm
  - Concrete 15.7 cm
  - Iron 5.3 cm
- Cs-134, Cs-137, I-131, I-132 will be dissolved and possibly Sr89 and Te-132. Certainly could be numerous other particulate materials. With similar gamma energies, the half value thicknesses will also be similar.

Any procedure to restart RHR will require manual operations in the reactor building and considerations of dose to control room operators .













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## 5 – Sensors and Instruments



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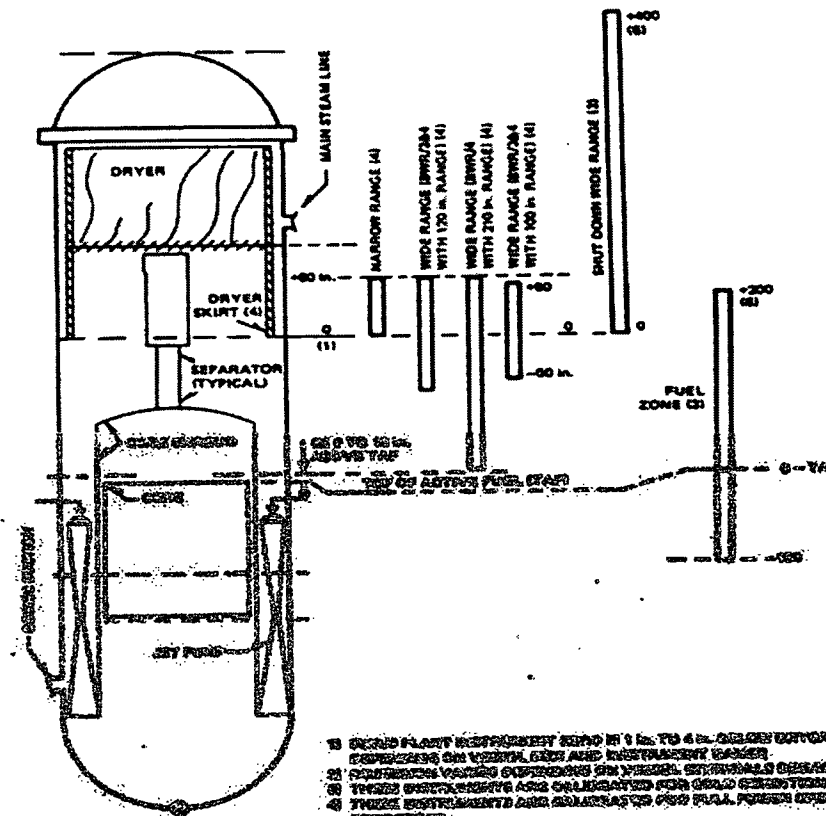
- The brine may cause degradation on the instruments, thermal couples, pressure sensors and water level indicators. The information on water level in the vessel has indicated no change for several days, since small lines are bled off the manometers to measure water level it is likely these lines are either blocked with debris, salt or steam bubbles.
- There should be bleed locations on these lines near the sensors which could be used to determine if the lines are plugged or have air in them.



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## 5 – Sensors and Instruments



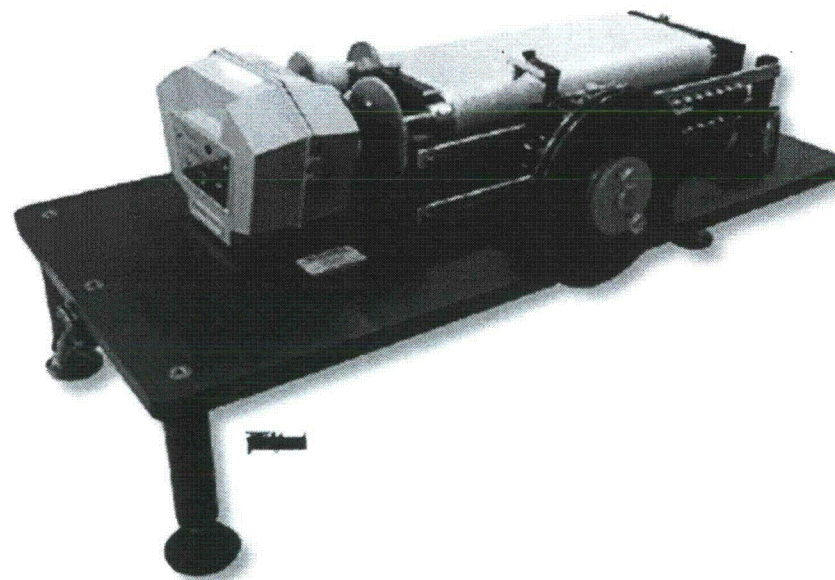
Typical BWR-4 Water Level Instrumentation Location (NUREG/CR-5640, 1990)



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**Stevens Water Level Chart Recorder**

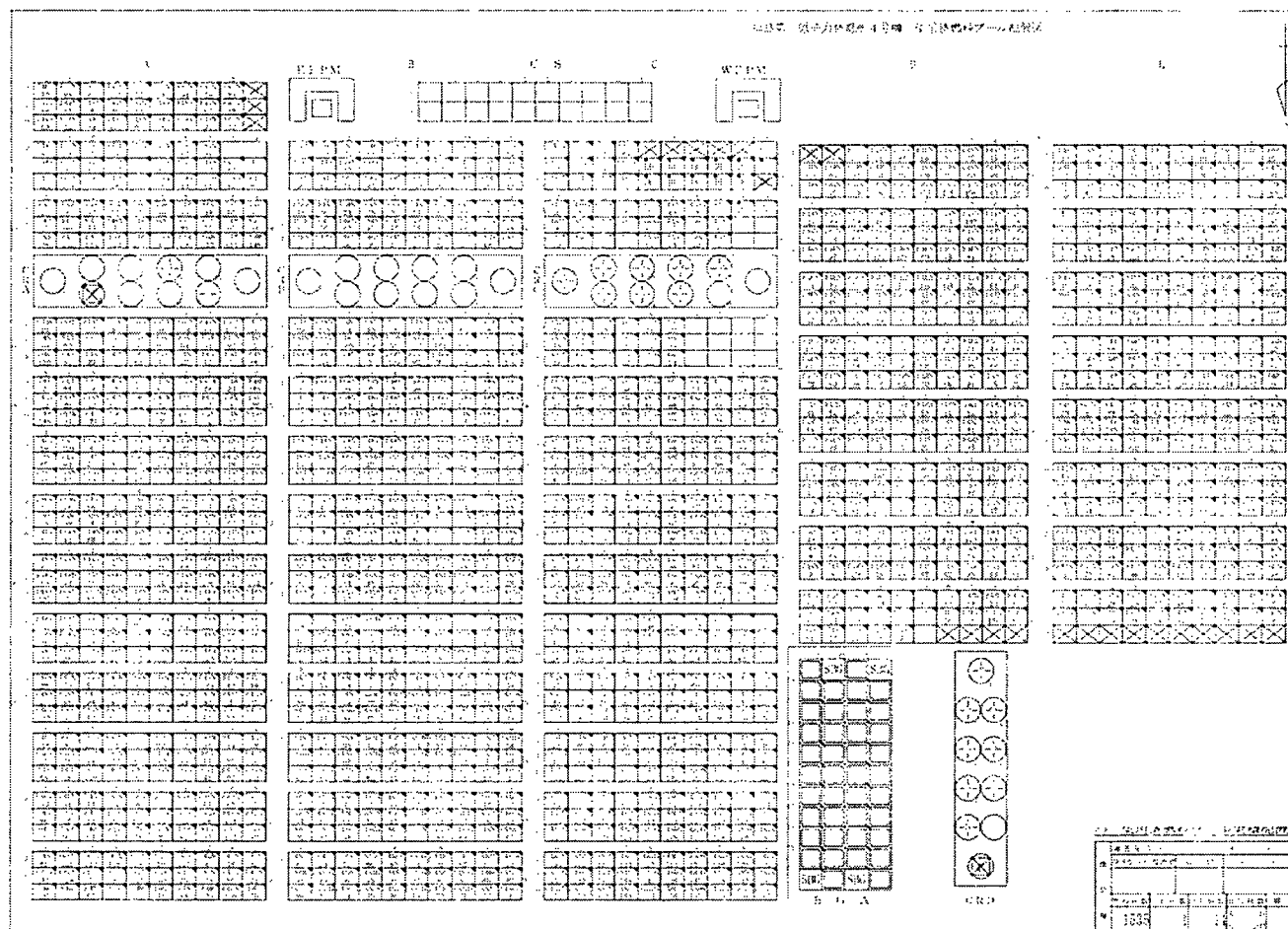




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## 8 – Spent Fuel Pool Quenching



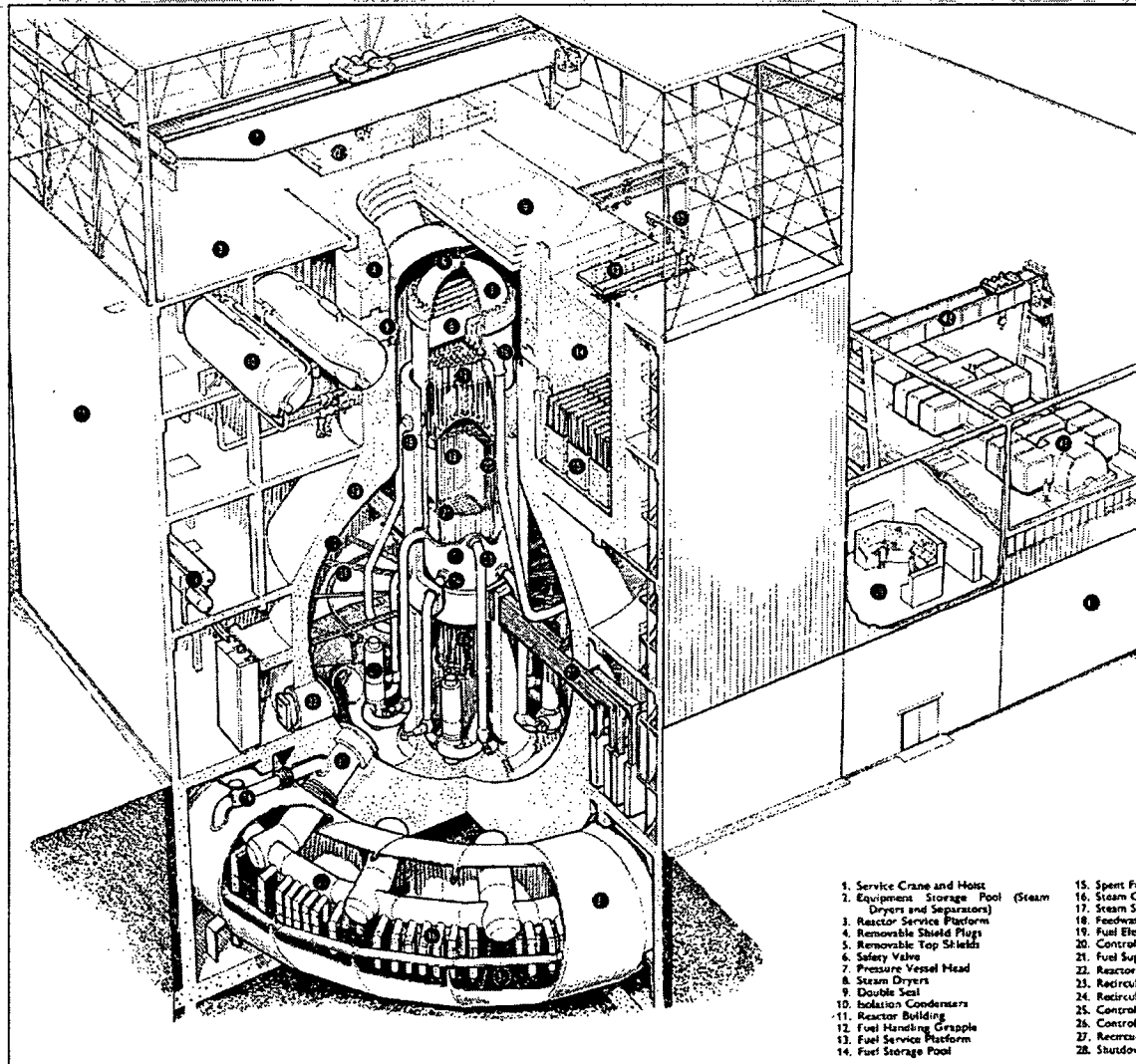
Spent Fuel Pool Loading Information From TEPCO for 1F4



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## 6 – Flooded Reactor Building to Couple Pressure Vessel to Concrete





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## 7 – Source of Fires

- Most pyrophoric metals like Zr burn with a white smoke.
- White smoke can also be from ordinary cellulose like paper or wood.
- The black smoke is from oils or cables that have ignited.
- Cables in the primary containment (i.e., drywell) if N<sub>2</sub> inertion is lost (there are no cables in the RPV). Cables in the secondary containment (i.e., Rx Bldg)
- Hydraulic and lubricating oils in various motors, pumps and valves in the Rx Bldg.
- Given the right conditions the Zirc clad can be ignited either in the SFP or RPV.
- H<sub>2</sub> is a flammable gas that is generated by the Zirc – H<sub>2</sub>O reaction. That is probably what blew the tops off the Rx Bldgs already.
- Cables fires have two big concerns the first is obvious loss of function of whatever the burning cable(s) is/are used for power or I&C, the second (and this happened at Browns Ferry) is inadvertent operation of the component (e.g., Pumps, valves, instrumentation, etc.). This can be a real challenge in trying to stabilize the plant (as it was in 1975 @ Browns Ferry) coupled with the typical fire hazards that impede operator/maintenance/ repair actions (i.e., smoke, heat reduced visibility, etc.).



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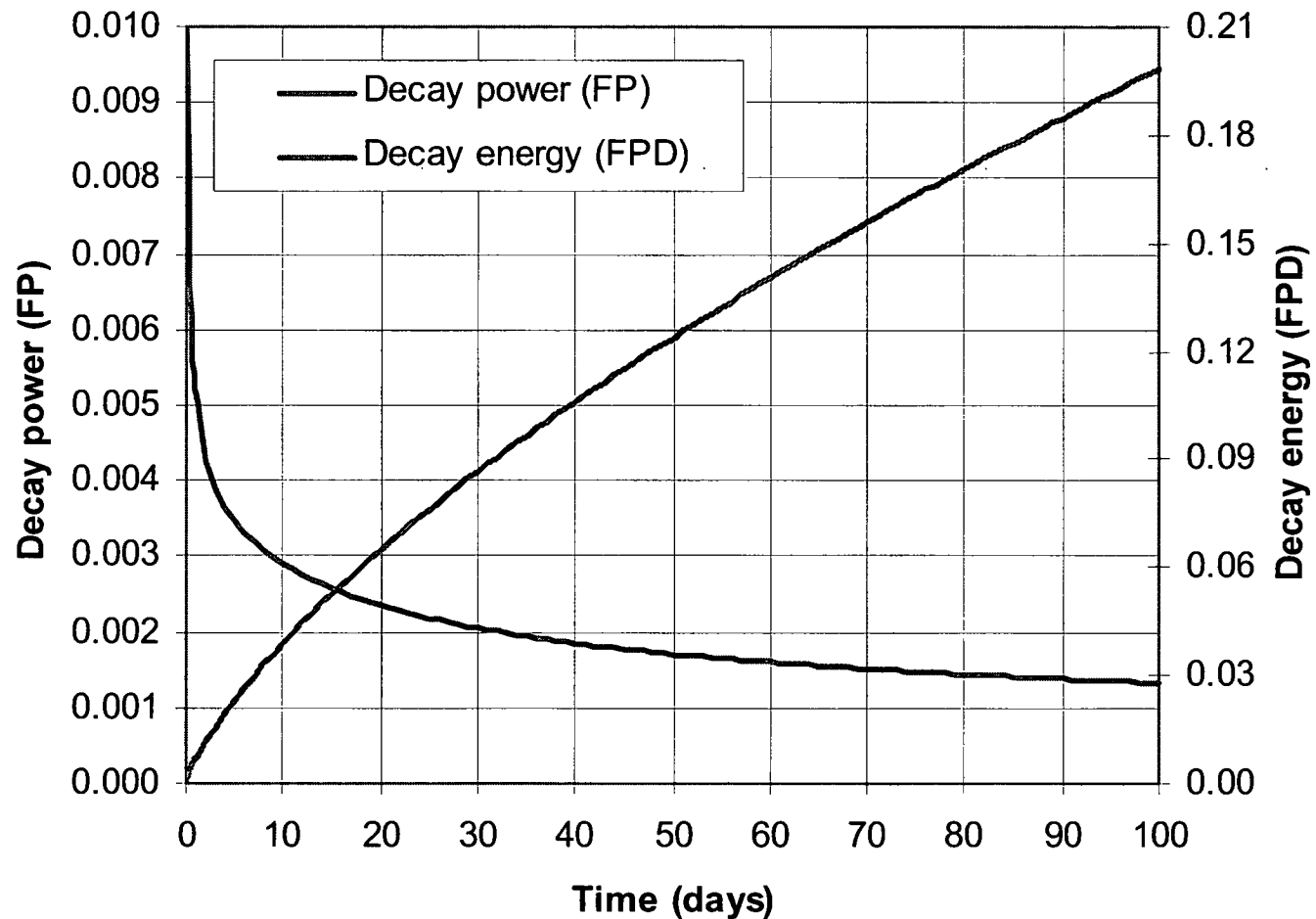
# Backups



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# Decay Power/Decay Energy for Units 2-3 (2380 MWt)





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## **Formation of deposits is highly dependent on local conditions**

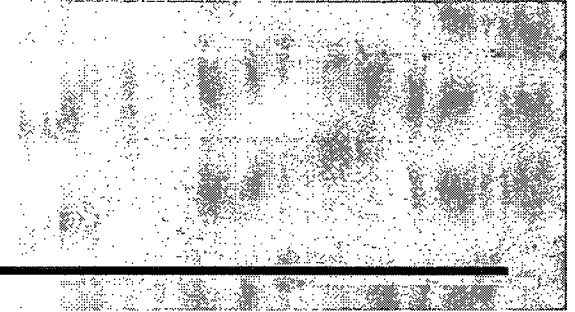
- If the reactors are not being vented to the outside, then the vessel is likely filled with concentrated brine solution (and possible salt deposits at the bottom). The torus is likely filled with sea water, but lower salt concentration.
- if the reactors are being vented outside the dry well, the vessel is still likely filled with concentrated brine solution and the torus is filled with brackish water (mix of salt water and fresh water).
- As sea water coolant is sprayed in, it is likely evaporating before reaching the fuel/debris field. This would leave a salt dust that is filtering down to the bottom (and maybe going back into solution).
- Salt is likely deposited on every surface. At points, it may flake off and then filter down to the bottom of the vessel and go back into solution
- If water is still leaking out the seals on the pumps, it's unlikely that anything is currently blocked or packed with salt, although this could change.



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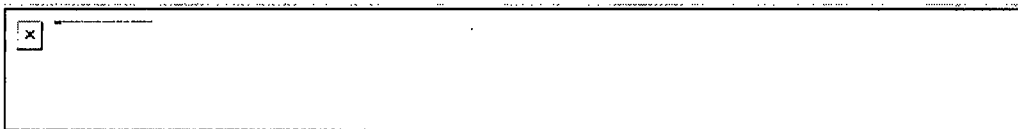
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- 1 – Control Room Shielding (dose)
- 2 – RHR Pump Operation and Shielding
- 3 – Measurement of Containment Water Level
- 4 – Update on Effect of Salt on Coolability
- 5 – Sensors (pool level)
- 6 – Flooded Reactor Building to Couple RPV to Concrete
- 7 – Source of Fires
- 8 – Spent Fuel Pool Quenching
- 9 – Whole Body Counting

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**Subject:** March 24 -- Greenwire is ready



## AN E&E PUBLISHING SERVICE

GREENWIRE -- THU., MARCH 24, 2011 -- [Read the full edition](#)

### 1. **CLIMATE:** Calif. regulators scramble in wake of court ruling on emissions law

California's climate change law is not in danger of outright reversal following a court decision this week that suspended it, but the deadline for approving a cap-and-trade carbon market later this year is in doubt, according to state government and legal experts following the process. If that deadline, which requires the state's Air Resources Board to vote on cap and trade in October, slips even one day into November, a ripple effect could delay greenhouse gas regulations set to go live on Jan. 1, 2012.

## TOP STORIES

2. **NUCLEAR CRISIS:** Psychological risks loom in Tokyo water warning
3. **NUCLEAR CRISIS:** Japan disaster raises questions about backup power at U.S. plants
4. **NUCLEAR CRISIS:** Earthquake risks must be reanalyzed for U.S. reactors

## JAPAN EARTHQUAKE

5. **NUCLEAR CRISIS:** Radiation fears prompt stockpiling; 2 plant workers injured
6. **NUCLEAR CRISIS:** Japan spawns a fresh look at disaster planning on U.S.-Mexico border
7. **NUCLEAR CRISIS:** Japanese power demand can't be met without reactors, official says
8. **NUCLEAR CRISIS:** Politics, radiation levels will dictate return to Fukushima
9. **AUTOS:** Production of hybrids, electric vehicles hurt by Japan disaster
10. **FISHERIES:** Radiation fears slow Japanese seafood exports



## CLIMATE CHANGE

11. REGULATIONS: EPA to tell Congress cutting black carbon is a 'win-win'

## POLITICS

12. CHEMICALS: Uneasy industry awaits release of new EPA reporting rules
13. CLIMATE: Greenpeace TV ads target Upton
14. ENERGY POLICY: Home heating advocates ask Obama to release emergency funds

## CLEAN TECH

15. RARE EARTHS: Countries jockey for critical elements leadership
16. ETHANOL: N.D. team visits Denmark for tips on building cellulosic refinery

## ENERGY

17. NUCLEAR: NRC requests public comment on new GE reactor design
18. NATURAL GAS: Eagle Ford Shale landowners prepare for battle against Texas National Guard
19. NATURAL GAS: Palomar pipeline canceled for now
20. ENERGY EFFICIENCY: Ohio regulators revive failed light bulb campaign

## FEDERAL AGENCIES

21. EPA: Enviro groups protest Jackson on visit to Calif. farms
22. BLM: Utah man fined for fiery 'fundraiser' on public lands

## TRANSPORTATION

23. HIGH-SPEED RAIL: N.C. lawmakers line up against federal funds

## AIR AND WATER

24. AIR POLLUTION: EPA science advisers repeat call for stricter smog standard
25. DRINKING WATER: EPA launches S. Calif. perchlorate probe

## NATURAL RESOURCES

26. EVERGLADES: Court lets Fla. off the hook for planned reservoir
27. NATIONAL PARKS: Wildfire ignited by volcano threatens Hawaiian rainforest

**28. INVASIVE SPECIES: Ark. senator wants money for fish farmers hurt by carp transport ban**

**E&ETV'S ONPOINT**

**29. ENERGY POLICY: Former Mich. Gov. Granholm makes case for clean energy standard**

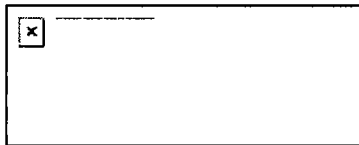
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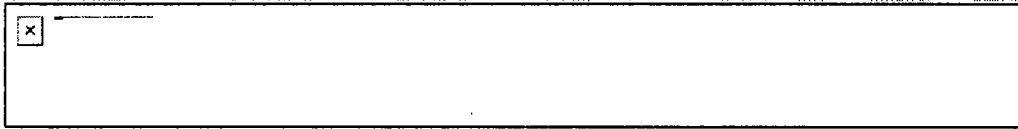
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E&ENEWS PM -- THU., MARCH 24, 2011 -- [Read the full edition](#)

### 1. **NUCLEAR CRISIS:** U.S. plant operators failing to report some equipment defects -- NRC audit

Almost 30 percent of U.S. nuclear reactor operators are failing to report certain defects in plant equipment, a situation that could lead to serious safety hazards, federal regulators said in a report released today. The Nuclear Regulatory Commission's Office of Inspector General (OIG) said reactor operators are confused about what they are required to report and are failing to report some equipment defects.

### THIS AFTERNOON'S STORIES

2. **COAL:** EPA promoted ash reuse without adequate risk data -- IG
3. **NUCLEAR CRISIS:** U.S. industry faces regulatory uncertainty, rising costs -  
- Exelon exec
4. **NUCLEAR CRISIS:** Pressure builds on NRC to halt license review for Calif. reactor
5. **NUCLEAR:** U.S., Russia extend security, inspection partnership
6. **NUCLEAR SAFETY:** Tenn. man charged with falsifying documents on TVA reactor
7. **WATER POLICY:** Panel presses White House on funding for U.S.-Mexico border projects
8. **OIL AND GAS:** Mayors decry proposed 'tar sands' pipeline in letter to State Dept.
9. **OFFSHORE DRILLING:** Interior approves first 'wildcat' well in deepwater Gulf
10. **WATER POLLUTION:** Groups sue W.Va. coal company over selenium discharges
11. **WIND:** Interior advances uncontested Del. offshore lease

## E&ETV'S ONPOINT

### 12. ENERGY POLICY: Former Mich. Gov. Granholm makes case for clean energy standard

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### NUCLEAR CRISIS: JAPAN & THE FUTURE OF ENERGY POLICY



The devastating earthquake and tsunami in Japan has spawned a major nuclear disaster. E&E examines the implications for energy, the environment, security and public health. [Click here](#) to go to the report.

CLIMATEWIRE -- FRI., MARCH 25, 2011 -- [Read the full edition](#)

#### 1. **NUCLEAR:** U.S. experts blame Fukushima 1 explosions and radiation on failed venting system

The hydrogen explosions that shattered the tops of two reactor buildings at the Fukushima 1 nuclear complex followed the venting of hydrogen and steam by plant operators desperate to prevent a far greater disaster: a high-pressure explosion of the primary reactor containment shell and radioactivity release, a former senior U.S. nuclear official concludes.

#### 2. **WHEAT:** Going back into the wild to build a stronger, more climate-resilient crop

A genetic archaeologist of sorts, Cary Fowler works to save the wild species threatened by crop domestication. Fowler is the executive director of the Global Crop Diversity Trust, an organization that seeks to preserve the genetic diversity of plants in seed banks. By providing a backup of wild varieties for their domesticated crop cousins, seed banks provide insurance in the case of a devastating blow to yields.

## TODAY'S STORIES

3. **POLICY:** Grants are more effective and cheaper than tax credits for spurring clean energy -- report
4. **WATER:** Southern Co. to reveal more to investors about climate-related water risks
5. **PUBLIC OPINION:** Climate adaptation for hometown is not always top priority, researcher finds
6. **ADAPTATION:** Experts learn the bottom-up approach to financing protective measures
7. **SCIENCE:** Researchers find ocean wind speeds rising, creating rougher seas
8. **OFFSHORE WIND:** Interior moves on offshore project in Del.
9. **BIOFUELS:** Food for fuels is starving millions, says Nestlé head
10. **NATIONS:** Australian prime minister suffers carbon tax setback
11. **ENERGY MARKETS:** Enercon loses its entire Indian subsidiary
12. **NUCLEAR CRISIS:** Germany plans more rapid nuclear phaseout

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E&E DAILY -- MON., MARCH 28, 2011 -- [Read the full edition](#)

### 1. **NUCLEAR CRISIS:** Japanese reactors, U.S. safety to take center stage on Capitol Hill

Top U.S. nuclear regulators, scientists and industry leaders will flesh out details of the nuclear crisis unfolding in Japan and its implications for nuclear safety in the United States for key Senate and House energy committees this week. A series of hearings will kick off tomorrow when Nuclear Regulatory Commission Executive Director of Operations Bill Borchardt updates the Senate Energy and Natural Resources Committee about the status of the crippled Fukushima Daiichi nuclear reactors on Japan's northeastern coast.

#### IN THE SENATE

2. **ENERGY POLICY:** Senate panel to take up hydropower, water use measures
3. **MINE SAFETY:** Main says new legislation is crucial
4. **TOXICS:** Erin Brockovich to headline Senate hearing on environmental contaminants
5. **NUCLEAR:** Congress to probe int'l security measures, cleanup of Cold War sites
6. **WORKFORCE:** Senators focus on challenges facing federal agencies' senior execs
7. **NATIONAL PARKS:** Panel to review proposed land purchases, construction cuts
8. **AGRICULTURE:** Lawmakers will consider rising gas prices' effect on farmers
9. **ARMY CORPS:** Agency budget to undergo scrutiny, as some lawmakers push for WRDA
10. **GSA:** Senators to probe green building standards, sale of federal

properties

## IN THE HOUSE

11. **CLIMATE**: Head of controversial warming project to star at House hearing
12. **DOE**: GOP to grill agency officials over proposed hefty spending boosts
13. **OFFSHORE DRILLING**: House Resources to review BOEMRE budget, permitting plans
14. **RESEARCH**: Appropriators face tough decisions on R&D spending
15. **TRANSPORTATION**: Lawmakers gear up to grill DOT over funding for reauthorization proposal
16. **OIL AND GAS**: House Resources panel to continue probe of price spikes
17. **TRANSPORTATION**: Before beer, pizza and bill writing, T&I panel to hear from key groups
18. **NOAA**: Proposed cuts to tsunami warning systems may heat up House hearings
19. **REGULATIONS**: House GOP to continue attempt to unravel red tape
20. **WATER**: Lawmakers to weigh reform of nearly broke flood insurance program
21. **CHEMICAL SECURITY**: House panel to weigh extending DHS program
22. **OIL AND GAS**: Hearing to encourage Canadian oil amid wait on Keystone XL permit
23. **INNOVATION**: Small business programs hit spotlight as authorization clock ticks down
24. **CONSUMER PROTECTION**: House appropriators target CPSC budget amid criticism from GOP
25. **ENERGY POLICY**: House panel to explore energy potential on Indian lands

## E&TV'S ONPOINT

26. **EPA**: Bracewell & Giuliani's Segal says agency overstepping authority with 'Utility MACT' plan

## THIS WEEK'S MARKUPS AND HEARINGS

**CALENDAR**: Activity for March 28 - April 1, 2011

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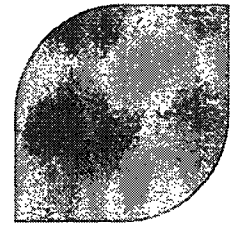
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# The Fukushima Daiichi Incident

1. Plant Design
2. Accident Progression
3. Radiological releases
4. Spent fuel pools
5. Sources of Information

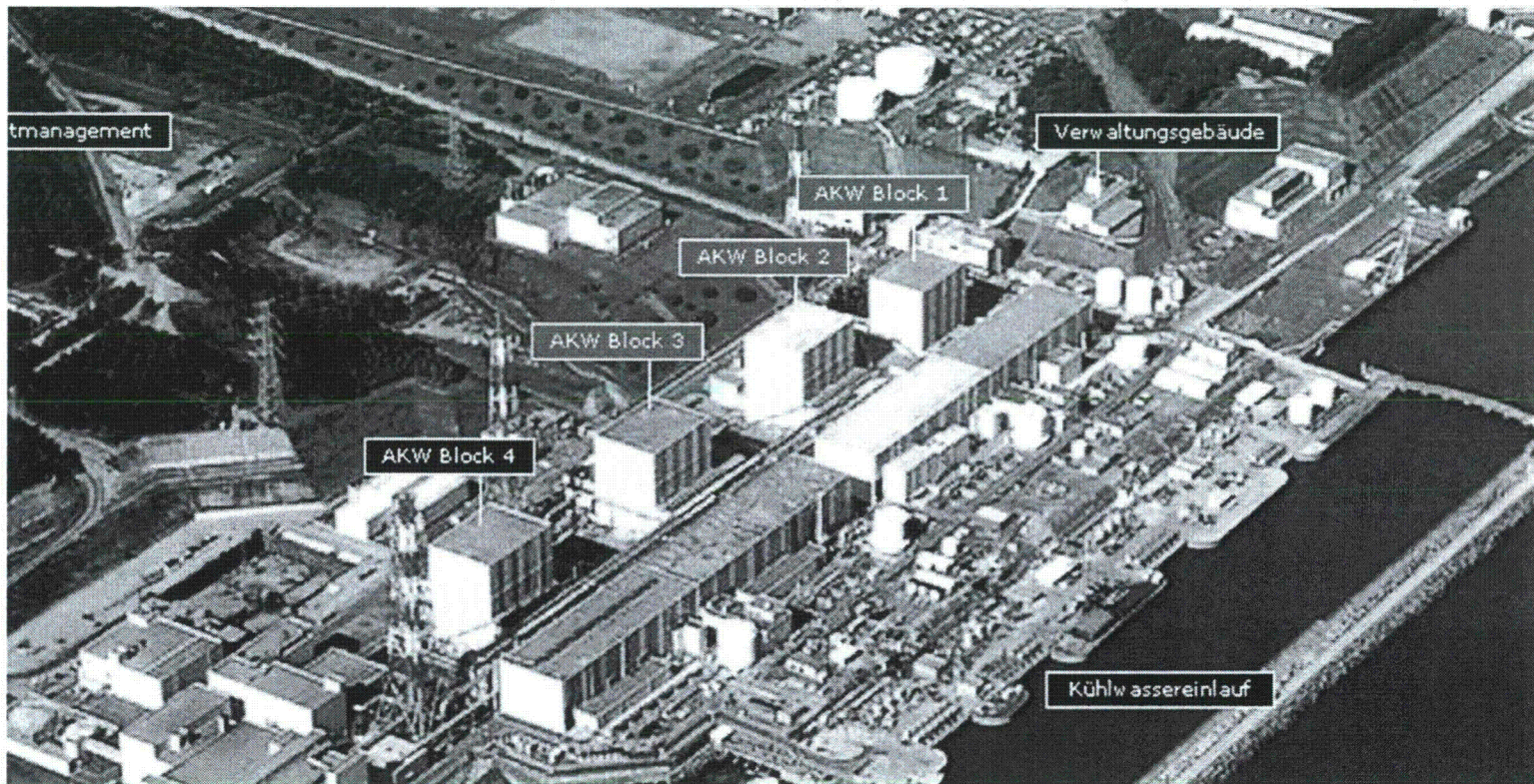
Matthias Braun  
PEPA4-G, AREVA–NP GmbH  
[Matthias.Braun@AREVA.com](mailto:Matthias.Braun@AREVA.com)

# The Fukushima Daiichi Incident

## 1. Plant Design

### ► Fukushima Daiichi (Plant I)

- ◆ Unit I - GE Mark I BWR (439 MW), Operating since 1971
- ◆ Unit II-IV - GE Mark I BWR (760 MW), Operating since 1974



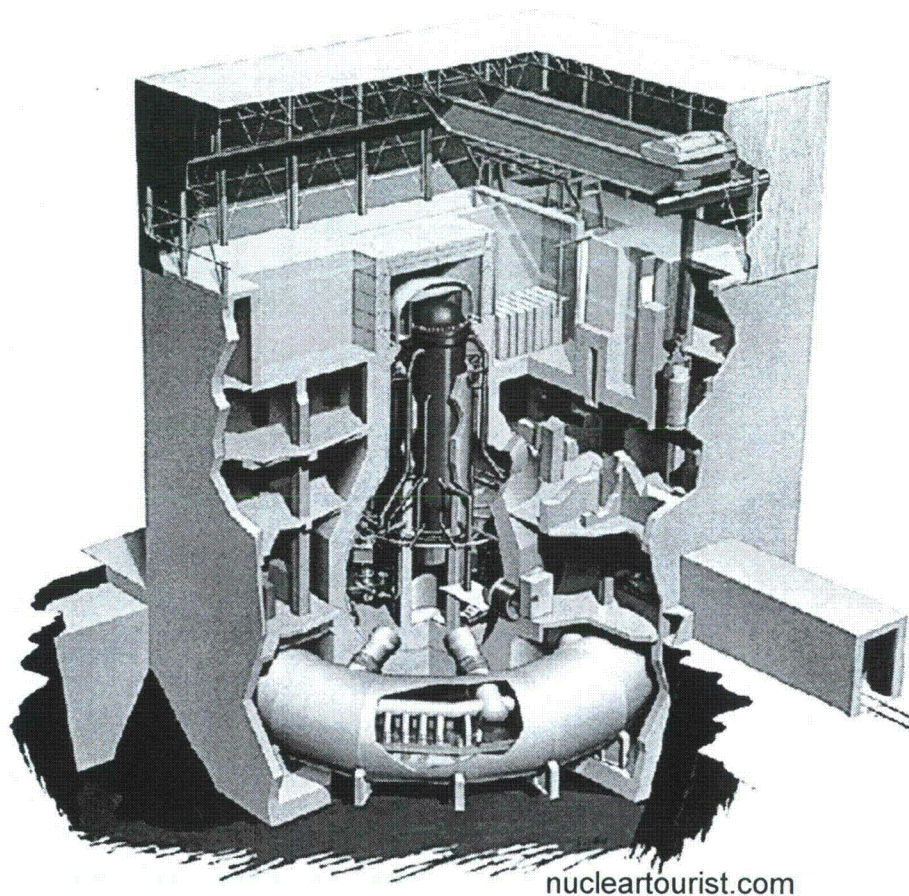


# The Fukushima Daiichi Incident

## 1. Plant Design

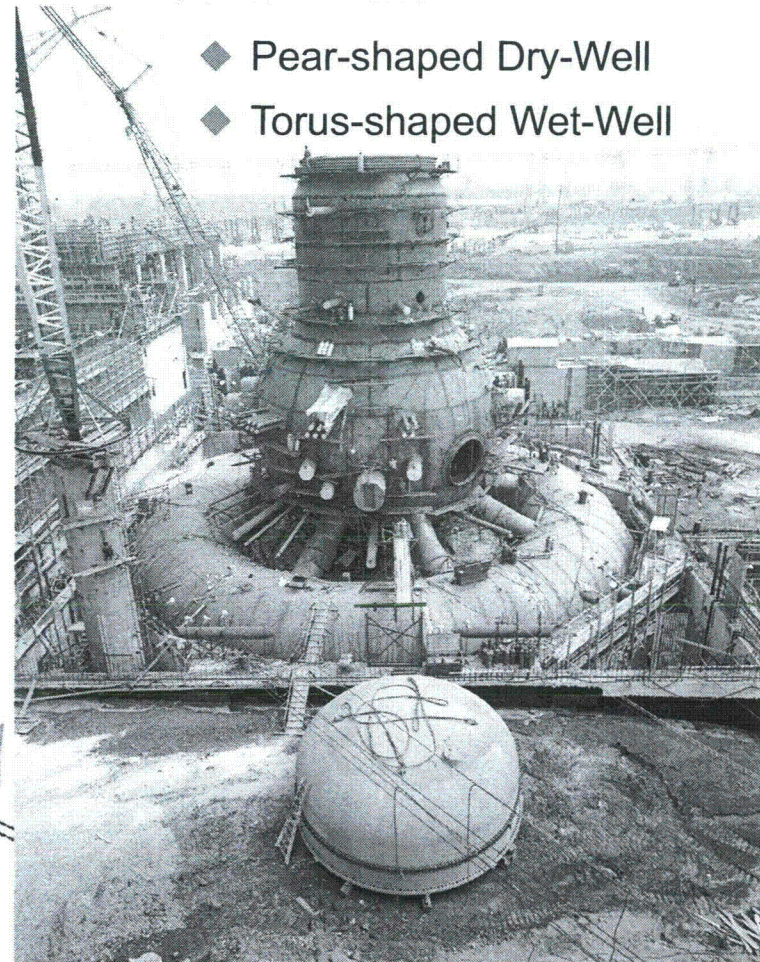
### ► Building structure

- ◆ Concrete Building
- ◆ Steel-framed Service Floor



### ► Containment

- ◆ Pear-shaped Dry-Well
- ◆ Torus-shaped Wet-Well



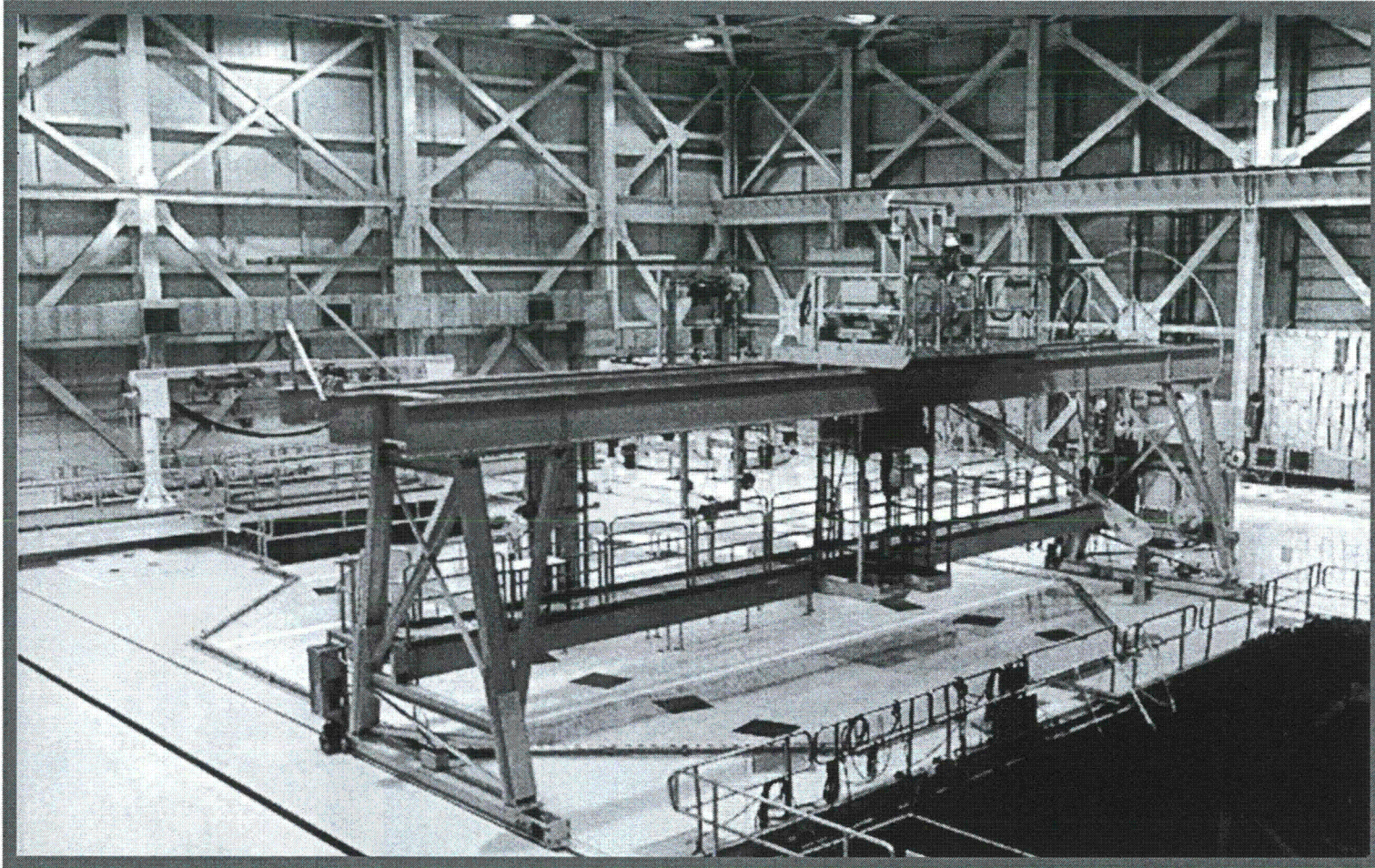
[en.wikipedia.org/wiki/Browns\\_Ferry\\_Nuclear\\_Power\\_Plant](http://en.wikipedia.org/wiki/Browns_Ferry_Nuclear_Power_Plant)



# The Fukushima Daiichi Incident

## 1. Plant Design

### ► Service Floor

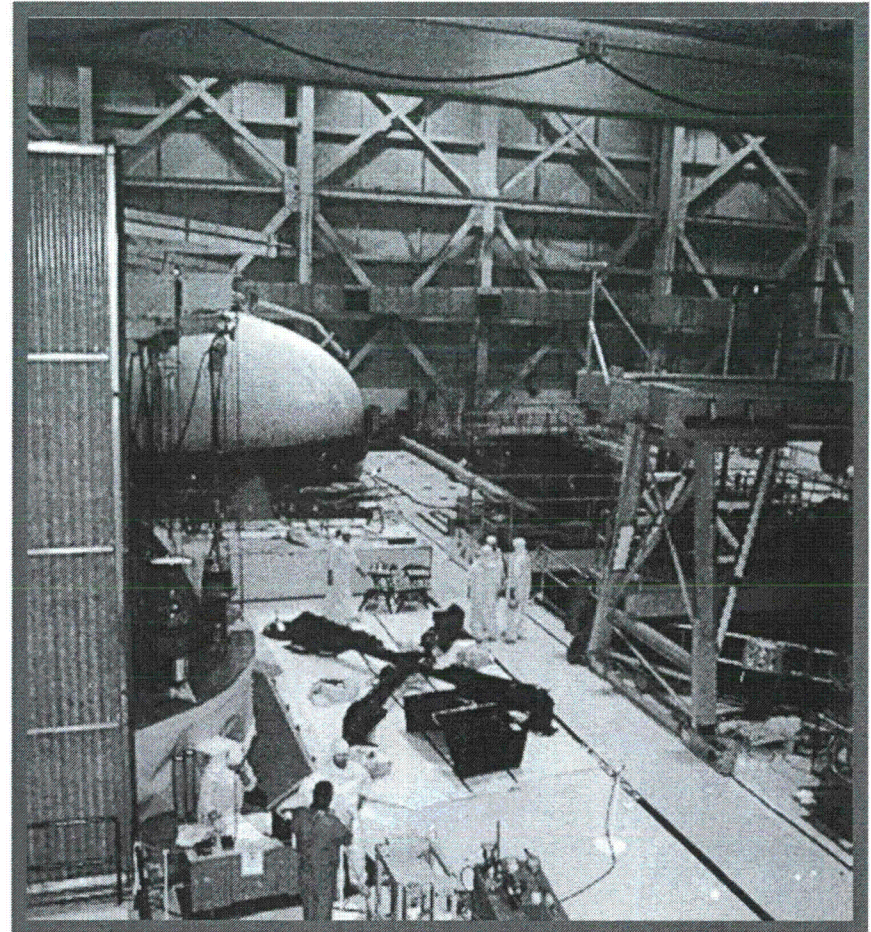
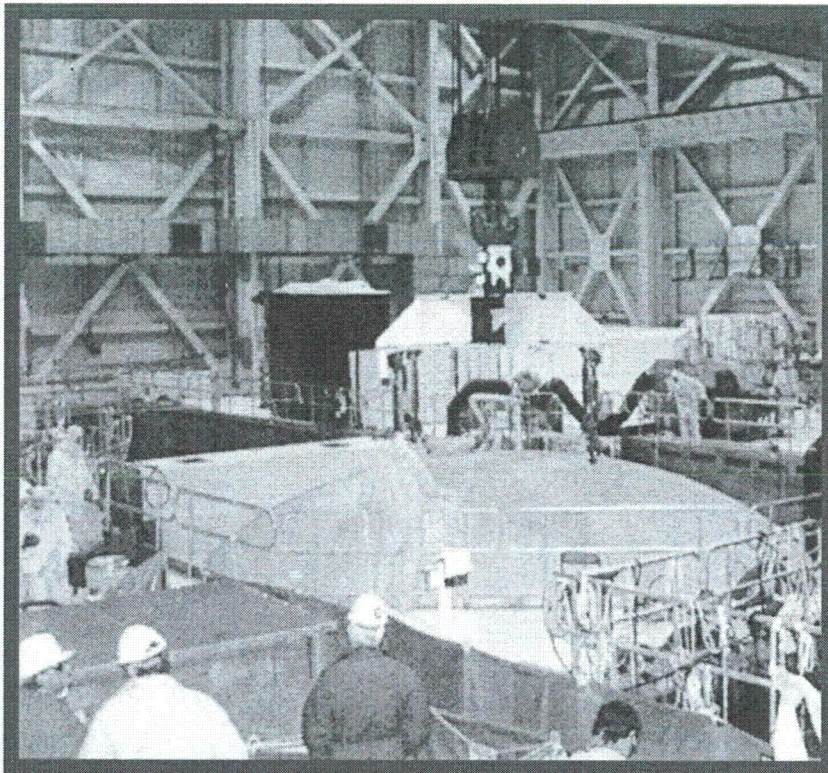




# The Fukushima Daiichi Incident

## 1. Plant Design

- ▶ Lifting the Containment closure head





# The Fukushima Daiichi Incident

## 1. Plant Design

► Reactor Service Floor  
(Steel Construction)

► Concrete Reactor Building  
(secondary Containment)

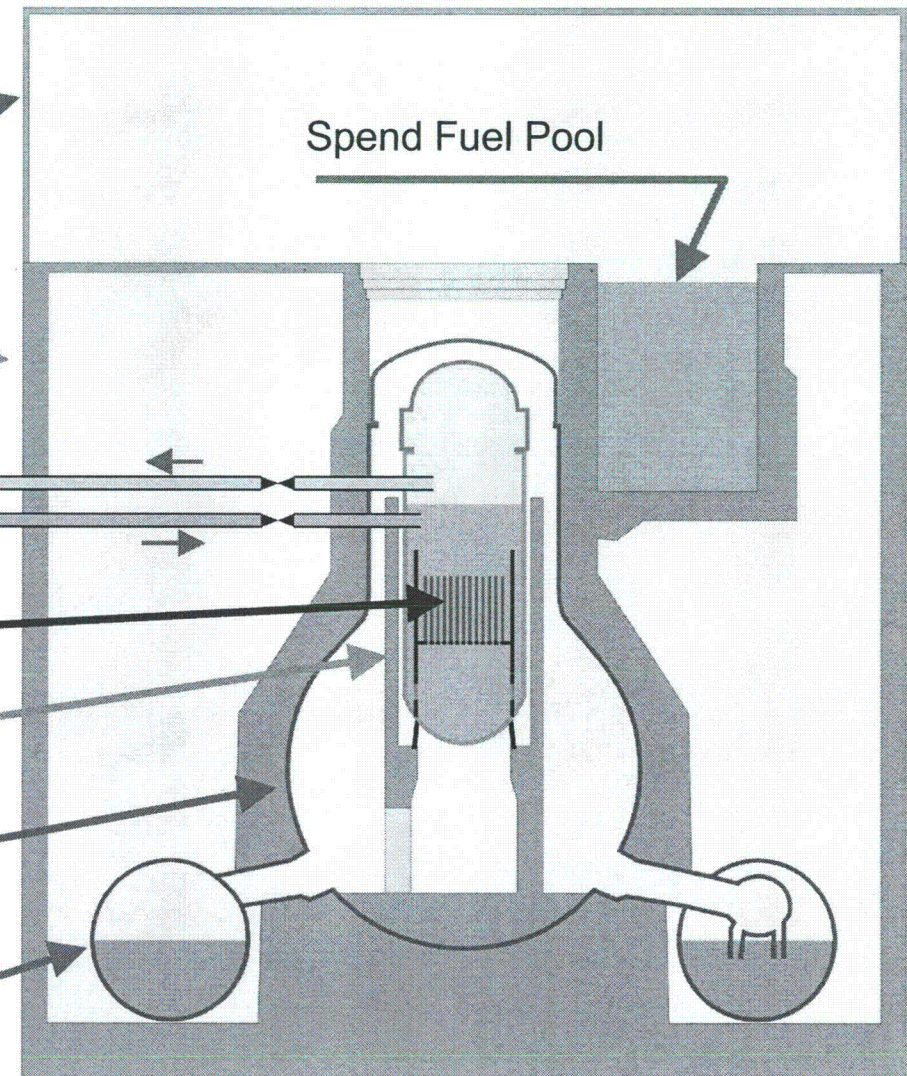
Fresh Steam line  
Main Feedwater

► Reactor Core

► Reactor Pressure Vessel

► Containment (Dry well)

► Containment (Wet Well) /  
Condensation Chamber





# The Fukushima Daiichi Incident

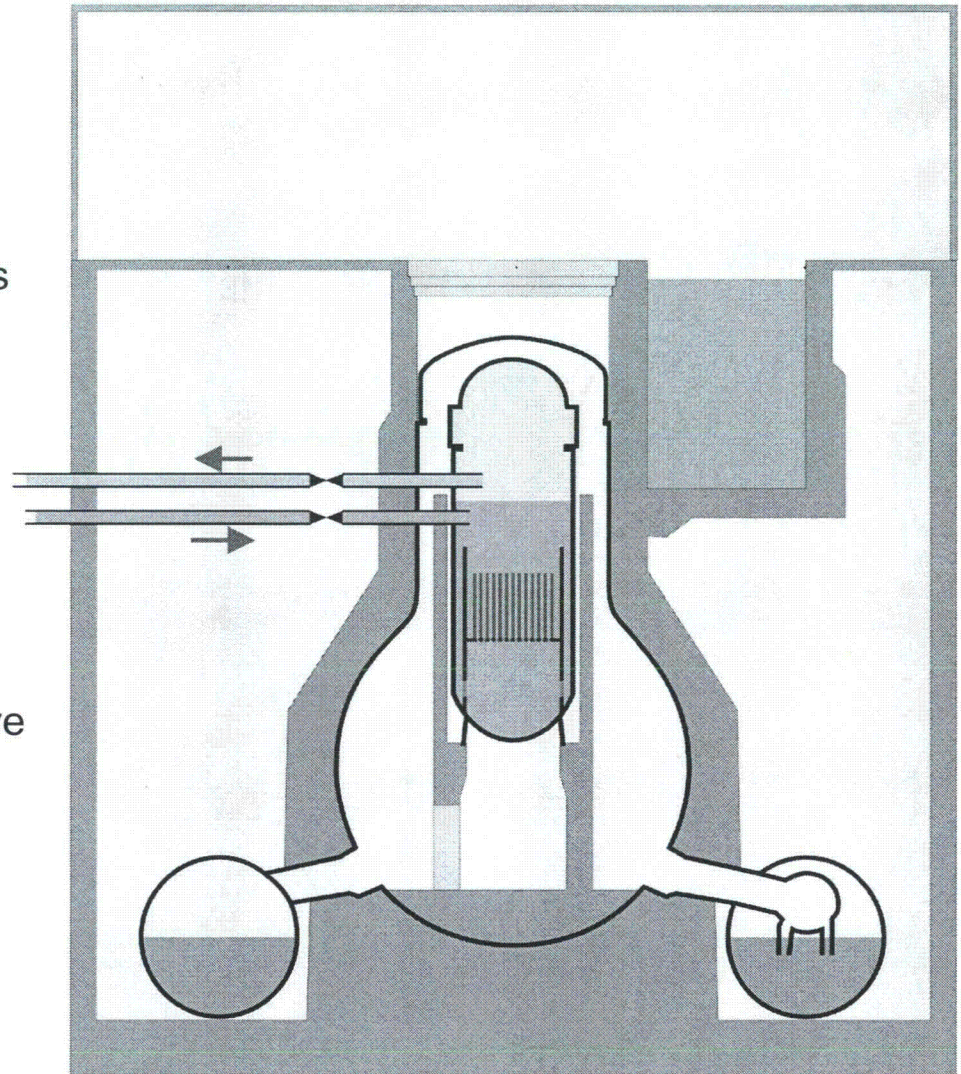
## 2. Accident progression

### ► 11.3.2011 14:46 - Earthquake

- ◆ Magnitude 9
- ◆ Power grid in northern Japan fails
- ◆ Reactors itself are mainly undamaged

### ► SCRAM

- ◆ Power generation due to Fission of Uranium stops
- ◆ Heat generation due to radioactive Decay of Fission Products
  - After Scram ~6%
  - After 1 Day ~1%
  - After 5 Days ~0.5%

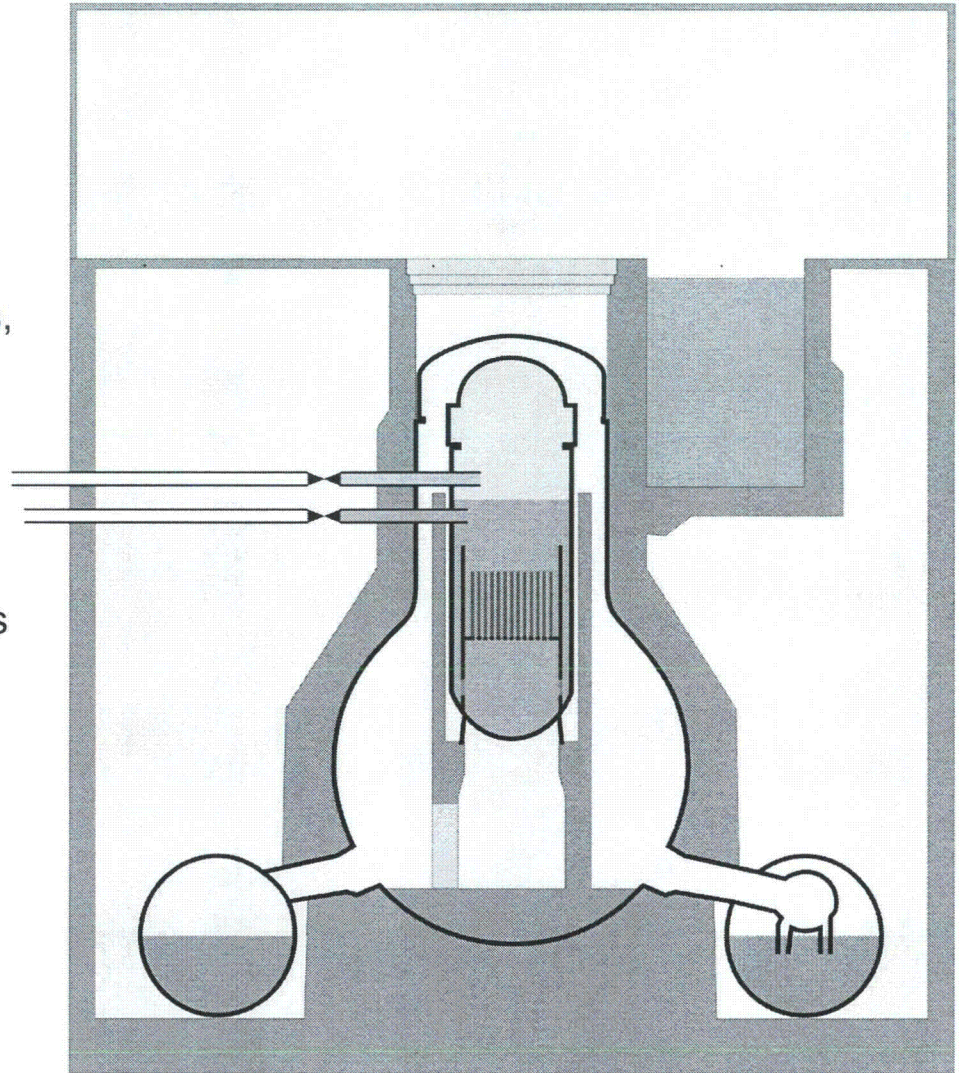




# The Fukushima Daiichi Incident

## 2. Accident progression

- ▶ Containment Isolation
  - ◆ Closing of all non-safety related Penetrations of the containment
  - ◆ Cuts off Machine hall
  - ◆ If containment isolation succeeds, a large early release of fission products is highly unlikely
- ▶ Diesel generators start
  - ◆ Emergency Core cooling systems are supplied
- ▶ Plant is in a stable save state

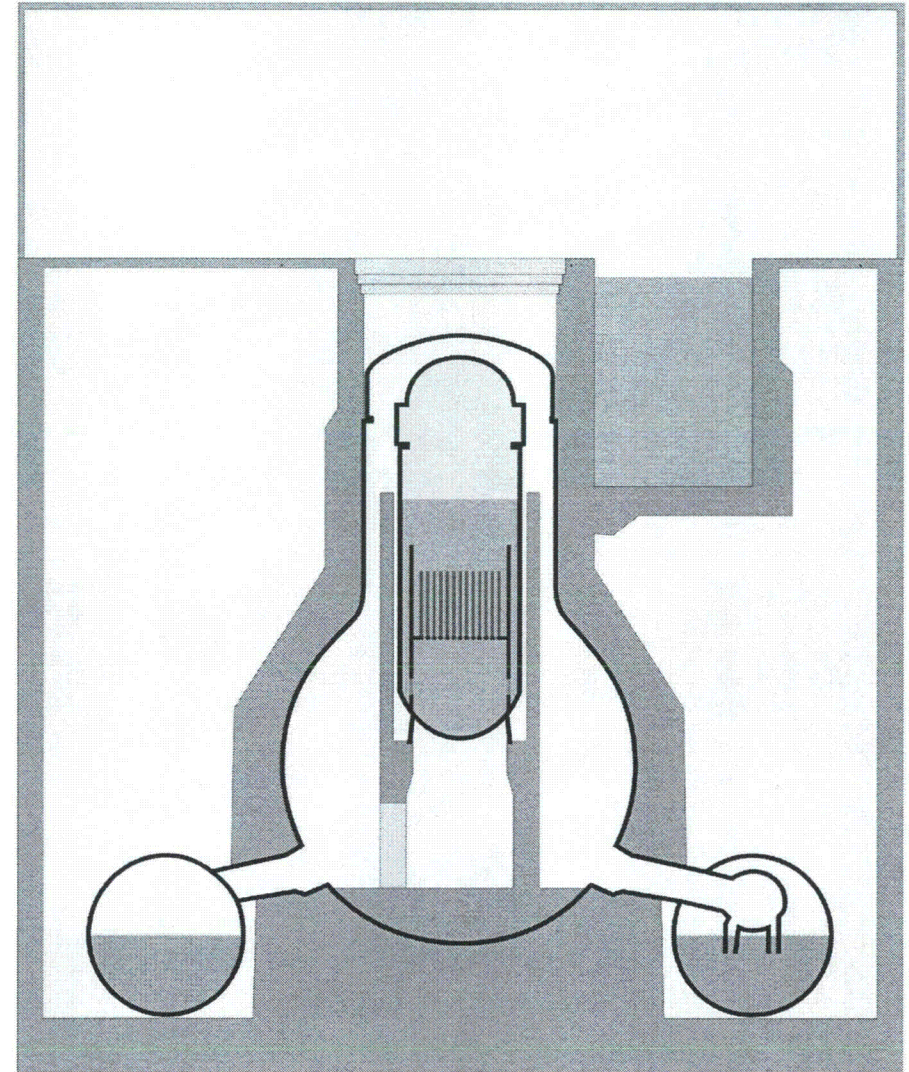




# The Fukushima Daiichi Incident

## 2. Accident progression

- ▶ 11.3. 15:41 Tsunami hits the plant
  - ◆ Plant Design for Tsunami height of up to 6.5m
  - ◆ Actual Tsunami height >7m
  - ◆ Flooding of
    - Diesel Generators and/or
    - Essential service water building cooling the generators
- ▶ Station Blackout
  - ◆ Common cause failure of the power supply
  - ◆ Only Batteries are still available
  - ◆ Failure of all but one Emergency core cooling systems

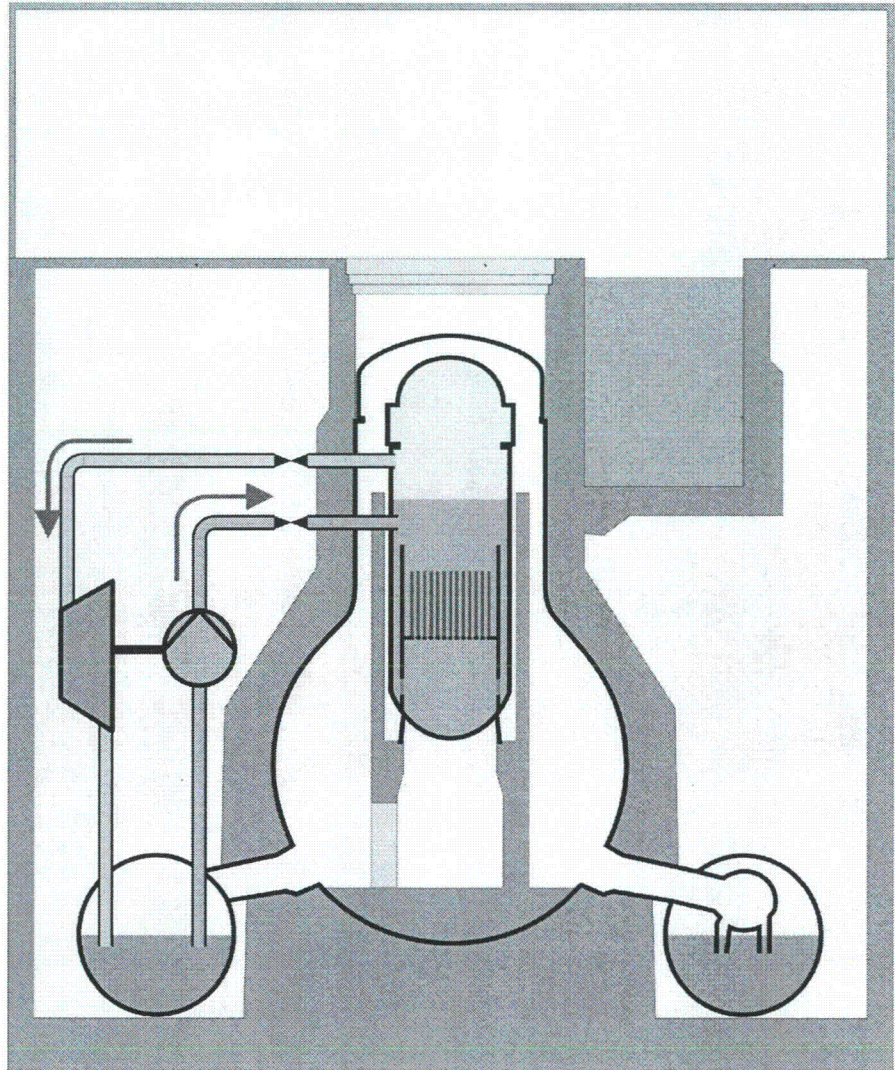




# The Fukushima Daiichi Incident

## 2. Accident progression

- ▶ Reactor Core Isolation Pump still available
  - ◆ Steam from the Reactor drives a Turbine
  - ◆ Steam gets condensed in the Wet-Well
  - ◆ Turbine drives a Pump
  - ◆ Water from the Wet-Well gets pumped in Reactor
  - ◆ Necessary:
    - Battery power
    - Temperature in the wet-well must be below 100°C
- ▶ As there is no heat removal from the building, the Core isolation pump cant work infinitely

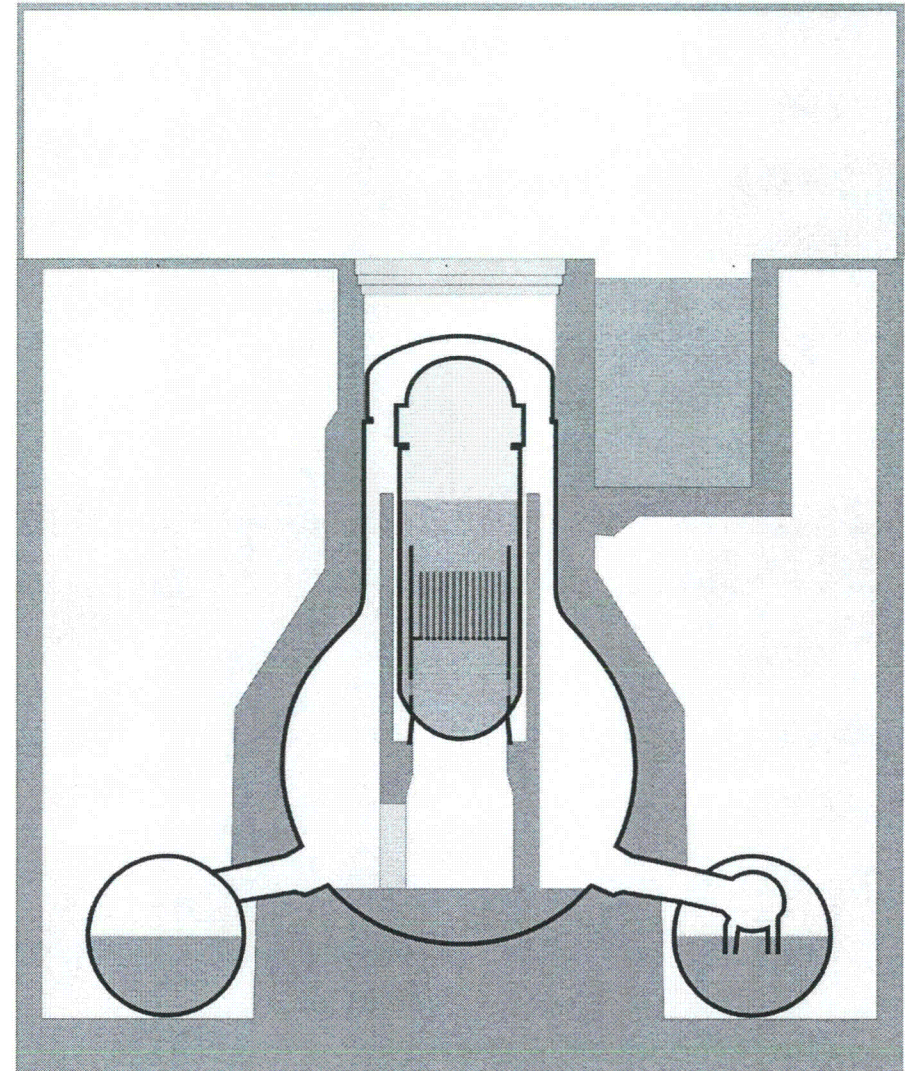




# The Fukushima Daiichi Incident

## 2. Accident progression

- ▶ Reactor Isolation pump stops
  - ◆ 11.3. 16:36 in Unit 1 (Batteries empty)
  - ◆ 14.3. 13:25 in Unit 2 (Pump failure)
  - ◆ 13.3. 2:44 in Unit 3 (Batteries empty)
- ▶ Decay Heat produces still steam in Reactor pressure Vessel
  - ◆ Pressure rising
- ▶ Opening the steam relieve valves
  - ◆ Discharge Steam into the Wet-Well
- ▶ Descending of the Liquid Level in the Reactor pressure vessel

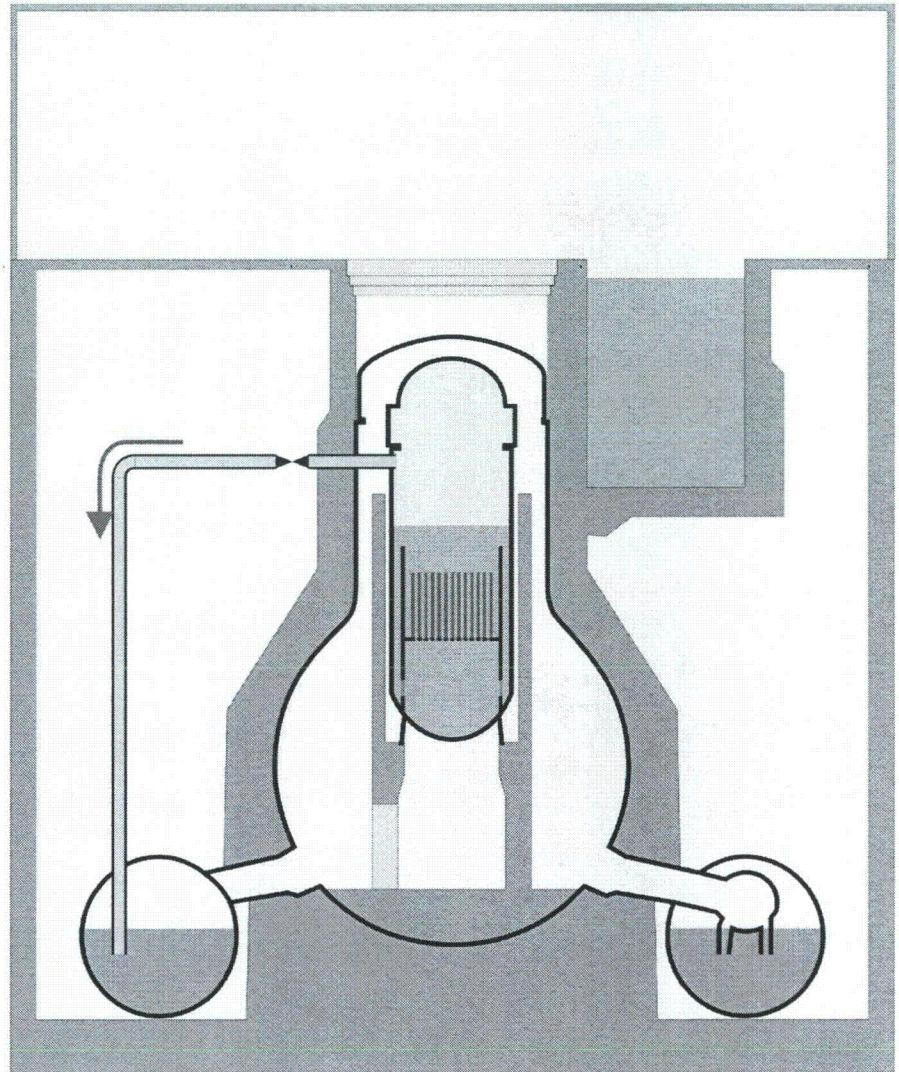




# The Fukushima Daiichi Incident

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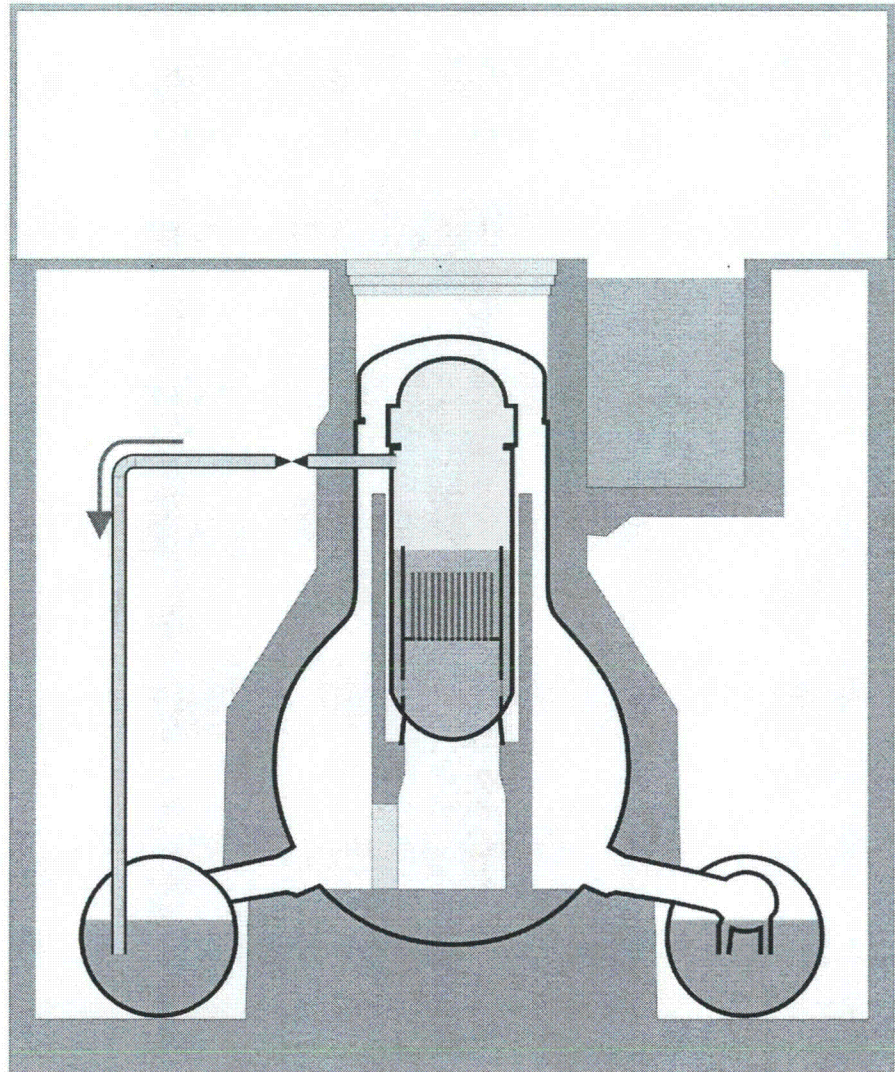




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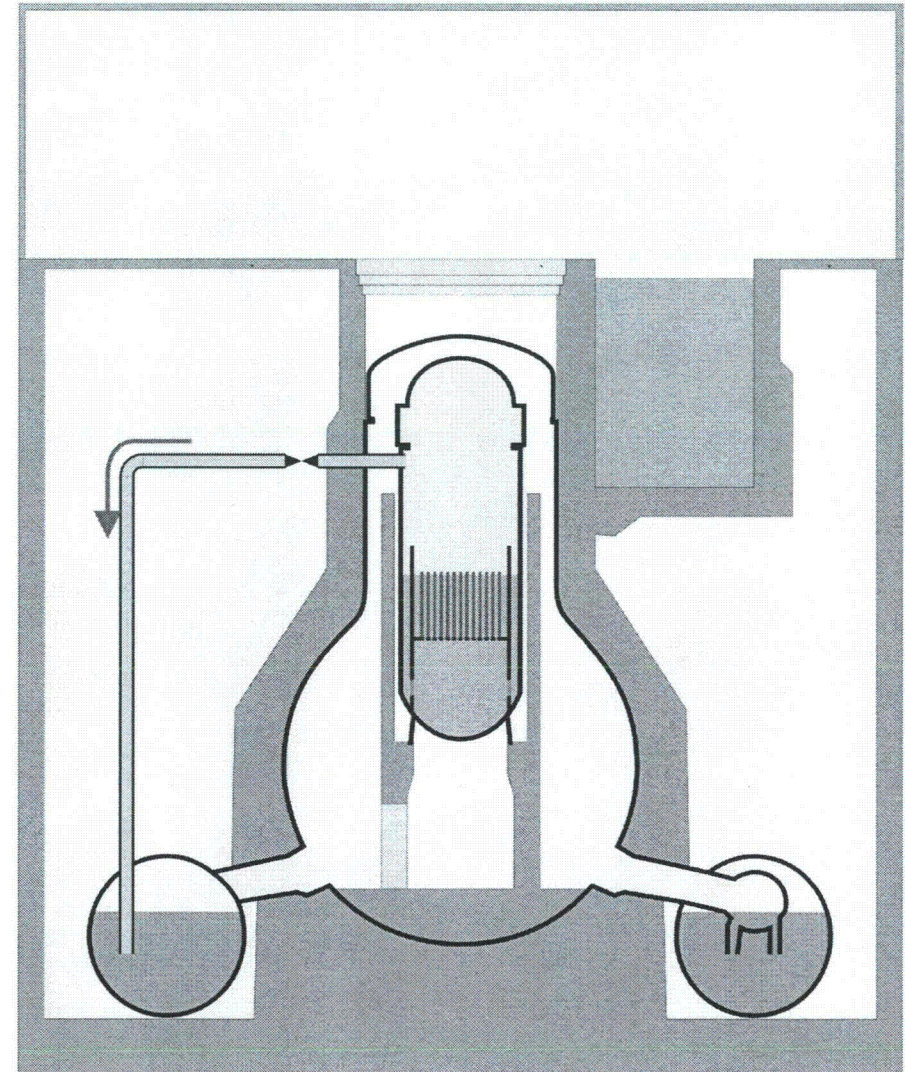




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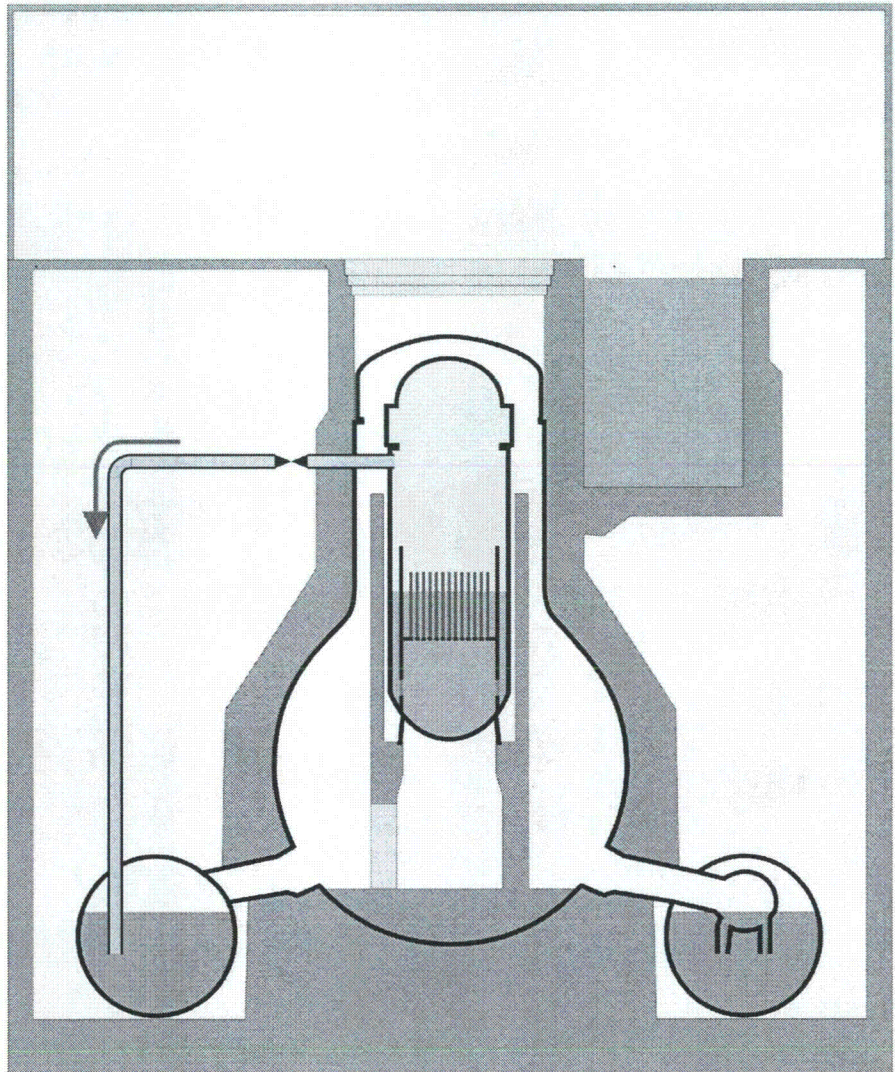




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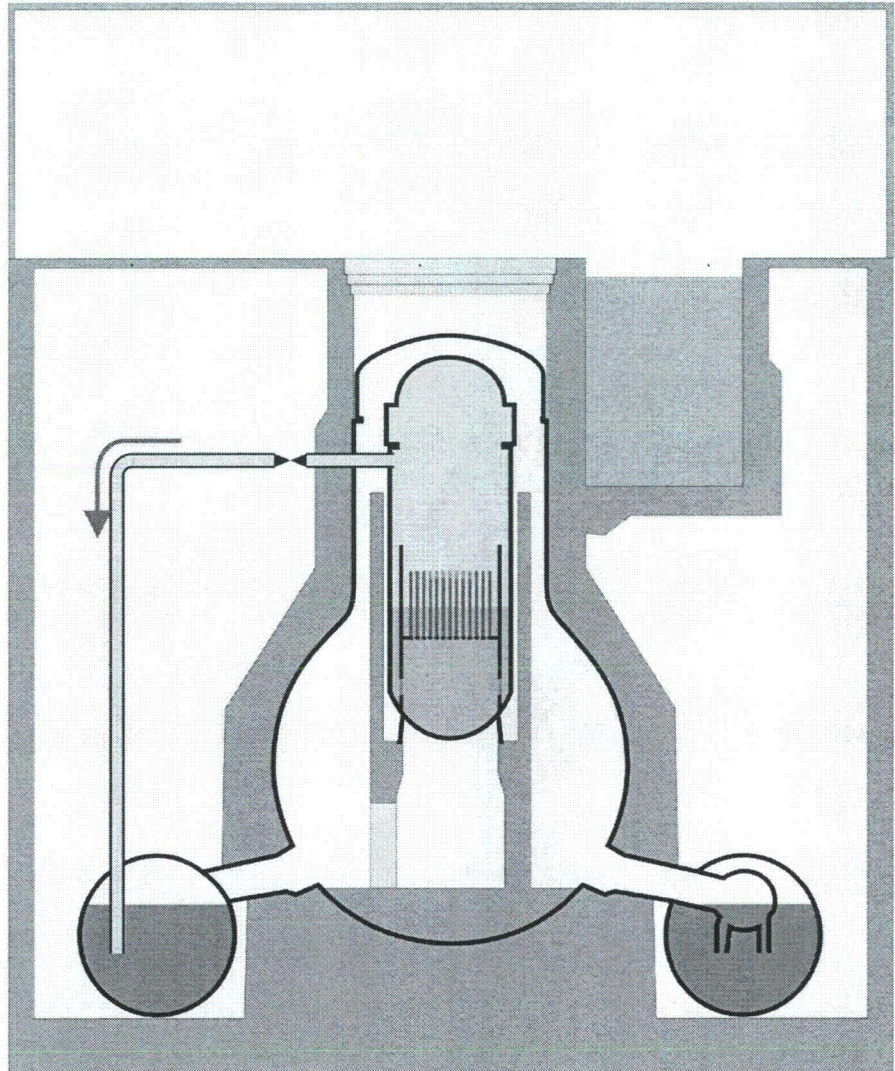




# The Fukushima Daiichi Incident

## 2. Accident progression

- ▶ Measured, and here referenced Liquid level is the collapsed level. The actual liquid level lies higher due to the steam bubbles in the liquid
- ▶ ~50% of the core exposed
  - ◆ Cladding temperatures rise, but still no significant core damage
- ▶ ~2/3 of the core exposed
  - ◆ Cladding temperature exceeds  $\sim 900^{\circ}\text{C}$
  - ◆ Ballooning / Breaking of the cladding
  - ◆ Release of fission products from the fuel rod gaps

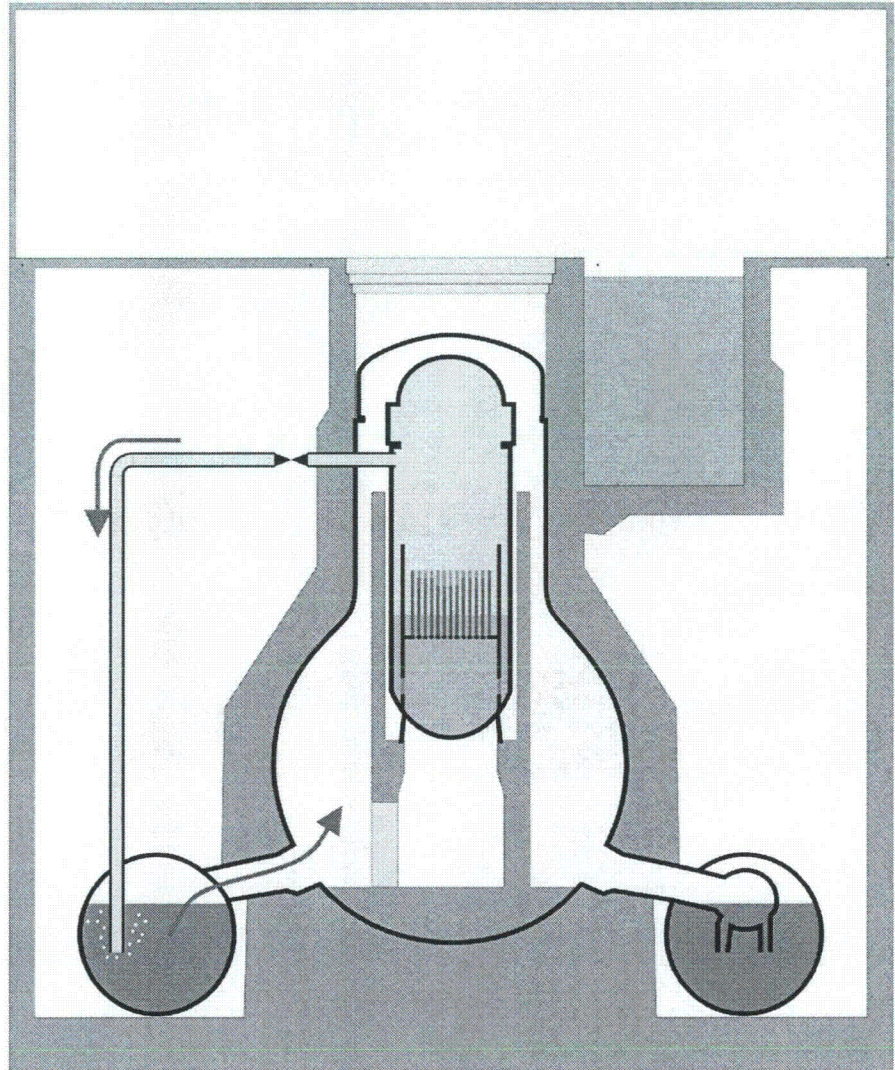




# The Fukushima Daiichi Incident

## 2. Accident progression

- ▶ ~3/4 of the core exposed
  - ◆ Cladding exceeds ~1200°C
  - ◆ Zirconium in the cladding starts to burn under Steam atmosphere
  - ◆  $\text{Zr} + 2\text{H}_2\text{O} \rightarrow \text{ZrO}_2 + 2\text{H}_2$
  - ◆ Exothermal reaction further heats the core
  - ◆ Generation of hydrogen
    - Unit 1: 300-600kg
    - Unit 2/3: 300-1000kg
  - ◆ Hydrogen gets pushed via the wet-well, the wet-well vacuum breakers into the dry-well

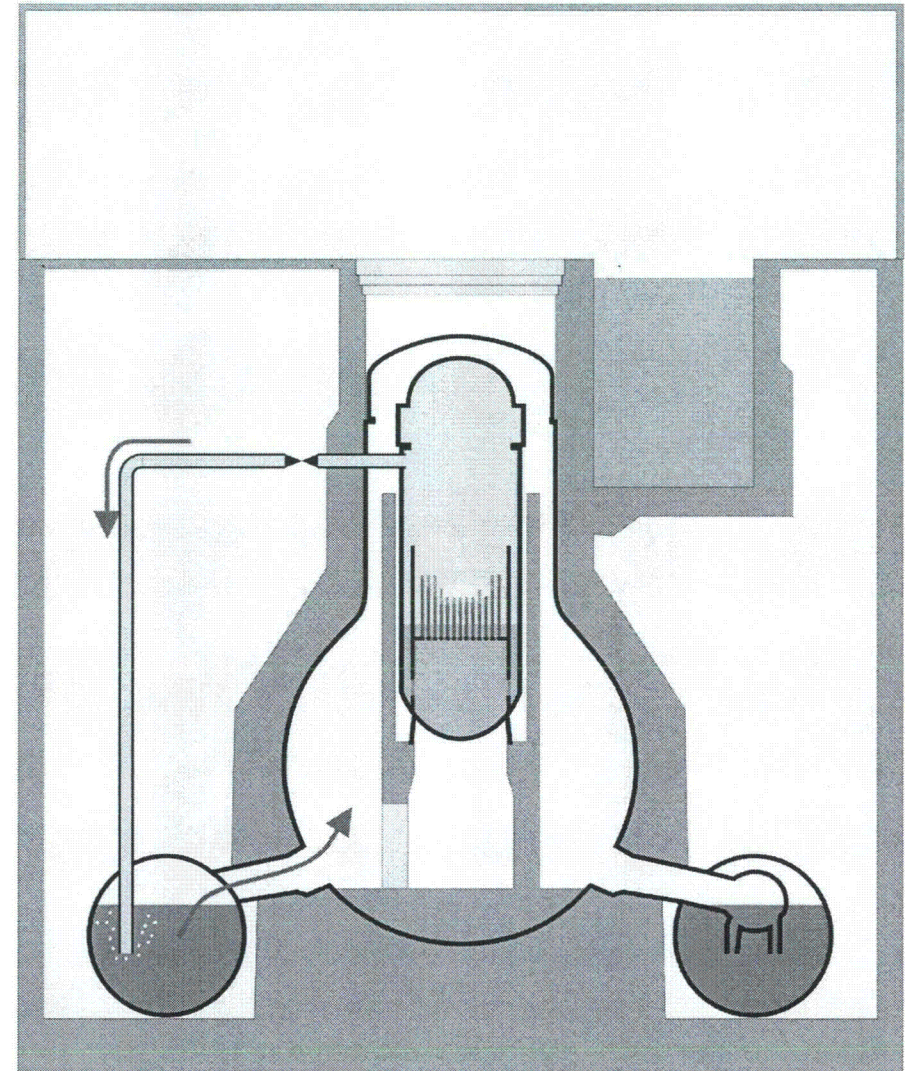




# The Fukushima Daiichi Incident

## 2. Accident progression

- ▶ at ~1800°C [Unit 1,2,3]
  - ◆ Melting of the Cladding
  - ◆ Melting of the steel structures
- ▶ at ~2500°C [Block 1,2]
  - ◆ Breaking of the fuel rods
  - ◆ debris bed inside the core
- ▶ at ~2700°C [Block 1]
  - ◆ Melting of Uranium-Zirconium eutectics
- ▶ Restoration of the water supply stops accident in all 3 Units
  - ◆ Unit 1: 12.3. 20:20 (27h w.o. water)
  - ◆ Unit 2: 14.3. 20:33 (7h w.o. water)
  - ◆ Unit 3: 13.3. 9:38 (7h w.o. water)

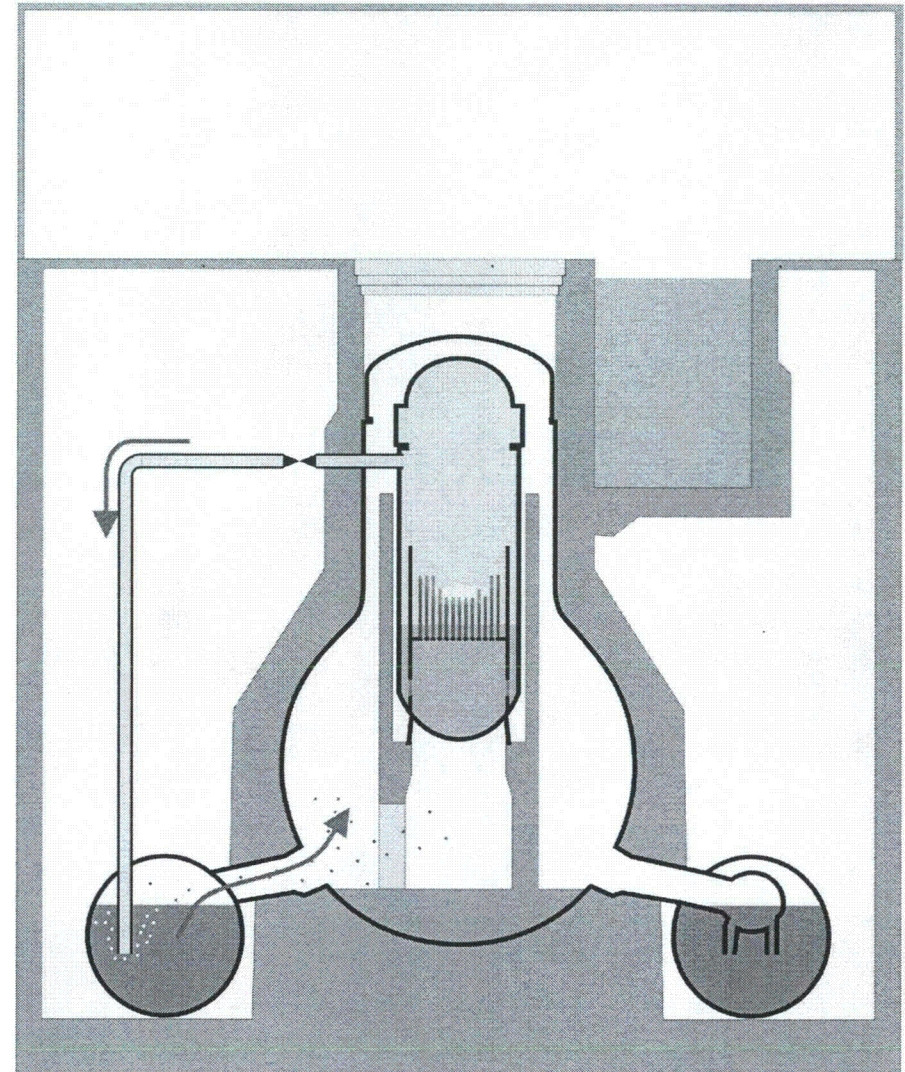




# The Fukushima Daiichi Incident

## 2. Accident progression

- ▶ Release of fission products during melt down
  - ◆ Xenon, Cesium, Iodine,...
  - ◆ Uranium/Plutonium remain in core
  - ◆ Fission products condensate to airborne Aerosols
- ▶ Discharge through valves into water of the condensation chamber
  - ◆ Pool scrubbing binds a fraction of Aerosols in the water
- ▶ Xenon and remaining aerosols enter the Dry-Well
  - ◆ Deposition of aerosols on surfaces further decontaminates air

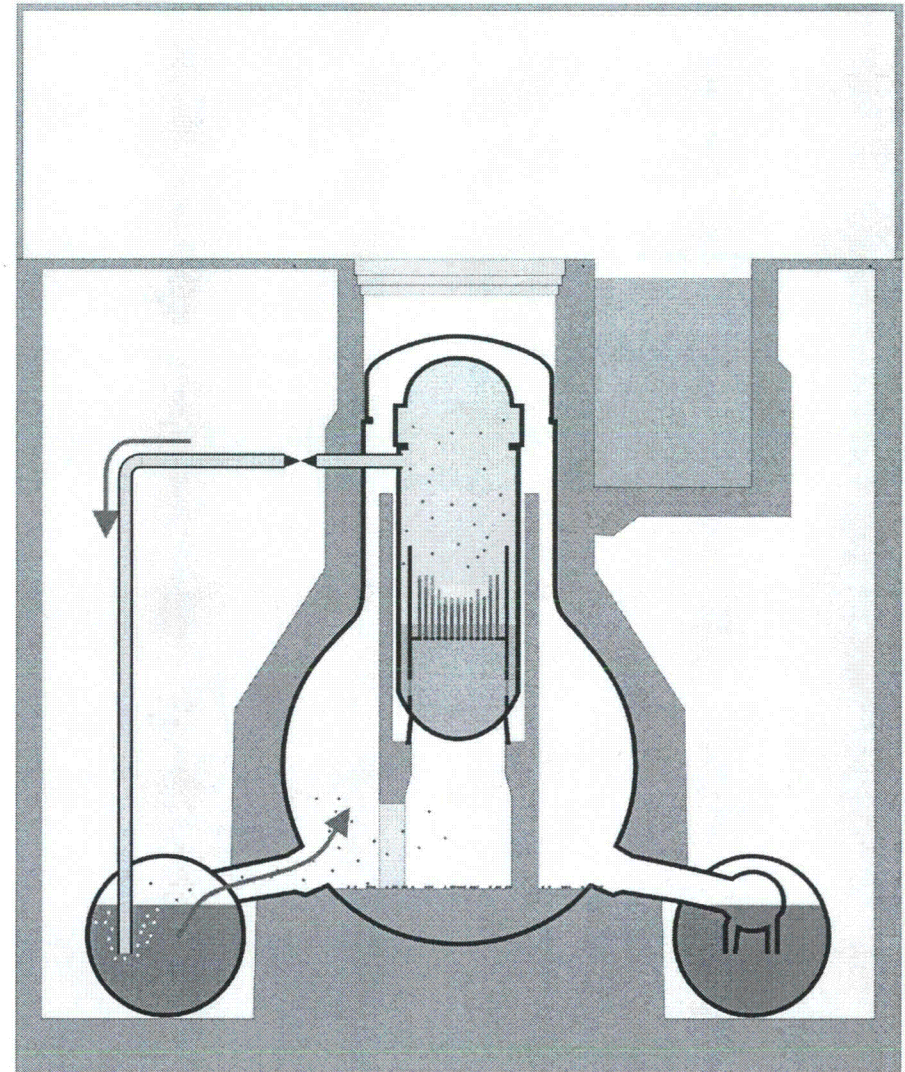




# The Fukushima Daiichi Incident

## 2. Accident progression

- ▶ Containment
  - ◆ Last barrier between Fission Products and Environment
  - ◆ Wall thickness ~3cm
  - ◆ Design Pressure 4-5bar
- ▶ Actual pressure up to 8 bars
  - ◆ Normal inert gas filling (Nitrogen)
  - ◆ Hydrogen from core oxidation
  - ◆ Boiling condensation chamber (like a pressure cooker)
- ▶ Depressurization of the containment
  - ◆ Unit 1: 12.3. 4:00
  - ◆ Unit 2: 13.3 00:00
  - ◆ Unit 3: 13.3. 8.41

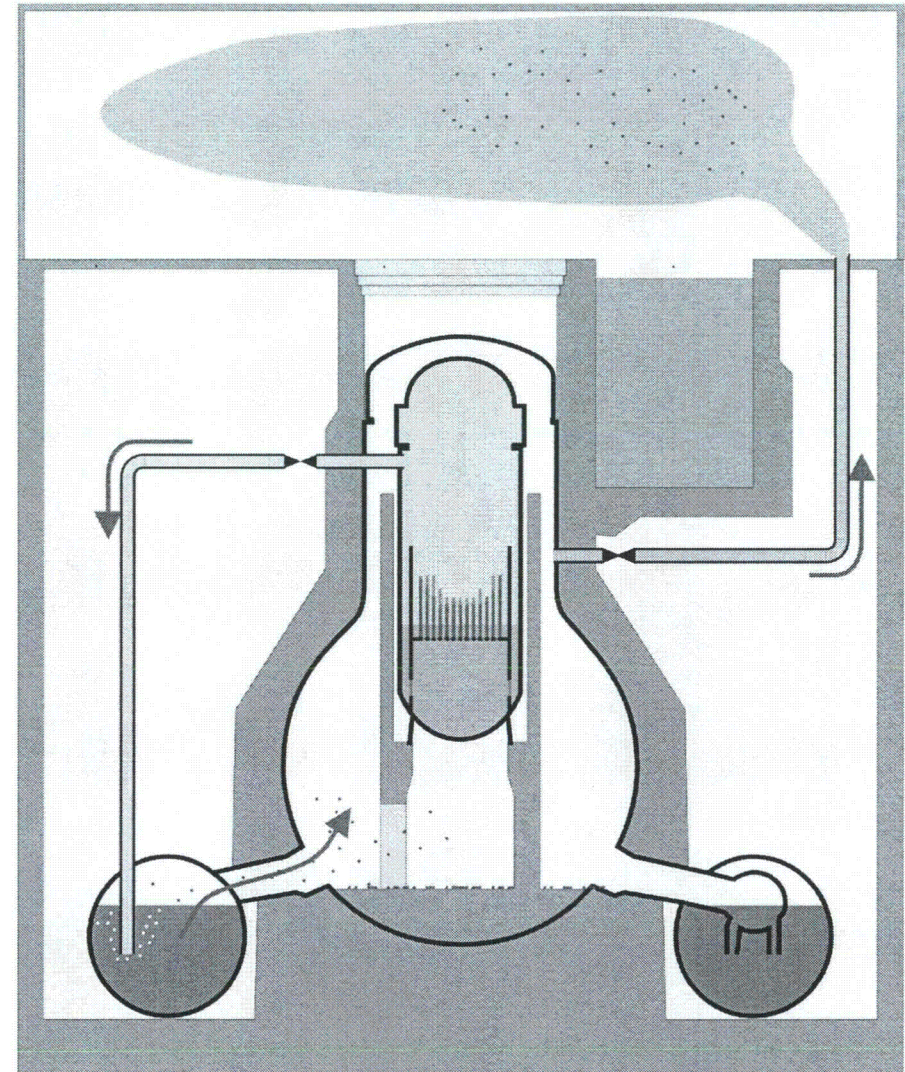




# The Fukushima Daiichi Incident

## 2. Accident progression

- ▶ Positive and negative Aspects of depressurizing the containment
  - ◆ Removes Energy from the Reactor building (only way left)
  - ◆ Reducing the pressure to ~4 bar
  - ◆ Release of small amounts of Aerosols (Iodine, Cesium ~0.1%)
  - ◆ Release of all noble gases
  - ◆ Release of Hydrogen
- ▶ Gas is released into the reactor service floor
  - ◆ Hydrogen is flammable



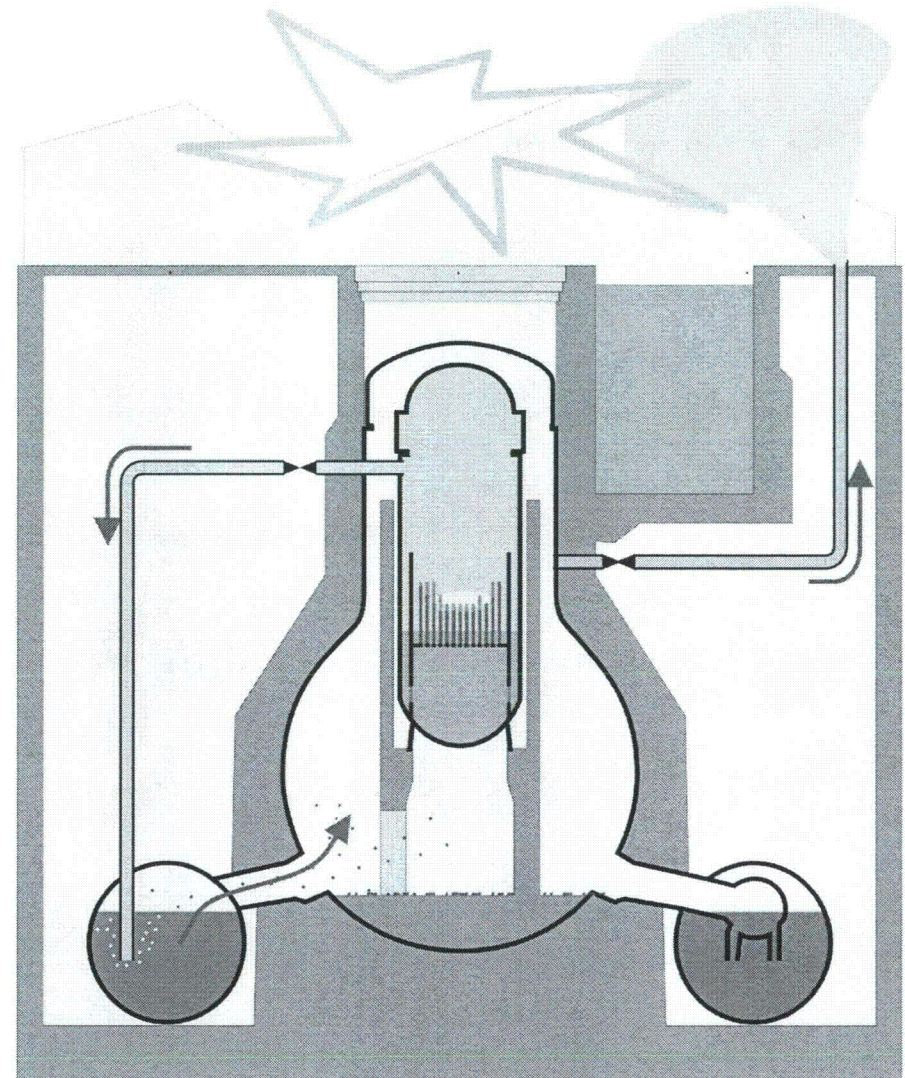
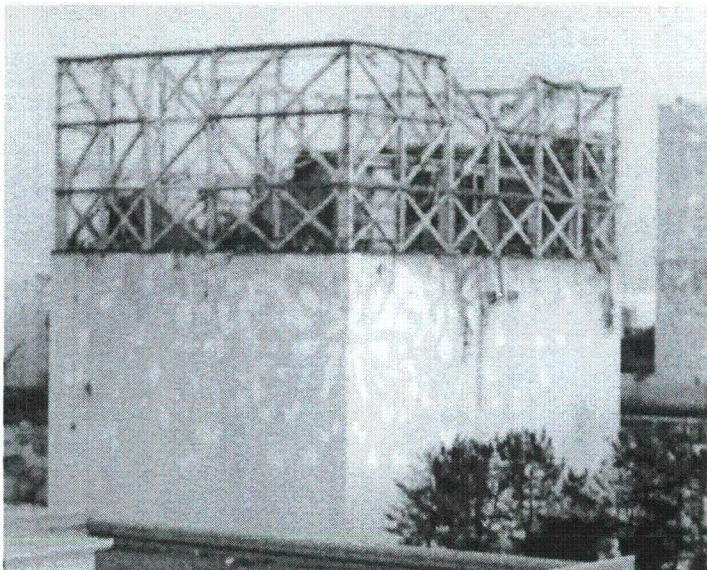


# The Fukushima Daiichi Incident

## 2. Accident progression

### ► Unit 1 und 3

- ◆ Hydrogen burn inside the reactor service floor
- ◆ Destruction of the steel-frame roof
- ◆ Reinforced concrete reactor building seems undamaged
- ◆ Spectacular but minor safety relevant





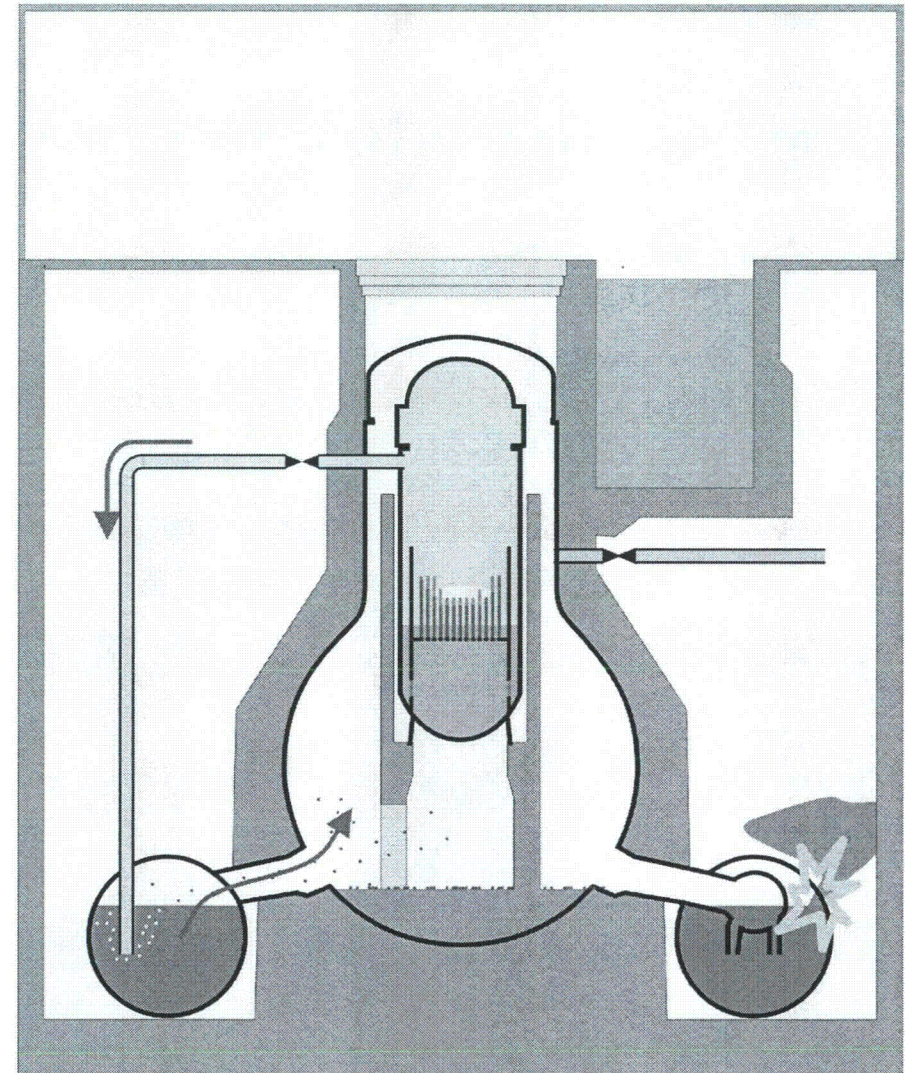
# The Fukushima Daiichi Incident

## 2. Accident progression

### ► Unit 2

- ◆ Hydrogen burn inside the reactor building
- ◆ Probably damage to the condensation chamber (highly contaminated water)
- ◆ Uncontrolled release of gas from the containment
- ◆ **Release of fission products**
- ◆ Temporal evacuation of the plant
- ◆ High local dose rates on the plant site due to wreckage hinder further recovery work

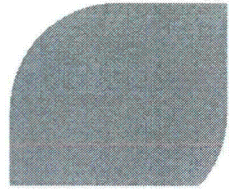
- No clear information's why Unit 2 behaved differently



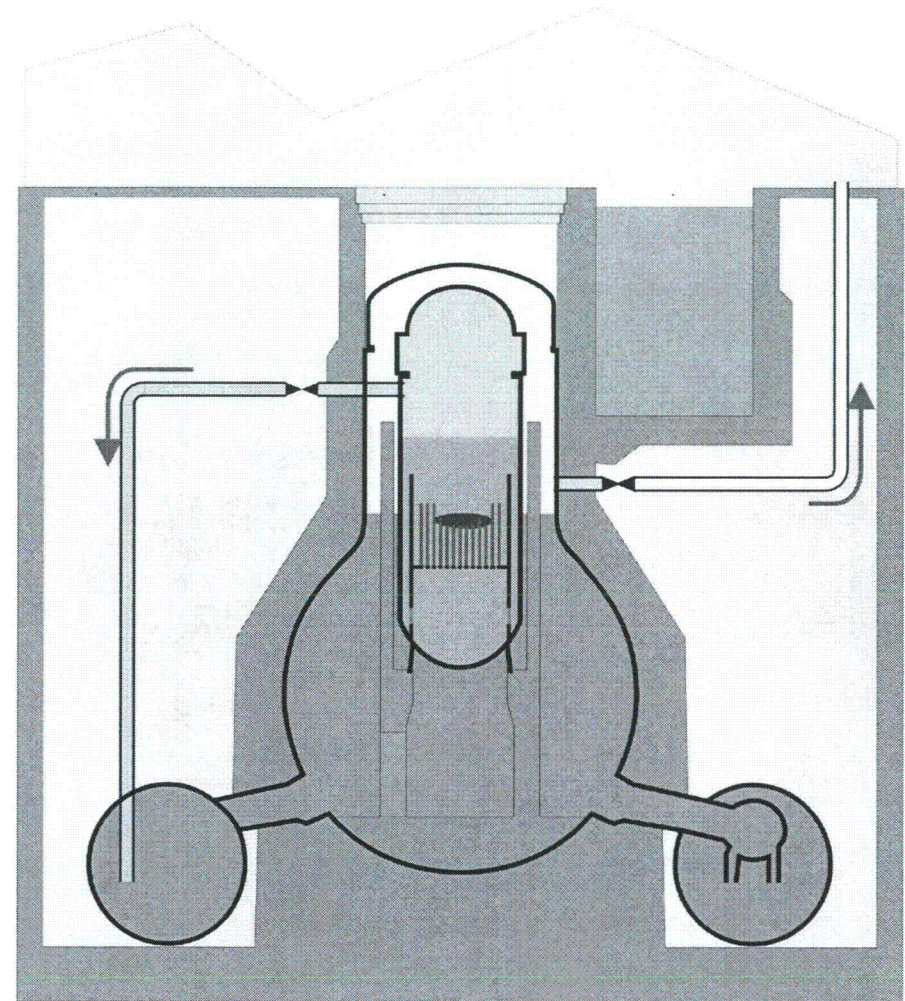


# The Fukushima Daiichi Incident

## 2. Accident progression

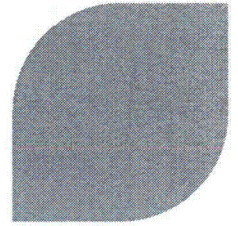


- ▶ Current status of the Reactors
  - ◆ Core Damage in Unit 1,2, 3
  - ◆ Building damage due to various burns Unit 1-4
  - ◆ Reactor pressure vessels flooded in all Units with mobile pumps
  - ◆ At least containment in Unit 1 flooded
- ▶ Further cooling of the Reactors by releasing steam to the atmosphere
- ▶ Only small further releases of fission products can be expected



# The Fukushima Daiichi Incident

## 3. Radiological releases



### ► Directly on the plant site

#### ◆ Before Explosion in Unit Block 2

- Below 2mSv / h
- Mainly due to released radioactive noble gases
- Measuring posts on west side. Maybe too small values measured due to wind

#### ◆ After Explosion in Unit 2 (Damage of the Containment)

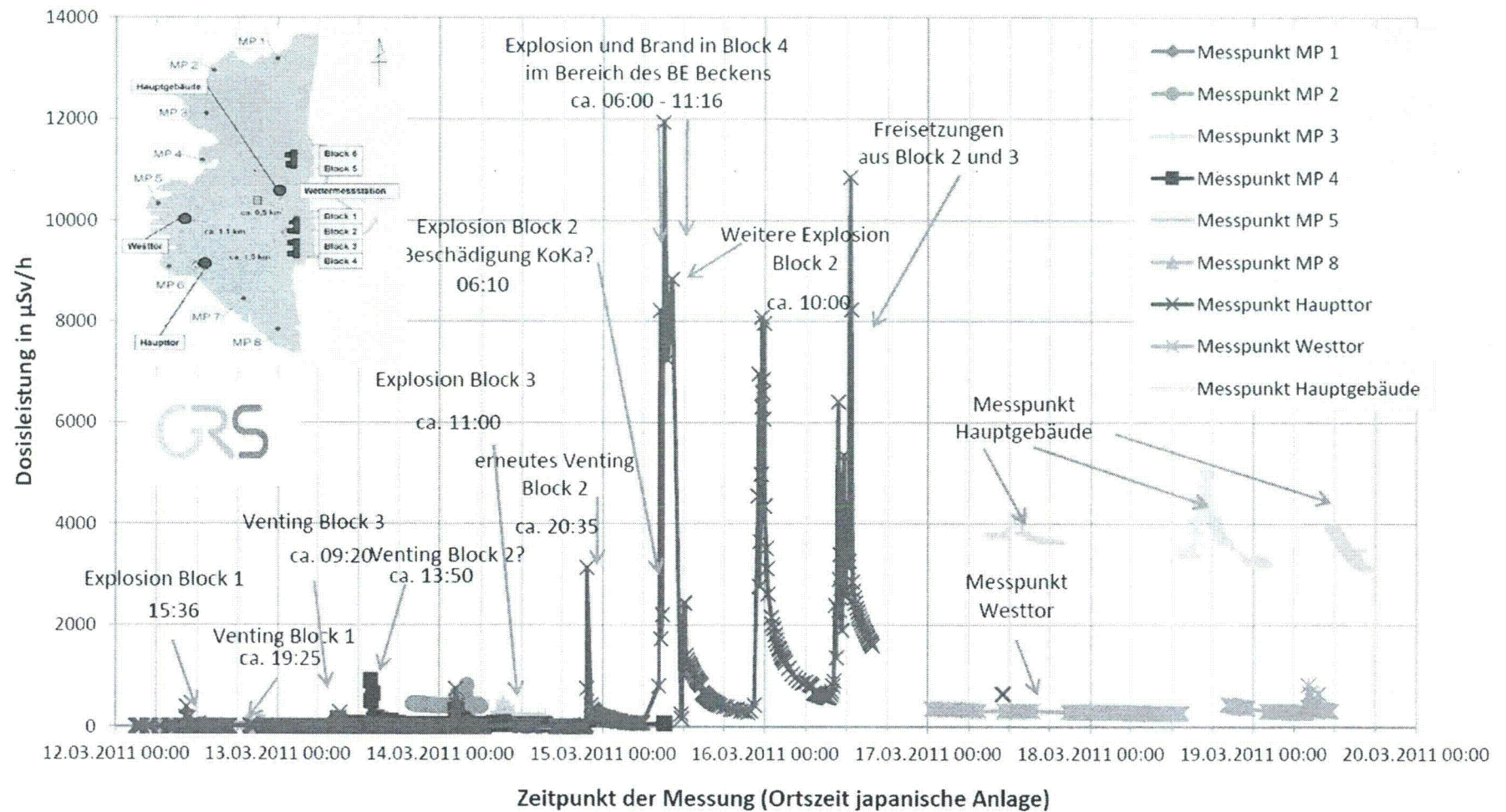
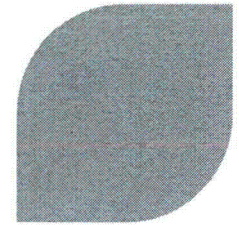
- Temporal peak values 12mSv / h
- (Origin not entirely clear)
- Local peak values on site up to 400mSv /h (wreckage / fragments?)
- Currently stable dose on site at 5mSv /h
- Inside the buildings a lot more

#### ◆ Limiting time of exposure of the workers necessary



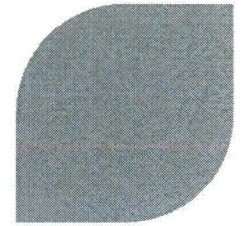
# The Fukushima Daiichi Incident

## 3. Radiological releases



# The Fukushima Daiichi Incident

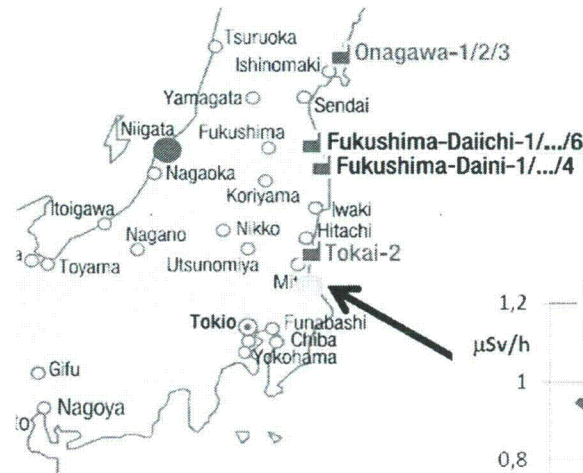
## 3. Radiological releases



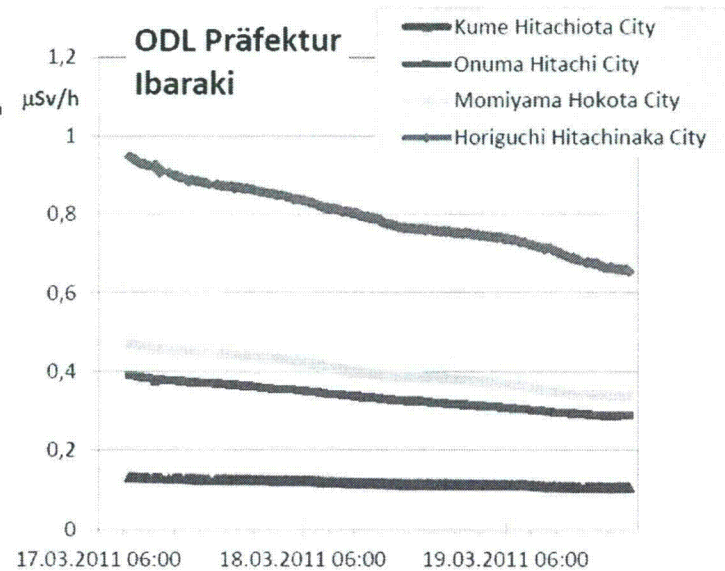
- ▶ Outside the Plant site
  - ◆ As reactor building mostly intact  
=> reduced release of Aerosols (not Chernobyl-like)
  - ◆ Fission product release in steam  
=> fast Aerosol grows, large fraction falls down in the proximity of the plant
  - ◆ Main contribution to the radioactive dose outside plant are the radioactive noble gases
  - ◆ Carried / distributed by the wind, decreasing dose with time
  - ◆ No „Fall-out“ of the noble gases, so no local high contamination of soil
  
- ▶ ~20km around the plant
  - ◆ Evacuations were adequate
  - ◆ Measured dose up to 0.3mSv/h for short times
  - ◆ Maybe destruction of crops / dairy products this year
  - ◆ Probably no permanent evacuation of land necessary

# The Fukushima Daiichi Incident

## 3. Radiological releases



GRS.de



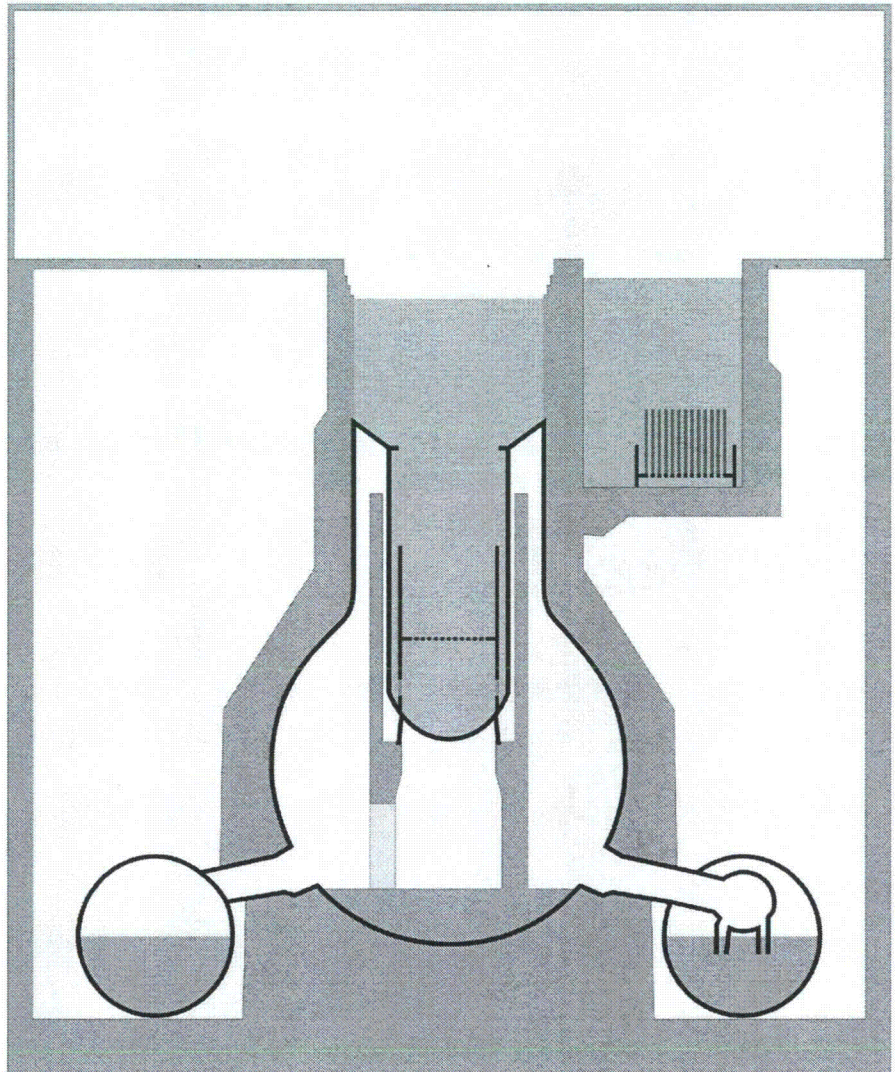
- ~50km around the plant
  - ◆ Control of Crop / Dairy products
  - ◆ Usage of Iodine pills  
(Caution, pills can interfere with heart medicine)



# The Fukushima Daiichi Incident

## 4. Spent fuel pools

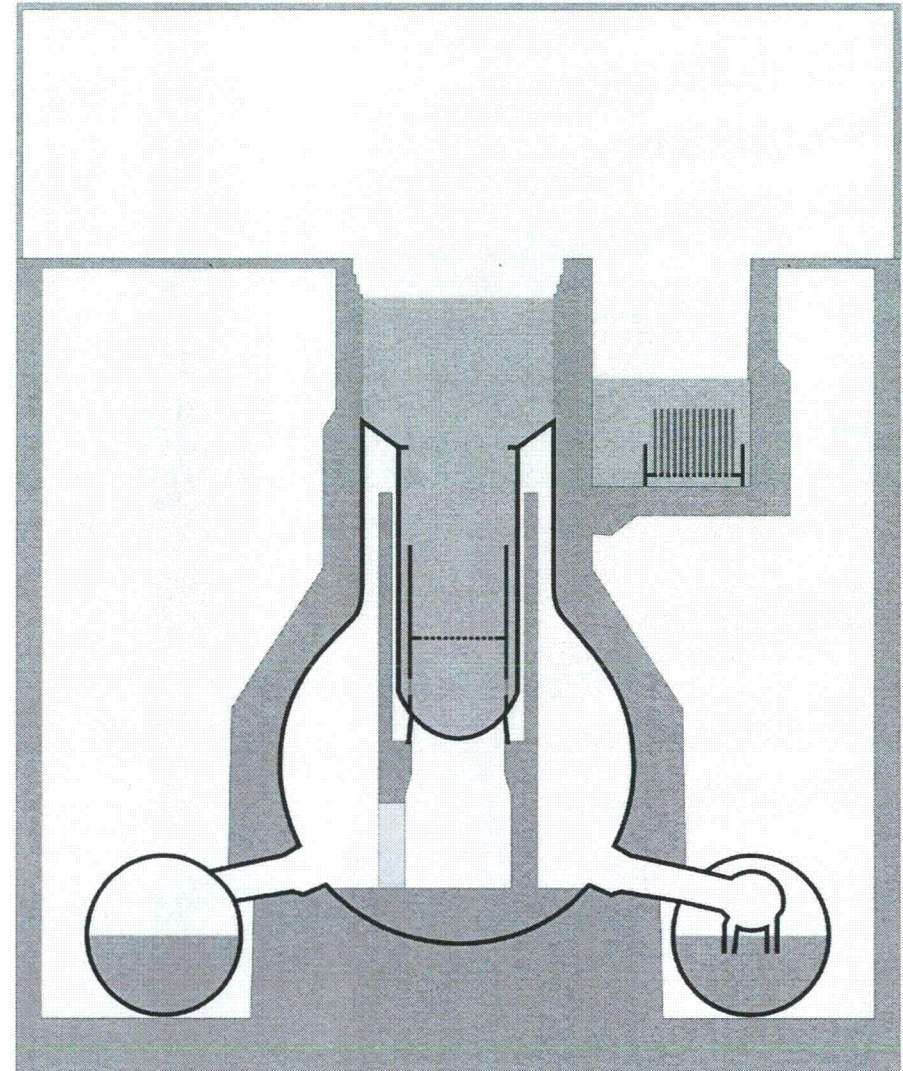
- ▶ Spent fuel stored in Pool on Reactor service floor
  - ◆ Due to maintenance in Unit 4 entire core stored in Fuel pool
  - ◆ Dry-out of the pools
    - Unit 4: in 10 days
    - Unit 1-3,5,6 in few weeks
  - ◆ **Leakage of the pools due to Earthquake?**
- ▶ Consequences
  - ◆ Core melt „on fresh air “
  - ◆ Nearly no retention of fission products
  - ◆ Large release



# The Fukushima Daiichi Incident

## 4. Spent fuel pools

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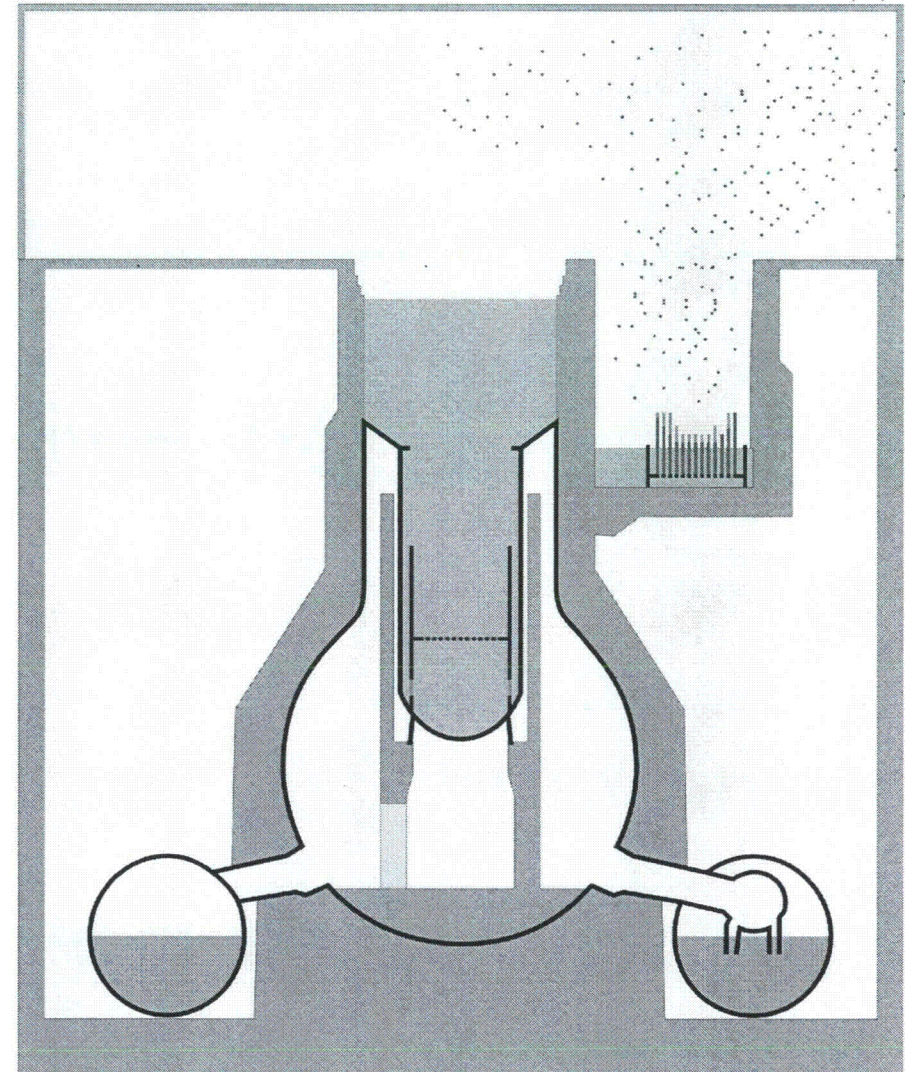




# The Fukushima Daiichi Incident

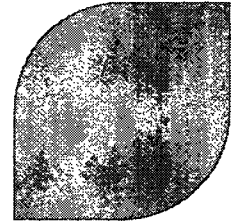
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  - ◆ Core melt „on fresh air “
  - ◆ Nearly no retention of fission products
  - ◆ Large release
- ▶ **It is currently unclear if release from fuel pool already happened**



# The Fukushima Daiichi Incident

## 5. Sources of Information



### ► Good sources of Information

#### ◆ Gesellschaft für Reaktorsicherheit [GRS.de]

- Up to date
- Radiological measurements published
- German translation of japanese/englisch web pages

#### ◆ Japan Atomic Industrial Forum [jaif.or.jp/english/]

- Current Status of the plants
- Measurement values of the reactors (pressure liquid level)

#### ◆ Tokyo Electric Power Company [Tepco.co.jp]

- Status of the recovery work
- Casualties

### ► May too few information are released by TEPCO, the operator of the plant

**From:** E&E Publishing, LLC <ealerts@eenews.net>  
**Sent:** Friday, March 25, 2011 1:19 PM  
**To:** Virgilio, Martin  
**Subject:** March 25 -- Greenwire is ready



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The oil and gas industry has nearly 7,200 permits to drill on public lands that it has yet to use, according to Bureau of Land Management data obtained by *Greenwire*. The unused, but still valid, drilling permits paint a starkly different picture from what industry and some in Congress have argued is a concerted effort by the Obama administration to lock up federal lands to energy production, said Dave Alberswerth, senior policy adviser on energy issues for the Wilderness Society and a former Interior Department official in the Clinton administration.

### TOP STORIES

2. **NUCLEAR CRISIS:** Japan disaster refuels liability debate in U.S.-India pact
3. **NUCLEAR CRISIS:** Devil's in the details for drinking water accident scenarios
4. **CLIMATE:** 2 Democrats press White House to ease industry's regulatory pain

### JAPAN EARTHQUAKE

5. **NUCLEAR CRISIS:** Likely breach in No. 3 reactor raises radiation risk
6. **NUCLEAR CRISIS:** Japan encourages more to evacuate after possible breach discovered
7. **COAL:** Japanese disaster may change global production, prices
8. **NUCLEAR CRISIS:** Information about Fukushima accident still under wraps
9. **NUCLEAR CRISIS:** Pets suffer in wake of disasters
10. **CHINA:** Officials plot nuclear plants without fuel rods

### CONGRESS

11. **REGULATIONS:** Ruckelshaus, Whitman bemoan 'siege' on EPA, Clean Air Act

12. **LOBBYING:** Coal group launches ads targeting EPA climate regs

## **POLITICS**

13. **OIL AND GAS:** BLM leasing reforms draw cheers, jeers, lawsuits

14. **RENEWABLE ENERGY:** Cash grants more effective than tax incentives -- study

15. **TRANSPORTATION:** Miles-traveled tax an effective supplement to gas tax -- CBO

## **ENERGY**

16. **COAL:** Salazar may have overstated lease earnings

17. **NUCLEAR:** NRC finds safety breaches at S.C. plant

18. **NUCLEAR SAFETY:** Report highlights 'key shortcomings' in U.S. weapons protection

19. **NATURAL GAS:** API president pushes for domestic drilling to create jobs

20. **ALASKA:** Oil company tax breaks appear dead in state Senate

21. **ALABAMA:** Motivations for environmental award called into question

## **FEDERAL AGENCIES**

22. **DOE:** IG faults oversight of solar-grant recipients

23. **ARMY CORPS:** Conflicting demands, shrinking budgets create unsustainable mission -- report

24. **CHEMICALS:** EPA declassifies 42 industry studies on possible toxins

## **NATURAL RESOURCES**

25. **NATIONAL PARKS:** Interior acquires long-sought tract along Gettysburg battlefield

26. **WILDLIFE:** Ted Turner's bison donation rescues historic herd

27. **FORESTS:** Calif. group raises \$7.5M to save redwoods

28. **MINING:** BHP Billiton to put \$10B into Australian operations

29. **WOLVES:** Conservation groups ask judge to lift Mont. and Idaho protections

## **LAW AND LOBBYING**

30. **PIPELINES:** Calif. regulators propose reduced fine for San Bruno blast that killed 8

31. **BUSINESS:** GE avoids taxes through lobbying, overseas investment

## CLEAN TECH

32. **SMART GRID:** Calif. utility offers opt-out plan for smart meters

33. **WIND:** First DOE-backed renewables project goes online in Hawaii

## INTERNATIONAL

34. **EARTHQUAKE:** Severe earthquake rocks Myanmar

35. **ENERGY MARKETS:** BP seeks to salvage Arctic exploration deal

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The devastating earthquake and tsunami in Japan has spawned a major nuclear disaster. E&E examines the implications for energy, the environment, security and public health. [Click here](#) to go to the report.

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Giving new meaning to toasted wheat, a team of agricultural researchers has spent the past three years and almost a million dollars installing electric heaters over wheat fields in the desert of Maricopa, Ariz. Called the "Hot Serial Cereal" project, the experiment is not a move to tempt breakfast-eaters in the morning, but rather to simulate a temperature rise of 2 to 6 degrees Fahrenheit -- the predicted global average increase for the next 50 years.

#### TODAY'S STORIES

2. **CANADA:** Looming election puts climate policies in a 'holding pattern'
3. **NUCLEAR:** Leakage of radioactive water slows Fukushima recovery efforts
4. **FINANCE:** China continues to lead U.S. in clean energy investment



5. **RENEWABLE ENERGY:** Artificial 'leaf' could provide easy, mobile energy
6. **ENERGY EFFICIENCY:** 60 percent of U.S. homes use some energy-efficient light bulbs -- study
7. **JAPAN:** Tokyo braces for a 20% gap between electricity supply and demand
8. **GREEN BUILDING:** Sydney's 'Central Park' will boast efficient buildings
9. **CHINA:** New targets to control carbon emissions based on GDP growth
10. **RENEWABLE ENERGY:** U.K. factory to be powered by municipal waste

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#### **E&ETV'S ONPOINT**

11. **ENERGY POLICY:** Lawmakers, analysts discuss challenges to crafting and passing a CES

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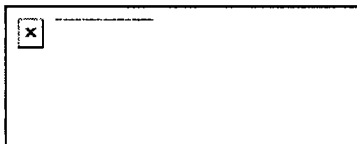
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**From:** E&E Publishing, LLC <ealerts@eenews.net>  
**Sent:** Monday, March 28, 2011 12:56 PM  
**To:** Schmidt, Rebecca  
**Subject:** March 28 -- Greenwire is ready



## AN E&E PUBLISHING SERVICE

GREENWIRE -- MON., MARCH 28, 2011 -- [Read the full edition](#)

### 1. **CLIMATE:** Enviro lawyers tied in knots over Calif. emissions ruling

A California court ruling suspending the implementation of the state's landmark climate change law came with a large dose of irony. That's because San Francisco County Superior Court Judge Ernest Goldsmith found that the state had failed to comply with another landmark law, one that is beloved by some of the same environmental groups that are critical of the ruling, the California Environmental Quality Act. Essentially, a major environmental initiative is under threat because the state failed to correctly carry out the appropriate environmental analysis.

## TOP STORIES

2. **NATIONAL PARKS:** Supreme Court stays out of Joshua Tree landfill dispute
3. **DOE:** Raise for senior employees rescinded after rule violation
4. **POLITICS:** Ad campaigns take EPA debate to the airwaves

## JAPAN EARTHQUAKE

5. **NUCLEAR CRISIS:** Japan disaster sparks push by Calif. port for federal dredging project
6. **DRINKING WATER:** High levels of contamination found in pipe leading out of plant
7. **NUCLEAR:** German companies plan suit over idled plants
8. **NUCLEAR CRISIS:** Japan struggles to keep public updated
9. **NUCLEAR POLICY:** Ties between regulators and industry criticized
10. **NUCLEAR CRISIS:** Reliance on old data left Japan's industry unprepared for disaster

## CONGRESS

11. EPA: Rust Belt voters support EPA carbon rules -- poll

## POLITICS

12. GERMANY: Nuclear fears cost Merkel control of a key state

## ENERGY

13. SMART GRID: N. Calif. protesters stake out, stalk meter installers
14. OFFSHORE DRILLING: BOEMRE approves 6th deepwater permit
15. NATURAL GAS: Pa. governor won't budge on gas tax

## LAW AND LOBBYING

16. CLIMATE: Court considers delaying Texas challenge to EPA takeover
17. ENDANGERED SPECIES: 9th Circuit upholds fish protection in Calif. water battle
18. URANIUM: Ohio lawsuit over processing plant settled after two decades
19. GULF RECOVERY: Ex-FEMA supervisor indicted on fraud related to Katrina relief contract
20. COAL: Massey wins case over coal dust at W.Va. school

## BUSINESS

21. FINANCE: Clean-tech developers fret over witching hour for DOE grants
22. MARKETING: 7 companies leave forest-certification program over 'greenwash' claims

## AIR AND WATER

23. COAL: Scrubbers set to slash FirstEnergy plant's emissions
24. WATER POLLUTION: A little burst of energy helps germs break down pollutants

## WASTES & HAZARDOUS SUBSTANCES

25. TOXICS: Uptick in disease clusters spurs calls for TSCA reform

## NATURAL RESOURCES

26. ENDANGERED SPECIES: Indian tiger population climbs amid habitat lost to development

27. **PARKS:** Burt's Bees founder plans to donate land for national park

**INTERNATIONAL**

28. **LEAD:** Chinese plant manager faces environmental charges over poisoning

**E&TV'S ONPOINT**

29. **EPA:** Bracewell & Giuliani's Segal says agency overstepping authority with 'Utility MACT' proposal

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Greenwire is written and produced by the staff of E&E Publishing, LLC. The one-stop source for those who need to stay on top of all of today's major energy and environmental action with an average of more than 20 stories a day. Greenwire covers the complete spectrum, from electricity industry restructuring to Clean Air Act litigation to public lands management. Greenwire publishes daily at Noon.



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## AN E&E PUBLISHING SERVICE

This e-mail is an alert that the full edition of ClimateWire was just published. When prompted, enter your trial access codes (both are case sensitive):

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### **NUCLEAR CRISIS: JAPAN & THE FUTURE OF ENERGY POLICY**



The devastating earthquake and tsunami in Japan has spawned a major nuclear disaster. E&E examines the implications for energy, the environment, security and public health. [Click here](#) to go to the report.

**CLIMATEWIRE -- THU., MARCH 31, 2011 -- [Read the full edition](#)**

#### **1. NUCLEAR: U.S. response to Japan's crisis should be a new spent fuel strategy, Senate panel is told**

The nuclear crisis in Japan provides an impetus for Congress to confront a failed national policy on dealing with spent fuel from U.S. reactors, witnesses told a Senate subcommittee yesterday. Massachusetts Institute of Technology professor Ernest Moniz called for an accelerated transfer of spent nuclear fuel rods from storage in water-covered pools at reactor sites to concrete and steel "dry" casks. Two other witnesses before the subcommittee, representing the nuclear industry and one of its frequent critics, differed on the implications of the reactor crisis on the safety of spent reactor fuel stored at the 104 U.S. nuclear power plants. But both agreed it was time to confront the stalemated issues surrounding the spent fuel.

#### **2. POLITICS: Obama, steering for the center, draws dissent from both sides**

President Obama is trying to find the political center of the nation's energy issues. His speech yesterday, in steering the nation back to the domestic economy, appeals to a

cm/132

broad section of political -- and geographic -- positions. He stood fast by nuclear power, promised swifter access for oil companies and prioritized climate change. Yet he got little credit from either side.

---

## TODAY'S STORIES

3. **AUSTRALIA:** China and Australia in climate dialogue as coal exporters gear up
4. **SCIENCE:** Navy plans to rebuild waning Arctic research programs
5. **MARKETS:** Traders expect Calif. cap-and-trade system to start on schedule
6. **FORESTS:** Study finds Russia's vast boreal forests changing, adding fuel to climate change
7. **FOOD SECURITY:** East Africa's drought drives up food aid needs by 25%
8. **RENEWABLE ENERGY:** Wave farm on Calif. coast allowed for feasibility study
9. **TRANSPORTATION:** Jet plane contrails may be more damaging than CO2 emissions -- study
10. **ELECTRIC CARS:** Wash. may tax electric vehicles
11. **SMART METERS:** Detroit's metering program to bring in more accurate, efficient devices

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## E&ETV'S ONPOINT

12. **CLEAN ENERGY:** National Hydropower Association's Munro discusses Senate action on hydro

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## ABOUT CLIMATEWIRE

ClimateWire is written and produced by the staff of E&E Publishing, LLC. It is designed to provide comprehensive, daily coverage of all aspects of climate change issues. From international agreements on carbon emissions to alternative energy technologies to state and federal GHG programs, ClimateWire plugs readers into the information they need to stay abreast of this sprawling, complex issue.





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**Sent:** Thursday, March 31, 2011 1:17 PM  
**To:** Virgilio, Martin  
**Subject:** March 31 -- Greenwire is ready



## AN E&E PUBLISHING SERVICE

GREENWIRE -- THU., MARCH 31, 2011 -- [Read the full edition](#)

### 1. **ENERGY POLICY:** Hill 'gangs' regroup as Obama speech, soaring fuel prices spur talks

An energy buzz has settled over Capitol Hill this week as fuel prices are surging and President Obama is calling for reducing imports of foreign oil. Lawmakers from both sides of the aisle are talking energy policy, floating independent measures and launching discussions of more comprehensive bills.

## TOP STORIES

2. **EPA:** Enviros urge Obama, Democrats to protect climate regs in budget talks
3. **AIR POLLUTION:** Has cap and trade created toxic hotspots? A new study says no
4. **REGULATIONS:** State environmental chiefs protest EPA's use of 'guidance'

## CONGRESS

5. **CLIMATE:** Study of temperature data confirms warming trend, scientist tells House panel
6. **HOUSE:** Boehner criticizes Obama's energy security speech
7. **SENATE:** Bipartisan bill would streamline confirmation process

## JAPAN EARTHQUAKE

8. **NUCLEAR CRISIS:** Spent fuel pools just as safe as dry casks -- NRC chief
9. **NUCLEAR:** U.S. parts makers see big profits in export industry
10. **NUCLEAR CRISIS:** Plant had minimal plans for worst-case scenarios
11. **NUCLEAR CRISIS:** High cesium levels detected 25 miles from troubled reactors

12. **NUCLEAR SAFETY**: Calif. plant operators propose advanced fault study

13. **NUCLEAR SAFETY**: France, Japan pledge to strengthen int'l standards

---

#### CLIMATE CHANGE

14. **CALIFORNIA**: Talks between enviro justice groups, regulators on emissions law break down

---

#### LAW AND LOBBYING

15. **COAL**: Judge blocks Kan. power plant project

16. **MINING**: Federal review panel upholds fines against Massey coal mine

---

#### CLEAN TECH

17. **OFFSHORE WIND**: Underwater 'backbone' would connect Atlantic farms

18. **CLEAN TECH**: Report outlines how DOD can spur energy innovation

---

#### ENERGY

19. **OFFSHORE DRILLING**: Shell permit starts waiting game for likely lawsuits

20. **NATURAL GAS**: Pa. enviro chief must approve all Marcellus Shale drilling citations

21. **NUCLEAR WASTE**: New technologies, long-term storage certainty key to DOE cleanup -- report

22. **NUCLEAR WASTE**: Plant operators recoup \$776M as spent fuel sits idle

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#### E&TV'S ONPOINT

23. **CLEAN ENERGY**: National Hydropower Association's Munro discusses Senate action on hydro

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**Subject:** April 1 -- Greenwire is ready



## AN E&E PUBLISHING SERVICE

GREENWIRE -- FRI., APRIL 1, 2011 -- [Read the full edition](#)

### 1. **GULF SPILL:** Transocean rejects agency subpoenas for Macondo probe

The owner of the Deepwater Horizon rig that exploded and sank last April, causing the worst oil spill in U.S. history, rejected official requests yesterday to have company employees testify at federal hearings investigating the disaster. Steven Roberts, counsel for the Houston-based Transocean Ltd., told the Bureau of Ocean Energy Management, Regulation and Enforcement that the company is unable to compel employees James Kent and Jay Odenwald to testify and that they would instead be represented by their personal attorneys.

## TOP STORIES

2. **SENATE:** No GOP environmental riders allowed in budget deal -- Reid
3. **CLIMATE:** House to vote next week on EPA bill as Senate dithers
4. **WHITE HOUSE:** Obama touts partnership to clean commercial fleets

## JAPAN EARTHQUAKE

5. **NUCLEAR CRISIS:** TEPCO will review radiation data after disclosing analysis problem
6. **NUCLEAR CRISIS:** U.S. officials assure that West Coast milk with radiation is safe
7. **NUCLEAR SAFETY:** NRC steps up inspections at 3 reactors

## ENERGY

8. **MINING:** Company to open Ore. chromite mine as project foes press lawsuit
9. **NATURAL GAS:** Pa. violation approval policy is only temporary -- state officials
10. **NUCLEAR POWER:** Vt. utility pulls back from power purchase over safety

concerns

## FEDERAL AGENCIES

11. **EPA**: Environmental justice panel dives into Gulf Coast restoration

## AIR AND WATER

12. **AIR POLLUTION**: High levels of lead detected outside of Chicago school
13. **AIR POLLUTION**: EPA to require Pa. plant to curb emissions reaching N.J.
14. **WATER POLLUTION**: Mich. city accepts \$26.5M contamination settlement
15. **WATER POLLUTION**: W.Va. judge allows suit against coal companies to continue

## NATURAL RESOURCES

16. **NATIONAL PARKS**: Watchdog presses NPS over religious displays at parks
17. **AGRICULTURE**: Death of bats could mean billions in losses for farmers

## WASTES & HAZARDOUS SUBSTANCES

18. **E-WASTE**: N.Y. launches sweeping, mandatory recycling program
19. **CHEMICALS**: Jury says Calif. plant contaminated air, water

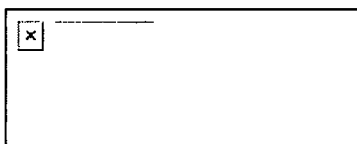
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**Subject:** Discuss NRC position going into the 29th CSS on redefining IAEA Safety Guides  
**Location:** O-17B4

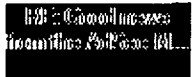
**Start:** Tue 4/12/2011 10:00 AM  
**End:** Tue 4/12/2011 10:30 AM

**Recurrence:** (none)

**Meeting Status:** Meeting organizer

**Organizer:** Virgilio, Martin  
**Required Attendees:** Brach, Bill; Camper, Larry; Lewis, Robert; Case, Michael; Cool, Donald; Schwartzman, Jennifer; ConferenceRoomO17B4 Resource

**Categories:** Business



**Purpose:** To decide on an NRC position going into the 29<sup>th</sup> CSS on redefining IAEA Safety Guides (Agenda Item 7.2)

Background Information in addition to the attached e-mail:

*From Bill Brach:*

With regard to the "Nature of Safety Guides" I have copied below the reference para from the IAEA procedure for drafting safety standards and copied the intro paragraphs from the NE Series Foreword (highlighting text for emphasis). I believe that this guidance is currently adequate. We can insist that new/revise safety guides be developed in accord with the Nov 2010 procedure and that the concept of "increasingly they reflect best practices to help users striving to achieve high levels of safety" is reflected in the IAEA Nuclear Series documents as indicated in the NE foreword.

IAEA November 2010 drafting guidelines procedure:

*"Safety Guides present international consensus recommendations — expressed as 'should' statements — of effective measures to ensure the fulfilment of safety requirements. The meaning is that it is necessary to take the measures stated (or equivalent alternative measures) to comply with the requirements. The recommendations may be of actions to be taken, conditions to be applied or procedures to be followed. " (page 3)*

NE Series documents:

## FOREWORD

*One of the Agency's statutory objectives is to "seek to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world". One way this objective is achieved is through publication of the various document series that are produced by the IAEA. Two of these document series are the IAEA Nuclear Energy Series (NES) and the IAEA Safety Standards.*

*According to Statute Article III, A.6, the IAEA Safety Standards establish "standards of safety for protection of health and minimization of danger to life and property." The safety standards include the Safety Fundamentals, the Safety Requirements, and the Safety Guides. These Standards are primarily written in a regulatory style, and are binding on the IAEA for its own operation. The principle users are the Member States regulatory bodies and other national authorities.*

*The NE Series produces reports designed to encourage and assist research on, and development and practical application of, nuclear energy for peaceful uses. This includes practical examples to be used by Member State owners and operators of utilities, implementing organizations, academia, and politicians, among others. This information is presented in guides, reports on technology status and advances, and best practices for peaceful uses of nuclear energy based on inputs from international experts. The NE Series complements the IAEA safety standards and provides detailed guidance, experience, good practices and examples on the five areas covered in the NE Series.*

The following is from the 28<sup>th</sup> Meeting Summary concerning this issue:

### **5.09 Report on the nature of the safety guides**

Mr Delattre provided a presentation on the nature of the Safety Guides, in response to Action 27.7 of the 27<sup>th</sup> CSS meeting (see Annex V). Mr. Virgilio also presented the views of the United States on the issue. Both Mr Delattre's and Mr Virgilio's presentations are available on the CSS website.

Mr Virgilio felt that the current definition of Safety Guides implies that a Safety Guide could be continually revised to include approaches that provide a higher and higher level of safety without "justification" based on safety, cost, and benefit - even though the associated requirement has not changed. Mr. Virgilio proposed a new definition for Safety Guides – that "the Safety Guides present an acceptable approach to meet the associated requirement. The approach presented is derived from international good practices, operating experience and lessons learned." Mr. Virgilio felt that both continuous improvement and regulatory stability could be achieved, if the need for improvement is justified based on operational experience, engineering analyses and risk insights.

---

**From:** Cubbage, Amy  
**Sent:** Friday, April 01, 2011 5:03 PM  
**To:** Miller, Charles; Virgilio, Martin; Holahan, Gary; Grobe, Jack; Dorman, Dan; Sanfilippo, Nathan  
**Subject:** RE: press release is out  
**Attachments:** ML11089A030.pdf; ML11089A045.pdf

The charter was finally declared and is available in ADAMS. Copy of memo and charter are attached.

Cynthia – please add the press release (link below) and the attached documents to the communications binder

Thanks,  
Amy

**From:** Cubbage, Amy  
**Sent:** Friday, April 01, 2011 4:35 PM  
**To:** Miller, Charles; Virgilio, Martin; Holahan, Gary; Grobe, Jack; Dorman, Dan; Sanfilippo, Nathan  
**Subject:** press release is out

<http://www.nrc.gov/reading-rm/doc-collections/news/2011/11-062.pdf>

The charter is attached to the press release. The charter will also be publicly available in ADAMS momentarily.

March 30, 2011

MEMORANDUM TO: Martin J. Virgilio  
Deputy Executive Director  
for Reactor and Preparedness Programs  
Executive Director for Operations

Charles L. Miller, Director  
Office of Federal and State Materials  
and Environmental Management Programs

FROM: R. W. Borchardt */RA/*  
Executive Director for Operations

SUBJECT: AGENCY TASK FORCE TO CONDUCT NEAR-TERM  
EVALUATION OF THE NEED FOR AGENCY ACTIONS  
FOLLOWING THE EVENTS IN JAPAN

On March 11<sup>th</sup>, 2011, Japan experienced a severe earthquake resulting in the shutdown of multiple reactors. It appears that the reactors' response to the earthquake went according to design. At the Fukushima Daiichi site, the earthquake caused the loss of normal AC power. In addition, it appears that the ensuing tsunami caused the loss of emergency AC power at the Fukushima Daiichi site. Subsequent events caused damage to fuel and radiological releases offsite.

The purpose of this memorandum is to task the Deputy Executive Director for Reactor and Preparedness Programs (DEDR) to convene an agency task force of U.S. Nuclear Regulatory (NRC) senior leaders and experts. The task force should conduct a methodical and systematic review of relevant NRC regulatory requirements, programs, and processes, and their implementation, to recommend whether the agency should make near-term improvements to our regulatory system. The task force should also identify a framework and topics for review and assessment for the longer-term effort.

Attached is a charter for the task force. The charter defines the objective, scope, coordination and communication, expected products, schedule, staffing, and Executive Director for Operations interface. The task force should update the Commission on the near-term review at approximately 30 and 60 days, and provide its observations, findings, and recommendations in the form of a written report and briefing at the completion of the near-term effort occurring at approximately 90 days.

The review should be conducted in accordance with Tasking Memorandum – COMGBJ-11-0002, "NRC Actions Following the Events in Japan."

Enclosure: As stated

CONTACT: Nathan T. Sanfilippo, OEDO  
301-415-3951

March 30, 2011

MEMORANDUM TO: Martin J. Virgilio  
Deputy Executive Director  
for Reactor and Preparedness Programs  
Executive Director for Operations

Charles L. Miller, Director  
Office of Federal and State Materials  
and Environmental Management Programs

FROM: R. W. Borchardt /RA/  
Executive Director for Operations

SUBJECT: AGENCY TASK FORCE TO CONDUCT NEAR-TERM  
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Enclosure: As stated

CONTACT: Nathan T. Sanfilippo, OEDO  
301-415-3951

**ADAMS Package: ML11089A050**

|         |                 |                      |                           |             |
|---------|-----------------|----------------------|---------------------------|-------------|
| OFFICE: | OEDO/Task Force | FSME/Task Force Lead | EDO/DEDR                  | EDO         |
| NAME:   | NSanfilippo     | CMiller              | MVirgilio<br>(ELeeds for) | RWBorchardt |
| DATE:   | 03/30/11        | 03/30/11             | 03/30/11                  | 03/30/11    |



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**CHARTER FOR THE NUCLEAR REGULATORY COMMISSION TASK FORCE  
TO CONDUCT A NEAR-TERM EVALUATION OF THE NEED FOR AGENCY ACTIONS  
FOLLOWING THE EVENTS IN JAPAN**

Objective

The objective of this task force is to conduct a methodical and systematic review of relevant NRC regulatory requirements, programs, and processes, and their implementation, to recommend whether the agency should make near-term improvements to our regulatory system. This task force will also identify a framework and topics for review and assessment for the longer-term effort.

Scope

The task force review will include the following:

- a. A near-term review to:
  - Evaluate currently available technical and operational information from the events that have occurred at the Fukushima Daiichi nuclear complex in Japan to identify potential or preliminary near-term/immediate operational or regulatory actions affecting domestic reactors of all designs, including their spent fuel pools. The task force will evaluate, at a minimum, the following technical issues and determine priority for further examination and potential agency action:
    - External event issues (e.g. seismic, flooding, fires, severe weather)
    - Station blackout
    - Severe accident measures (e.g., combustible gas control, emergency operating procedures, severe accident management guidelines)
    - 10 CFR 50.54 (hh)(2) which states, "Each licensee shall develop and implement guidance and strategies intended to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities under the circumstances associated with loss of large areas of the plant due to explosions or fire, to include strategies in the following areas: (i) Fire fighting; (ii) Operations to mitigate fuel damage; and (iii) Actions to minimize radiological release." Also known as B.5.b.
    - Emergency preparedness (e.g., emergency communications, radiological protection, emergency planning zones, dose projections and modeling, protective actions)
  - Develop recommendations, as appropriate, for potential changes to NRC's regulatory requirements, programs, and processes, and recommend whether generic communications, orders, or other regulatory actions are needed.

ENCLOSURE

- b. Recommendations for the content, structure, and estimated resource impact for the longer-term review.

#### Coordination and Communications

The near-term task force will:

- Solicit stakeholder input as appropriate, but remain independent of industry efforts.
- Coordinate and cooperate where applicable with other domestic and international efforts reviewing the events in Japan for additional insights.
- Provide recommendations to the Commission for any immediate policy issues identified prior to completion of the near-term review.
- Provide recommendations to program offices for any immediate actions not involving policy issues, prior to completion of the near-term review.
- Identify resource implications of near-term actions.
- Consider information gained from Temporary Instruction 2515/183, "Followup to the Fukushima Daiichi Nuclear Station Fuel Damage Events."
- Develop a communications plan.
- Update and brief internal stakeholders, as appropriate.

#### Expected Product and Schedule

The task force will provide its observations, conclusions, and recommendations in the form of a written report to the Deputy Executive Director for Reactor and Preparedness Programs at the completion of the 90-day near-term review.

During the development of its report, the task force will brief the Commission on the status of the review at approximately the 30- and 60-day points.

The report will be transmitted to the Commission via a SECY paper, and the task force will brief the Commission on the results of the near-term effort at approximately the 90-day point. The report will be released to the public via normal Commission processes.

The task force will recommend a framework for a longer-term review as a part of the near-term report. The longer-term review will begin as soon as the NRC has sufficient technical information from the events in Japan (with a goal of beginning by the end of the near-term review).

### Staffing

The task force will consist of the following members:

|                          |                   |      |
|--------------------------|-------------------|------|
| Leader                   | Charles Miller    | FSME |
| Senior Managers          | Daniel Dorman     | NMSS |
|                          | Jack Grobe        | NRR  |
|                          | Gary Holahan      | NRO  |
| Senior Staff             | Amy Cabbage       | NRO  |
|                          | Nathan Sanfilippo | OEDO |
| Administrative Assistant | Cynthia Davidson  | OGC  |

Additional task force members will be added as needed. For the near-term review, other staff members may be consulted on a part-time basis.

### EDO Interface

The task force will keep agency leadership informed on the status of the effort and provide early identification of significant findings. The task force will report to Martin J. Virgilio, Deputy Executive Director for Reactor and Preparedness Programs.

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**From:** Leeds, Eric  
**Sent:** Friday, April 01, 2011 4:55 PM  
**To:** Dean, Bill; Lew, David; Roberts, Darrell; McCree, Victor; Wert, Leonard; Satorius, Mark; Pederson, Cynthia; West, Steven; Howell, Art; Kennedy, Kriss  
**Cc:** Johnson, Michael; Flanders, Scott; Wiggins, Jim; Evans, Michele; Virgilio, Martin; Weber, Michael; Miller, Charles; Holahan, Gary; Brenner, Eliot; Hayden, Elizabeth; Schmidt, Rebecca; Powell, Amy; Meighan, Sean; Ruland, William; Boger, Bruce; Cheok, Michael; Moore, Scott  
**Subject:** Eric Leeds NGA Presentation  
**Attachments:** Presentation%20to%20NGA%20(Energy%20Panel)%20April%202011.ppt.ppt

Attached is our first draft of a generic slide presentation for the Fukushima event. Its geared for a non-nuclear, public audience and is meant to be modified based on the time allowed (generally 30 minutes or less) and level of detail the presenter chooses to provide.

Your comments and suggestions are welcome and requested. Sean Meighan is our POC.

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