98 docs
225 pages

Group E

(Records Released In Their Entirety)

Rosales-Cooper, Cindy

From: Rosales-Cooper, Cindy
Sent: Monday, March 28, 2011 11:56 AM
To: Evans, Michele
Cc: Salus, Amy; Flanders, Scott; Johnson, Michael; Williams, Donna
Subject: RE: Background 3rd team to Japan .docx
Attachments: Hossein Hamzehee.docx; Andrzej Drozd.docx; Edward Fuller.docx; Background 3rd team to Japan .docx

Michele,

NRO's nominees for teams 3 and 4 to Japan. Summaries of their expertise are attached.

Team 3 (Departing ~April 2)

Hossein Hamzehee

Team 3 (Departing ~ April 16)

Andrzej Drozd

Available for departure on or after April 22

Edward Fuller

Please have the organizers contact me if Hossein is selected. He is currently out of the office but reachable.

Cindy E. Rosales-Cooper
Technical Assistant for International Activities
Office of New Reactors
(301) 415-1168

From: Holahan, Gary
Sent: Thursday, March 24, 2011 4:23 PM
To: Rosales-Cooper, Cindy
Subject: FW: Background 3rd team to Japan .docx

Cindy,

Please read the attachment to the e-mail below.

NRO should propose severe accident experts who could support the 3rd group to Japan (for 2 weeks). List due Monday.

Gary

From: Salus, Amy
Sent: Thursday, March 24, 2011 11:14 AM
To: Ruland, William; Holahan, Gary; Miller, Charles; Haney, Catherine; Sheron, Brian; Ordaz, Vonna; Dean, Bill; McCree,

E1)

Victor; Satorius, Mark; Howell, Art; Collins, Elmo
Subject: Background 3rd team to Japan .docx

Hossein G. Hamzehee

Summary of Qualifications:

I have over twenty eight years of experience in risk and reliability assessment, Maintenance Rule, engineering evaluation, inspection, and regulation of commercial nuclear power plants. I joined the NRC agency in early 1998. I am currently a branch chief in NRO, responsible for the MHI US-APWR design certification application. I was also responsible for the development of guidance document for the implementation of 50.54(hh)(2), "loss of large areas of the plant due to fires and explosions from beyond design-basis events." I have been involved in the development of many probabilistic risk assessments (PRAs) for the operating nuclear power plants, which includes severe accident management and accident recovery techniques for internal events, seismic events, and internal fire. I also worked for two nuclear utilities, including TU Electric and Northeast Utilities. I completed one-year Senior Reactor Operator certification training for Comanche Peak Units 1 and 2. I have made significant contributions to the development of PRA studies, methods, and their applications to risk-informed regulations. I am the principal author/co-author of numerous NUREG reports and Commission papers in the area of PRA/Severe Accidents. I interact very well with internal and external organizations. I have been very successful in utilizing my industry and NRC experience to effectively support the safe operation of nuclear power plants. I have a Bachelor of Science degree and a Master of Science degree in Mechanical Engineering. A summary of industry experience is summarized below:

Texas Utilities – 7/87 to 4/98:

- Supervisor, PRA Section: Participated in Senior Reactor Operator training for one year. Directed risk-based IST for Comanche Peak units 1 and 2 and obtained the NRC approval. Directed Individual Plant Examination for Vulnerabilities to Severe Accidents (IPE) and developed necessary PRA guidance and implementation procedures for technical staff. Participated in independent reviews of a number of IPE and PRA studies in USA and in European countries. Served as the chairman of the Maintenance Rule Expert Panel. Provided series of training on risk-informed activities to operations, Work Control, Licensing, and Engineering staff.

Northeast Utilities – 7/85 to 7/87:

- Reliability Engineer: As a test engineer, performed integrated leakage rate testing of Connecticut Yankee containment. Performed reliability and availability improvement evaluations for three operating nuclear power plants.

PLG, Inc – 6/81 to 7/85:

- Engineering Consultant: As a PRA practitioner, supported the development of numerous full-scope PRA studies. Performed seismic PRA, fire PRA, and risk quantification for the following PRA studies:
  - TMI-1 PRA
  - Seabrook PRA
  - Midland PRA
  - Oconee PRA
  - Indian point PRA
  - Zion PRA

Edward Fuller

My experience and expertise in severe accident analysis and severe accident management is as follows. When I worked at EPRI, I was assigned on loan to the Industry Degraded Rulemaking Program (IDCOR), where I was the Technical Manager for severe accident phenomena and analysis. Among other duties, I managed the development of the MAAP code and its use to carry out severe accident analyses for the IDCOR reference plants. One of these was Peach Bottom (a Mark I BWR).

After returning to EPRI I was the project manager overseeing the continued development of MAAP, and coordinated activities related to its becoming acceptable to the NRC for use in Individual Plant Examinations (IPEs). I also started the MAAP Users Group. I was also on the Engineering Design Review Committee that peer-reviewed the Severe Accident Management technical Basis Report that served as the basis for the industry to develop its severe accident management guidance and accident management procedures.

After leaving EPRI in 1994, I carried out a number of severe accident analyses using MAAP for utility clients while working at Polestar. I returned to EPRI in 2003, and worked for three years in the Steam generator Management Program, where I was responsible for resolving engineering and regulatory issues related to steam generator tube integrity. I came to the NRC in 2006, and am responsible for the review of Level 2 PRA and severe accident evaluations of the design certification vendors and COL applicants. In this role, I am focusing on the roles of severe accident and mitigation features in the new reactor designs, and on how they will be integrated into enhanced severe accident management guidelines.

Andrzej Drozd

Expertise:
Containment analysis: DBA and SA for BWRs: MKI, II, II, ABWR, ESBWR - numerous calculations (hand + MELCOR code) and SERs

Contribution to reviewing SAMDAs for BWR's owners group

Rosales-Cooper, Cindy

From: Rosales-Cooper, Cindy
Sent: Monday, March 28, 2011 3:53 PM
To: Johnson, Michael
Subject: CNRA Conference Call today

Hi Mike,
The phone call with CNRA heads lasted about 40 minutes and concluded with the following:

CNRA will develop a Task Group specifically to focus on lessons learned from the Japanese Accident. A request for nominations will go out to all CNRA members this week with a response date of April 15. The Task Group will then meet the first part of May and hopefully report out to the entire CNRA in June. The scope ofthe task group, as discussed today, will be primarily operating reactors. Eric Leeds suggested that the task group focus on external events, station blackouts, combustigle gas control, and severe accident management and mitigation. This is similar to what the Commission directed the Fukushima Task Group to review. Mike Weightman and Luis Echavarri felt strongly that for now MDEP would focus on lessons learned for new reactors, however, my understanding is that the task group members will ultimately issue the scope.

Eric took the lead for identifying an SESer from NRR to participate in the group. We discussed the pluses and minuses of the US leading the task group and decided that it shouldn't be either the U.S. or France. Spain looked like a good candidate for leading.

There are plans to have another CNRA leadership meeting next week on the margins of the CNS in Vienna. We have asked that it be done at a time that you and Eric and call in, otherwise, both Jack Grobe and John Tappert are in Vienna for the CNS.

For now there is no NRO actions.

NRR will provide CNRA with a copy of the SRM for development of the NRC task group.

Cindy

E2

From: Dudes, Laura
To: NRO_SES Distribution
Subject: FW: UniStar Monthly Photo-gram - March 2011
Date: Monday, March 28, 2011 9:33:48 AM

FYI!

From: UniStar [mailto:mary.klett@unistarnuclear.com]
Sent: Monday, March 28, 2011 8:49 AM
To: Dudes, Laura
Subject: UniStar Monthly Photo-gram - March 2011

UniStar | Calvert Cliffs | AREVA EPR™ | EDF Project in France | EPR™ in Finland

This "photogram" is intended to provide a quick monthly snapshot of construction progress in Europe and project status in the U.S.

UniStar sends our heartfelt condolences to the victims of the Japanese earthquake and resulting tsunami. Our sincere thanks to those nuclear facility workers throughout the country and of course, especially at Fukushima Daiichi, who proved their dedication to their chosen profession.

In a recent report from the Enivornmental Protection Agency, tougher emissions restrictions since 1990 have helped avoid 13 million lost work days.

The benefits of the Clean Air Act are estimated to exceed costs by a factor of more than 30 to one.

"To meet our energy needs, the Administration believes we must rely on a diverse set of energy sources including renewables like wind and solar, natural gas, clean coal and nuclear power....Nuclear energy also has an important role to play in our energy portfolio." Secretary of Energy, Steven Chu, testimony to Subcommittee on Energy and Water Development of the House

Updates for Flamanville, France; Olkiluoto, Finland; Taishan, China

Flamanville, France - One year ago, March 2010

Flamanville, France - February 2011 - Administration building on left, and reactor dome laydown area on right.

Flamanville, France - January 2011
Turbines arrive at the site

Olkiluoto, Finland - February 2011
Site close-up

Taishan 1 - December 2010 - Reactor building liner. Equipment Hatch Sleeve Installation

Taishan 1 - December 2010 - Reactor Building slab at 1.5 meters. Concrete pour.

Taishan 2 - December 2010
Nuclear Island

E3

Committee on Appropriations, March 15, 2011

"The American people should have full confidence that the United States has rigorous safety regulations in place to ensure that our nuclear power is generated safely and responsibly."

Secretary of Energy, Steven Chu, testimony to Subcommittee on Energy and Water Development of the House Committee on Appropriations, March 15, 2011

Rosales-Cooper, Cindy

From: Flanders, Scott
Sent: Monday, March 28, 2011 12:03 PM
To: Rosales-Cooper, Cindy
Subject: RE: Background 3rd team to Japan .docx

In my office T7F2

From: Rosales-Cooper, Cindy
Sent: Monday, March 28, 2011 12:01 PM
To: Flanders, Scott
Subject: RE: Background 3rd team to Japan .docx

I can explain, where are you sitting? Basically, I got names from the original list that Gary produced. We can add names but it will have to be soon cause the deadline for response was noon today.

Cindy

From: Flanders, Scott
Sent: Monday, March 28, 2011 11:59 AM
To: Rosales-Cooper, Cindy
Subject: RE: Background 3rd team to Japan .docx

Cindy, how do we come up with the list of people to propose? I have at least two staff members that are qualified on BWR, one was a Shift Supervisor and River Bend and the other was a Nuc Engineer at a BWR Mark 1 plant.

Scott

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Edward Fuller

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E4

Cindy E. Rosales-Cooper
Technical Assistant for International Activities
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To: Rosales-Cooper, Cindy
Subject: FW: Background 3rd team to Japan .docx

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Subject: Background 3rd team to Japan .docx

From: Dudes, Laura
To: NRG_SES Distribution
Subject: FW: WENRA Meeting 22 - 23 of March, 2011 in Helsinki - Item 2a
Date: Monday, March 28, 2011 9:34:41 AM
Attachments: WENRA task force.doc
WENRA JAPAN STATEMENT.doc

FYI

From: Tapani.Virolainen@stuk.fi [mailto:Tapani.Virolainen@stuk.fi]
Sent: Thursday, March 24, 2011 7:05 AM
To: Dudes, Laura
Subject: FW: WENRA Meeting 22 - 23 of March, 2011 in Helsinki - Item 2a

Alejando have these finalized text made by WENRA.

From: Alm-Lytz, Kirsi
Sent: Wednesday, March 23, 2011 12:45 PM
To: Alm-Lytz, Kirsi; 'Willy.DeRoovere@fanc.fgov.be'; 'yvan.pouleur@fanc.fgov.be'; 'benoit.deboeck@belv.be'; 'pieter.degelder@belv.be'; 'S.Tzotchev@bnra.bg'; 'E.Tsvetanova@bnra.bg'; 'dana.drabova@sujb.cz'; 'petr.krs@sujb.cz'; 'romana.bozenhardova@sujb.cz'; Laaksonen, Jukka; 'andre-claude.lacoste@asn.fr'; 'guillaume.gillet@asn.fr'; 'daniel.queniart@irsn.fr'; 'Gerald.hennenhoefer@bmu.bund.de'; 'martina.palm@bmu.bund.de'; 'lux@haea.gov.hu'; 'giovanni.bava@isprambiente.it'; 'lamberto.matteocci@isprambiente.it'; 'roberto.ranieri@isprambiente.it'; 'm.demcenko@vatesi.lt'; 'd.brandisauskas@vatesi.lt'; 'piet.muskens@minvrom.nl'; 'vajda.borbala@cncan.ro'; 'camelia.liutiev@cncan.ro'; 'lucian.biro@cncan.ro'; 'madalina.tronea@cncan.ro'; 'marta.ziakova@ujd.gov.sk'; 'peter.uhrik@ujd.gov.sk'; 'andrej.stritar@gov.si'; 'agurgui@csn.es'; 'imj@csn.es'; 'ffm@csn.es'; 'ann-louise.eksborg@ssm.se'; 'Hallman, Anders'; 'georg.schwarz@ensi.ch'; 'markus.straub@ensi.ch'; 'mike.weightman@hse.gsi.gov.uk'; 'Gary.Booth@hse.gsi.gov.uk'; 'Stefan.Theis@ensi.ch'; 'olivier.gupta@asn.fr'; Reiman, Lasse; 'andreas.molin@bmlfuw.gv.at'; 'amcgarry@rpii.ie'; 'Patrick.Majerus@ms.etat.lu'; 'ole.harbitz@nrpa.no'; 'jurkowski@paa.gov.pl'; 'mykolaichuk@hq.snrc.gov.ua'; 'a.martirosyan@anra.am'; 'maria@gan.ru'; 'a.khamaza@gan.ru'; 'v.kolobov@gan.ru'; 'spevakova@rambler.ru'; 'a.soroka@gan.ru'; 'hans.wanner@ensi.ch'; 'erik.jende@ssm.se'; 'roberto.ranieri@isprambiente.it'; 'pet.kr@seznam.cz'
Cc: Virtanen, Helena
Subject: RE: WENRA Meeting 22 - 23 of March, 2011 in Helsinki - Item 2a

Please find attached the finalised texts for Item 2a.

Best Regards,

Kirsi

i <<WENRA task force.doc>> <<WENRA JAPAN STATEMENT.doc>>

From: Alm-Lytz, Kirsi
Sent: Tuesday, March 22, 2011 3:39 PM
To: Alm-Lytz, Kirsi; 'Willy.DeRoovere@fanc.fgov.be'; 'yvan.pouleur@fanc.fgov.be'; 'benoit.deboeck@belv.be'; 'pieter.degelder@belv.be'; 'S.Tzotchev@bnra.bg'; 'E.Tsvetanova@bnra.bg'; 'dana.drabova@sujb.cz'; 'petr.krs@sujb.cz'; 'romana.bozenhardova@sujb.cz'; Laaksonen, Jukka; 'andre-claude.lacoste@asn.fr'; 'guillaume.gillet@asn.fr'; 'daniel.queniart@irsn.fr'; 'Gerald.hennenhoefer@bmu.bund.de'; 'martina.palm@bmu.bund.de'; 'lux@haea.gov.hu'; 'giovanni.bava@isprambiente.it'; 'lamberto.matteocci@isprambiente.it'; 'roberto.ranieri@isprambiente.it'; 'm.demcenko@vatesi.lt'; 'd.brandisauskas@vatesi.lt'; 'piet.muskens@minvrom.nl'; 'vajda.borbala@cncan.ro'; 'camelia.liutiev@cncan.ro'; 'lucian.biro@cncan.ro'; 'madalina.tronea@cncan.ro'; 'marta.ziakova@ujd.gov.sk'; 'peter.uhrik@ujd.gov.sk'; 'andrej.stritar@gov.si'; 'agurgui@csn.es'; 'imj@csn.es'; 'ffm@csn.es'; 'ann-louise.eksborg@ssm.se'; 'Hallman, Anders'; 'georg.schwarz@ensi.ch'; 'markus.straub@ensi.ch'; 'mike.weightman@hse.gsi.gov.uk'; 'Gary.Booth@hse.gsi.gov.uk'; 'Stefan.Theis@ensi.ch'; 'olivier.gupta@asn.fr'; Reiman, Lasse; 'andreas.molin@bmlfuw.gv.at'; 'amcgarry@rpii.ie'; 'Patrick.Majerus@ms.etat.lu'; 'ole.harbitz@nrpa.no'; 'jurkowski@paa.gov.pl'; 'mykolaichuk@hq.snrc.gov.ua'; 'a.martirosyan@anra.am'; 'maria@gan.ru'; 'a.khamaza@gan.ru'; 'v.kolobov@gan.ru'; 'spevakova@rambler.ru'; 'a.soroka@gan.ru'; 'hans.wanner@ensi.ch'; 'erik.jende@ssm.se'
Cc: Virtanen, Helena
Subject: RE: WENRA Meeting 22 - 23 of March, 2011 in Helsinki - draft statement on Item 2a

Here is the draft statement after the first meeting day in electronic format.

Best Regards,

Kirsi

<< File: WENRA JAPAN STATEMENT (3).doc >>

From: Alm-Lytz, Kirsi
Sent: Tuesday, March 22, 2011 1:16 PM
To: Alm-Lytz, Kirsi; 'Willy.DeRoovere@fanc.fgov.be'; 'yvan.pouleur@fanc.fgov.be'; 'benoit.deboeck@belv.be'; 'pieter.degelder@belv.be'; 'S.Tzotchev@bnra.bg'; 'E.Tsvetanova@bnra.bg'; 'dana.drabova@sujb.cz'; 'petr.krs@sujb.cz'; 'romana.bozenhardova@sujb.cz'; Laaksonen, Jukka; 'andre-claude.lacoste@asn.fr'; 'guillaume.gillet@asn.fr'; 'daniel.queniart@irsn.fr'; 'Gerald.hennenhoefer@bmu.bund.de'; 'martina.palm@bmu.bund.de'; 'lux@haea.gov.hu'; 'giovanni.bava@isprambiente.it'; 'lamberto.matteocci@isprambiente.it'; 'roberto.ranieri@isprambiente.it'; 'm.demcenko@vatesi.lt'; 'd.brandisauskas@vatesi.lt'; 'piet.muskens@minvrom.nl'; 'vajda.borbala@cncan.ro'; 'camelia.liutiev@cncan.ro'; 'lucian.biro@cncan.ro'; 'madalina.tronea@cncan.ro'; 'marta.ziakova@ujd.gov.sk'; 'peter.uhrik@ujd.gov.sk'; 'andrej.stritar@gov.si'; 'agurgui@csn.es'; 'imj@csn.es'; 'ffm@csn.es'; 'ann-louise.eksborg@ssm.se'; 'Hallman, Anders'; 'georg.schwarz@ensi.ch'; 'markus.straub@ensi.ch'; 'mike.weightman@hse.gsi.gov.uk'; 'Gary.Booth@hse.gsi.gov.uk'; 'Stefan.Theis@ensi.ch'; 'olivier.gupta@asn.fr'; Reiman, Lasse; 'andreas.molin@bmlfuw.gv.at'; 'amcgarry@rpii.ie'; 'Patrick.Majerus@ms.etat.lu'; 'ole.harbitz@nrpa.no'; 'jurkowski@paa.gov.pl'; 'mykolaichuk@hq.snrc.gov.ua'; 'a.martirosyan@anra.am'; 'maria@gan.ru'; 'a.khamaza@gan.ru'; 'v.kolobov@gan.ru'; 'spevakova@rambler.ru'; 'a.soroka@gan.ru'; 'hans.wanner@ensi.ch'; 'erik.jende@ssm.se'
Cc: Virtanen, Helena
Subject: RE: WENRA Meeting 22 - 23 of March, 2011 in Helsinki - presentation for Item 2a

Dear colleagues,

Please find attached the presentation related to Item 2a.

Best Regards,

Kirsi

<< File: Stress Tests.ppt >>

From: Alm-Lytz, Kirsi
Sent: Saturday, March 19, 2011 5:45 PM
To: Alm-Lytz, Kirsi; 'Willy.DeRoovere@fanc.fgov.be'; 'yvan.pouleur@fanc.fgov.be'; 'benoit.deboeck@belv.be'; 'pieter.degelder@belv.be'; 'S.Tzotchev@bnra.bg'; 'E.Tsvetanova@bnra.bg'; 'dana.drabova@sujb.cz'; 'petr.krs@sujb.cz'; 'romana.bozenhardova@sujb.cz'; Laaksonen, Jukka; 'andre-claude.lacoste@asn.fr'; 'guillaume.gillet@asn.fr'; 'daniel.queniart@irsn.fr'; 'Gerald.hennenhoefer@bmu.bund.de'; 'martina.palm@bmu.bund.de'; 'lux@haea.gov.hu'; 'giovanni.bava@isprambiente.it'; 'lamberto.matteocci@isprambiente.it'; 'roberto.ranieri@isprambiente.it'; 'm.demcenko@vatesi.lt';

ES

'd.brandisauskas@vatesi.lt'; 'piet.muskens@minvrom.nl'; 'vajda.borbala@cncan.ro'; 'camelia.liutiev@cncan.ro'; 'lucian.biro@cncan.ro'; 'madalina.tronea@cncan.ro'; 'marta.ziakova@ujd.gov.sk'; 'peter.uhrik@ujd.gov.sk'; 'andrej.stritar@gov.si'; 'agurgui@csn.es'; 'imj@csn.es'; 'ffm@csn.es'; 'ann-louise.eksborg@ssm.se'; 'Hallman, Anders'; 'georg.schwarz@ensi.ch'; 'markus.straub@ensi.ch'; 'mike.weightman@hse.gsi.gov.uk'; 'Gary.Booth@hse.gsi.gov.uk'; 'Stefan.Theis@ensi.ch'; 'olivier.gupta@asn.fr'; Reiman, Lasse; 'andreas.molin@bmlfuw.gv.at'; 'amcgarry@rpii.ie'; 'Patrick.Majerus@ms.etat.lu'; 'ole.harbitz@nrpa.no'; 'jurkowski@paa.gov.pl'; 'mykolaichuk@hq.snrc.gov.ua'; 'a.martirosyan@anra.am'; 'maria@gan.ru'; 'a.khamaza@gan.ru'; 'v.kolobov@gan.ru'; 'spevakova@rambler.ru'; 'a.soroka@gan.ru'; 'hans.wanner@ensi.ch'; 'erik.jende@ssm.se'
Cc: Virtanen, Helena
Subject: RE: WENRA Meeting 22 - 23 of March, 2011 in Helsinki - revised draft agenda

Dear colleagues,

Here is updated draft agenda for the meeting. Item 2a "Discussion of the Fukushima NPP accident and possible WENRA measures" has been added for the first day. The numbering of the other items remains the same.

Best regards and see you next week,

Kirsi

<< File: Draft_Agenda_WENRA_Helsinki_2011.doc >>

From: Alm-Lytz, Kirsi
Sent: Friday, March 11, 2011 12:08 PM
To: Alm-Lytz, Kirsi; 'Willy.DeRoovere@fanc.fgov.be'; 'yvan.pouleur@fanc.fgov.be'; 'benoit.deboeck@belv.be'; 'pieter.degelder@belv.be'; 'S.Tzotchev@bnra.bg'; 'E.Tsvetanova@bnra.bg'; 'dana.drabova@sujb.cz'; 'petr.krs@sujb.cz'; 'romana.bozenhardova@sujb.cz'; Laaksonen, Jukka; 'andre-claude.lacoste@asn.fr'; 'guillaume.gillet@asn.fr'; 'daniel.queniart@irsn.fr'; 'Gerald.hennenhoefer@bmu.bund.de'; 'martina.palm@bmu.bund.de'; 'lux@haea.gov.hu'; 'giovanni.bava@isprambiente.it'; 'lamberto.matteocci@isprambiente.it'; 'roberto.ranieri@isprambiente.it'; 'm.demcenko@vatesi.lt'; 'd.brandisauskas@vatesi.lt'; 'piet.muskens@minvrom.nl'; 'vajda.borbala@cncan.ro'; 'camelia.liutiev@cncan.ro'; 'lucian.biro@cncan.ro'; 'madalina.tronea@cncan.ro'; 'marta.ziakova@ujd.gov.sk'; 'peter.uhrik@ujd.gov.sk'; 'andrej.stritar@gov.si'; 'agurgui@csn.es'; 'imj@csn.es'; 'ffm@csn.es'; 'ann-louise.eksborg@ssm.se'; 'Hallman, Anders'; 'georg.schwarz@ensi.ch'; 'markus.straub@ensi.ch'; 'mike.weightman@hse.gsi.gov.uk'; 'Gary.Booth@hse.gsi.gov.uk'; 'Stefan.Theis@ensi.ch'; 'olivier.gupta@asn.fr'; Reiman, Lasse; 'andreas.molin@bmlfuw.gv.at'; 'amcgarry@rpii.ie'; 'Patrick.Majerus@ms.etat.lu'; 'ole.harbitz@nrpa.no'; 'jurkowski@paa.gov.pl'; 'mykolaichuk@hq.snrc.gov.ua'; 'a.martirosyan@anra.am'; 'maria@gan.ru'; 'a.khamaza@gan.ru'; 'v.kolobov@gan.ru'; 'spevakova@rambler.ru'; 'a.soroka@gan.ru'; 'hans.wanner@ensi.ch'
Cc: Virtanen, Helena
Subject: RE: WENRA Meeting 22 - 23 of March, 2011 in Helsinki - documents for items 3 and 4

Dear colleagues,

For Item 3, here are

- the RHWG report on long term operation of NPPs
- a document on RHWG further activities on existing reactors
- a proposal for quantitative reporting on harmonisation
- draft RHWG presentation to WENRA.

For Item 4, in addition to the report I sent on Tuesday, here are

- presentation on the WGWD activities
- the first issue of the storage NAH progress report.

Best Regards,

Kirsi

<< File: Item3_Report_LTO.pdf >> << File: Item3_RHWG_FurtherWorkExistingNPPs.pdf >> << File: Item3_QuantitativeReporting2011.pdf >> << File: Item_3_RHWG_Activities_March2011.ppt >> << File: Item4_wgwd_presentation.pdf >> << File: Item4_Report_harmonisation_storageSRLs_2010_12_31.pdf >>

From: Alm-Lytz, Kirsi
Sent: Tuesday, March 08, 2011 2:01 PM
To: Alm-Lytz, Kirsi; 'Willy.DeRoovere@fanc.fgov.be'; 'yvan.pouleur@fanc.fgov.be'; 'benoit.deboeck@belv.be'; 'pieter.degelder@belv.be'; 'S.Tzotchev@bnra.bg'; 'E.Tsvetanova@bnra.bg'; 'dana.drabova@sujb.cz'; 'petr.krs@sujb.cz'; 'romana.bozenhardova@sujb.cz'; Laaksonen, Jukka; 'andre-claude.lacoste@asn.fr'; 'guillaume.gillet@asn.fr'; 'daniel.queniart@irsn.fr'; 'Gerald.hennenhoefer@bmu.bund.de'; 'martina.palm@bmu.bund.de'; 'lux@haea.gov.hu'; 'giovanni.bava@isprambiente.it'; 'lamberto.matteocci@isprambiente.it'; 'roberto.ranieri@isprambiente.it';

'm.demcenko@vatesi.lt'; 'd.brandisauskas@vatesi.lt';
'piet.muskens@minvrom.nl'; 'vajda.borbala@cncan.ro';
'camelia.liutiev@cncan.ro'; 'lucian.biro@cncan.ro';
'madalina.tronea@cncan.ro'; 'marta.ziakova@ujd.gov.sk';
'peter.uhrik@ujd.gov.sk'; 'andrej.stritar@gov.si'; 'agurgui@csn.es';
'imj@csn.es'; 'ffm@csn.es'; 'ann-louise.eksborg@ssm.se'; 'Hallman, Anders';
'georg.schwarz@ensi.ch'; 'markus.straub@ensi.ch';
'mike.weightman@hse.gsi.gov.uk'; 'Gary.Booth@hse.gsi.gov.uk';
'Stefan.Theis@ensi.ch'; 'olivier.gupta@asn.fr'; Reiman, Lasse;
'andreas.molin@bmlfuw.gv.at'; 'amcgarry@rpii.ie';
'Patrick.Majerus@ms.etat.lu'; 'ole.harbitz@nrpa.no'; 'jurkowski@paa.gov.pl';
'mykolaichuk@hq.snrc.gov.ua'; 'a.martirosyan@anra.am'; 'maria@gan.ru';
'a.khamaza@gan.ru'; 'v.kolobov@gan.ru'; 'spevakova@rambler.ru';
'a.soroka@gan.ru'; 'hans.wanner@ensi.ch'
Cc: Virtanen, Helena
Subject: WENRA Meeting 22 - 23 of March, 2011 in Helsinki - revised agenda and first documents

Dear colleagues,

I'm sending you a revised draft agenda for the next WENRA meeting with only minor modifications.

For Item 2, I attach here also the conclusions from last WENRA meeting in Bratislava.

For Item 4, here is the version 1.1 of the storage SRLs with the modified part 3, i.e. without the possibility to identify benchmarking results of individual countries.

I will send all the other documents related to different items as soon as I have received them.

And for your information, RHWG report on the progress towards harmonisation of safety for existing reactors in WENRA countries and WGWD report on waste and spent fuel storage safety reference levels (V. 2.1) have now been published on the WENRA website as agreed in the last WENRA meeting.

Best Regards,

Kirsi

<< File: Draft_Agenda_WENRA_Helsinki_2011.doc >> << File: Conclusions of WENRA meeting held in Bratislava in November 2010.doc >> << File: V1_1_storage-report_public_2011-02-08.pdf >>

From: Alm-Lytz, Kirsi
Sent: Tuesday, February 01, 2011 9:34 AM
To: Alm-Lytz, Kirsi; 'Willy.DeRoovere@fanc.fgov.be';
'yvan.pouleur@fanc.fgov.be'; 'benoit.deboeck@belv.be';
'pieter.degelder@belv.be'; 'S.Tzotchev@bnra.bg'; 'E.Tsvetanova@bnra.bg';
'dana.drabova@sujb.cz'; 'petr.krs@sujb.cz';
'romana.bozenhardova@sujb.cz'; Laaksonen, Jukka; 'andre-claude.lacoste@asn.fr'; 'guillaume.gillet@asn.fr'; 'daniel.queniart@irsn.fr';
'Gerald.hennenhoefer@bmu.bund.de'; 'martina.palm@bmu.bund.de';
'lux@haea.gov.hu'; 'giovanni.bava@isprambiente.it';
'lamberto.matteocci@isprambiente.it'; 'roberto.ranieri@isprambiente.it';
'm.demcenko@vatesi.lt'; 'd.brandisauskas@vatesi.lt';
'piet.muskens@minvrom.nl'; 'vajda.borbala@cncan.ro';
'camelia.liutiev@cncan.ro'; 'lucian.biro@cncan.ro';
'madalina.tronea@cncan.ro'; 'marta.ziakova@ujd.gov.sk';
'peter.uhrik@ujd.gov.sk'; 'andrej.stritar@gov.si'; 'agurgui@csn.es';
'imj@csn.es'; 'ffm@csn.es'; 'ann-louise.eksborg@ssm.se'; 'Hallman, Anders';
'georg.schwarz@ensi.ch'; 'markus.straub@ensi.ch';
'mike.weightman@hse.gsi.gov.uk'; 'Gary.Booth@hse.gsi.gov.uk';
'Stefan.Theis@ensi.ch'; 'olivier.gupta@asn.fr'; Reiman, Lasse;
'andreas.molin@bmlfuw.gv.at'; 'amcgarry@rpii.ie';
'Patrick.Majerus@ms.etat.lu'; 'ole.harbitz@nrpa.no'; 'jurkowski@paa.gov.pl';
'mykolaichuk@hq.snrc.gov.ua'; 'a.martirosyan@anra.am'; 'maria@gan.ru';
'a.khamaza@gan.ru'; 'v.kolobov@gan.ru'; 'spevakova@rambler.ru';
'a.soroka@gan.ru'; 'hans.wanner@ensi.ch'
Cc: Virtanen, Helena
Subject: WENRA Meeting 22 - 23 of March, 2011 in Helsinki - draft agenda

Dear colleagues,

please find attached a draft agenda for the upcoming WENRA Plenary Meeting to be held in Helsinki on 22-23 March. I would like to ask you to send me your possible comments and suggestions **by Friday, 4 March**.

Best Regards,

Kirsi Alm-Lytz

<< File: Draft_Agenda_WENRA_Helsinki_2011.doc >>

From: Virtanen, Helena
Sent: Monday, January 31, 2011 11:43 AM
To: Alm-Lytz, Kirsi; 'Willy.DeRoovere@fanc.fgov.be';
'yvan.pouleur@fanc.fgov.be'; 'benoit.deboeck@belv.be';
'pieter.degelder@belv.be'; 'S.Tzotchev@bnra.bg'; 'E.Tsvetanova@bnra.bg';
'dana.drabova@sujb.cz'; 'petr.krs@sujb.cz';
'romana.bozenhardova@sujb.cz'; Laaksonen, Jukka; 'andre-

claude.lacoste@asn.fr'; 'guillaume.gillet@asn.fr'; 'daniel.queniart@irsn.fr';
'Gerald.hennenhoefer@bmu.bund.de'; 'martina.palm@bmu.bund.de';
'lux@haea.gov.hu'; 'giovanni.bava@isprambiente.it';
'lamberto.matteocci@isprambiente.it'; 'roberto.ranieri@isprambiente.it';
'm.demcenko@vatesi.lt'; 'd.brandisauskas@vatesi.lt';
'piet.muskens@minvrom.nl'; 'vajda.borbala@cncan.ro';
'camelia.liutiev@cncan.ro'; 'lucian.biro@cncan.ro';
'madalina.tronea@cncan.ro'; 'marta.ziakova@ujd.gov.sk';
'peter.uhrik@ujd.gov.sk'; 'andrej.stritar@gov.si'; 'agurgui@csn.es';
'imj@csn.es'; 'ffm@csn.es'; 'ann-louise.eksborg@ssm.se';
'georg.schwarz@ensi.ch'; 'markus.straub@ensi.ch';
'mike.weightman@hse.gsi.gov.uk'; 'Gary.Booth@hse.gsi.gov.uk';
'Stefan.Theis@ensi.ch'; 'olivier.gupta@asn.fr'; Reiman, Lasse;
'andreas.molin@bmlfuw.gv.at'; 'amcgarry@rpii.ie';
'Patrick.Majerus@ms.etat.lu'; 'ole.harbitz@nrpa.no'; 'jurkowski@paa.gov.pl';
'mykolaichuk@hq.snrc.gov.ua'; 'a.martirosyan@anra.am'; 'maria@gan.ru';
'a.khamaza@gan.ru'; 'v.kolobov@gan.ru'; 'spevakova@rambler.ru';
'a.soroka@gan.ru'; 'hans.wanner@ensi.ch'
Subject: WENRA Meeting 22 - 23 of March, 2011 in Helsinki

Dear All,

On behalf of WENRA Chair Mr Jukka Laaksonen I'd like to invite you to the next WENRA Meeting which will take place in Helsinki on 22 - 23 of March 2011 at House of Estates located in city centre of Helsinki (address: Snellmaninkatu 9). (Same place than last year). For more information about the venue please refer to web pages:

http://www.valtioneuvosto.fi/tietoa-valtioneuvostosta/tilat/saatytalo/en.jsp .

As to the accommodation there is a block reservation at **Hotel Scandic Grand Marina** (located about 1 km from the meeting venue).

Room rates (breakfast, gym and sauna included):

121,70 € room/night	single
141,70 € room/night	double

Please make your reservation either by the booking form www.scandichotels.com

or E-mail: grandmarina@scandichotels.com, (telephone + 358 9 16 661)

Please make you reservation as soon possible but **no later than 22 of February 2011**

In either case please use the reference code : **STU210311**

When planning your trip, please take into account that we would like to invite you to the welcome dinner on **Monday on 21 of March 2010, at 19:30 at Hotel Scandic Grand Marina.**

Please send information about your intended participation as well as travel details (arrival, departure) to **helena.virtanen@stuk.fi**

Please find enclosed some general information about logistics.

Should you need any assistance in accommodation or logistics in general, please don't hesitate to contact **helena.virtanen@stuk.fi.**

Mrs Kirsi Alm-Lytz (**kirsi.alm-lytz@stuk.fi**) will be glad to help you with other possible issues.

Wishing you warmly welcome to Helsinki.

With kind regards,

Helena Virtanen

Secretary to DG Jukka Laaksonen

STUK - Radiation and Nuclear Safety Authority

P.O. Box 14, Laippatie 4

FI-00881 Helsinki, Finland

Telephone: + 358 9 759 88 201

GSM + 358 400 504 544

Fax: + 358 9 759 88 216

e-mail: helena.virtanen@stuk.fi

www.stuk.fi

<< File: Logistics.doc >>

WENRA – 23 March 2011

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 12th 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.

23 March 2011

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 21st 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.

From: Johnson, Michael
To: Borchardt, Bill
Subject: RE: Chairman
Date: Monday, March 28, 2011 7:26:00 AM

Yep. Thanks.

From: Borchardt, Bill
Sent: Monday, March 28, 2011 7:26 AM
To: Johnson, Michael
Subject: FW: Chairman

Comm Magwood will preside over the SMR Comm mtg

From: Virgilio, Martin
Sent: Saturday, March 26, 2011 9:38 PM
To: Borchardt, Bill; Weber, Michael
Cc: Ash, Darren; Muessle, Mary; Sheron, Brian
Subject: FYI: Chairman

Note that the delegation of Emergency Powers goes to Bill (from 2100 Saturday to 1300 on Tuesday; and, Commissioner Magwood is delegated the authority to preside over the SMR Commission meeting on Tuesday.

From: Sheron, Brian
Sent: Saturday, March 26, 2011 7:06 PM
To: Borchardt, Bill; Weber, Michael; Virgilio, Martin
Subject: Chairman

In case you weren't aware, the Chairman said he was going to Japan tonight (I believe he has a 10 pm flight that gets him into Japan at 9pm their time. He told Chuck he was coming there during a conference call between the Chairman, chuck, and the ET at 6:30 pm tonight.

Chuck said he will arrange an agenda for the Chairman. The Chairman said that we shouldn't announce his visit. He said the White House planned to make the announcement. He also said he was going to return on Tuesday because of congressional hearings.

E6

Phalen, Martin

From: Davis, Marlys E. [Marlys.Davis@xenuclear.com]
Sent: Tuesday, March 29, 2011 3:10 PM
To: Phalen, Martin
Cc: Stoedter, Karla; Zurawski, Paul
Subject: Questions concerning I-131 detection from Japan's release
Attachments: 3332_001.pdf

Marty,

Attached are Prairie Island's responses to the seven questions.

Thank you,
Marlys Davis
651-388-1121, ext. 4154

NRC Question Response Form

Request Number: N/A Status:

Requested By *(Inspector name)*: Marty Phalen Date Requested: 3/23/2011

Question / Document Request: Q / D *(circle one)* System:

Detailed Question or Request:

Remarks:

1) Iodine-131 was detected in Kewaunee's rainwater.
2) PINGP should not be surprised to find unique isotopes in different locations.

Questions:

1) Drinking water station sample results including sample location, dates, results and MDA.
2) Non-drinking water sample results including sample location, dates, results and MDA.
3) Air sample data (including charcoal filters) including sample location, dates, results and MDA.
4) Milk sample results including sample location, dates, results and MDA.
5) Comments and/or insights based on recent radiological observations.
6) Were there any changes to PINGPs sample frequencies?
7) Were there any changes to the isotopes that PINGP is looking for?

Initiated By *(individual taking the request)*: Sam DiPasquale, P.E.

Assigned To (Person responding to request): Dave Gauger Date Assigned: 3/23/2011

CAP / Work Order Issued? Yes (No *(circle one)* Number:

Response (include a list of documents provided):

Is this an equipment issue that affects plant operability? ☐ Yes ☒ No

If yes, contact the Shift Manager immediately. _____

Date/Contacted By

Completed By: Peter Wilsey Date Completed: 3/29/11

Peer / Tech Review / Validation By: Dale A Gauger Date Completed: 3/29/11

Team Leader / Supervisor Review / Approval: [signature] Date Completed: 3/29/11

Additional Info Attached? Yes / No [forward a copy to Regulatory Affairs]

Use of this form as a procedural aid does not require retention as a quality record.

NRC Question Response Form

Reviewer Verification Guidance

- Data Requests:
  - Is the information provided complete? Was any material removed from the information provided?
  - Is the information provided correct? Was the preparer of the response a subject matter expert?
- Information Requests:
  - Does the response answer the question being asked? Is the response on topic and clear?
  - Are inputs and assumptions appropriately validated?
  - If there is an embedded calculation, is the math correct?
  - Is the response well formulated? Was enough work put into the response?
  - Does the response reflect a differing professional opinion between the preparer and the inspector? Is the response professional in tone? Is the response argumentative?
  - Is there a condition adverse to quality? Has a CAP been initiated?

The answers to the following questions only include data from March, 2011.

1. Drinking water station sample results including sample locations, dates results and MDA.

Samples of City of Red Wing drinking water were taken on 3/8/11, 3/15/11, and 3/22/11. The monthly composite of these samples has not been analyzed. The LLD for I-131 is 1 pCi/L. The quarterly composite for tritium has also not been analyzed. The LLD for tritium is approximately 150 pCi/L.

Samples from offsite resident wells (Hansen and Peterson) were taken 3/16/11 for the special tritium analysis. These samples have not yet been analyzed. The LLD for tritium is 19 pCi/L.

2. Non-drinking water sample results including sample location, dates, results, and MDA.

Samples of upstream and downstream Mississippi River water were taken on 3/8/11, 3/15/11, and 3/22/11. The monthly composite of these samples has not been analyzed. The LLD for I-131 is 1 pCi/L. The quarterly composite for tritium has also not been analyzed. The LLD for tritium is approximately 150 pCi/L.

Samples from onsite monitoring wells P-10, MW-7 and MW-8 were taken 3/16/11 for the special tritium analysis. These samples have not yet been analyzed. The LLD for tritium is 19 pCi/L.

Samples of rain/snow runoff were taken as described below with the results shown below:

Location	Date	I-131 Activity (uCi/mL)
Old Admin Building Roof	3/23/11	<1.99E-8
Plant Parking Lot	3/24/11	2.82E-8
Plant Parking Lot (repeat)	3/24/11	<1.69E-8
Peterson Farm (offsite)	3/24/11	<1.06E-8
Kinneman Farm (offsite)	3/24/11	2.12E-8

3. Air sample data (including charcoal filters) including sample location, dates, results, and MDA.

Samples of particulate and charcoal filters were taken at air monitoring stations P-1, P-2, P-3, P-4, and P-6 on 3/8/11, 3/15/11, and 3/22/11. The only samples with positive I-131 results are shown below. The LLD for gross beta is 0.005 pCi/m^3, and 0.03 pCi/m^3 for I-131.

For the March 22, 2011 Air Iodine collection.

Loc.	Vol. (m3)	I-131 (pCi/m3)
P-1	431	0.042 ± 0.012
P-2	429	0.028 ± 0.015
P-3	429	0.027 ± 0.013
P-4	430	0.034 ± 0.017
P-6	429	0.030 ± 0.015

4. Milk sample results including sample location, dates, results, and MDA.

Milk samples were taken from sample locations P-43, P-37, P-18, and P-42 on 3/13/11. These samples have not been analyzed. The LLD for I-131 is 0.5 pCi/L.

5. Comments and/or insights based on recent radiological observations.

The I-131 activity is from the Fukushima nuclear accident.

The dairy cows are currently on stored feed and the milk should not be affected.

The area near PI does not have reservoirs used for drinking water that could be affected by fallout.

6. Were there any changes to PINGP's sample frequencies?

No changes were made to the REMP sampling frequency. Additional rain/snow runoff samples were taken to capture the Fukushima event.

7. Were there any changes to the isotopes that PINGP is looking for?

No. Based on the Chernobyl event, the expected isotopes are I-131, Cs-134, Cs-137, and Ru-106. All of these isotopes are included in the analyses already performed.

From:	Johnson, Michael
To:	Astwood, Heather; Doane, Margaret; Sheron, Brian; Schwartzman, Jennifer; Rosales-Cooper, Cindy; Dehn, Jeff; Sangimino, Donna-Marie
Cc:	Leeds, Eric
Subject:	Re: Information: NEA LTO forum
Date:	Monday, March 28, 2011 12:34:30 PM

Thanks. Great update.
From my blackberry.

From: Astwood, Heather
To: Doane, Margaret; Johnson, Michael; Sheron, Brian; Schwartzman, Jennifer; Rosales-Cooper, Cindy; Dehn, Jeff; Sangimino, Donna-Marie
Cc: Leeds, Eric
Sent: Mon Mar 28 12:02:01 2011
Subject: Information: NEA LTO forum

I spoke to Diane Jackson as a follow-up from our discussion this morning. Attached is the latest LTO forum agenda but this could change. The CNRA Chairman and Vice Chairs are going to have a meeting this afternoon to talk about any changes that need to be made to the agenda in light of recent events.

As for the logistics of Session 4 –

Echavarri is chairing the session. He will introduce the Chairs of the previous sessions – (Weightman, Repussard and Galliger from Exellon)
Each Chair will have 5 minutes to give a summary of what happened in his session.
Then the Jaczko and Lacoste will have 10-12 minutes each to speak.
A representative from Japanese Industry and one for the European Municipalities were also invited to on the panel with Jaczko and Lacoste. Neither have responded and may not show up. If they show up – they will also have 10 minutes to speak. If not – it will just be Jaczko and Lacoste.
Then the session will be opened to Q's and A's
Echavarri will moderate and Weightman, Repussard and Galliger will be on the stage but off to the side.
The idea is that most of the questions should go to Jaczko, Lacoste (and Japanese industry and European Municipalities if there) but the three chairs are available if needed.
The entire session will be 1.5 hours.

Heather Astwood
International Team Leader
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
301-415-1075

E8

NEA Forum on LTO: Key Challenges — Date: 8 June 2011, Paris

Panellist Preparations

Key: Green= verbal confirmation; Red=official letter sent; Blue=official acceptance.

Late update: 28 March

	Chair	Regulator	Industry	Stakeholder
Opening	Luis Echavarri	---	----	Jim Lyons, IAEA
Session 1: Regulatory Challenges	Mike Weightman	***Japan***	***Canada*** Duncan Hawthorne, CEO of Bruce Power	***France*** Yannick Rousselet, Greenpeace
		Russia Dr. Nikolay Kutin, Chairman, Rostechnadzor		
		India Mr. Bajaj, Chairman AERB		
Session 2: technical Challenges	Jacques Repussard	***Canada*** Terry Jamieson, CNSC	***Finland*** Harri Tuomisto Fortum	
		Korea Mr. Choul Ho YUN	***Switzerland*** Patrick Miazza, CEO of the Mühleberg NPP (a BWR with almost 40 years of operation)	
		Japan JNES		
		China		
Session 3: Industry Challenges	*Chair:* ***United States Industry*** Michael P. Gallagher, Exelon, Vice-President License Renewal Projects	***Finland*** Jukka LAAKSONEN, Director General, Radiation and Nuclear Safety Authority (STUK)	***France*** Jean-Marc MIRAUCOURT, Directeur Ingénierie Parc en Exploitation et Déconstruction EDF – Direction Production Ingénierie Division Ingénierie Nucléaire	***Canada*** Dave Shier, head of the Canadian Nuclear Workers Council and Chair of the International Nuclear Workers Unions Network (INWUN).
			Sweden	
			Japan/ Canada?	
Session 4: Policy and Conclusions	Luis Echavarri	***United States*** Gregory Jaczko	***Japan***	***European Municipalities***
	Mike Weightman	***France*** André Lacoste		
	Jacques Repussard			
	Industry United States Michael Gallagher			

From: Doane, Margaret
To: Johnson, Michael; Astwood, Heather; Sheron, Brian; Schwartzman, Jennifer; Rosales-Cooper, Cindy; Dehn, Jeff; Sangimino, Donna-Marie
Cc: Leeds, Eric
Subject: RE: Information: NEA LTO forum
Date: Monday, March 28, 2011 1:35:55 PM

Thanks Heather. Jen, can you please work with Heather to get a meeting with the Chairman's speech writers. Heather can tell you the right people to invite for the discussion as technical staff have been working on this.
Prior to the meeting with the speech writers, you need a pre-meeting with the technical staff to get straight the recommendations to the speech writers as there are many offices involved. NRR has the lead.
Thanks,
Margie

From: Johnson, Michael
Sent: Monday, March 28, 2011 12:35 PM
To: Astwood, Heather; Doane, Margaret; Sheron, Brian; Schwartzman, Jennifer; Rosales-Cooper, Cindy; Dehn, Jeff; Sangimino, Donna-Marie
Cc: Leeds, Eric
Subject: Re: Information: NEA LTO forum

Thanks. Great update.
From my blackberry.

From: Astwood, Heather
To: Doane, Margaret; Johnson, Michael; Sheron, Brian; Schwartzman, Jennifer; Rosales-Cooper, Cindy; Dehn, Jeff; Sangimino, Donna-Marie
Cc: Leeds, Eric
Sent: Mon Mar 28 12:02:01 2011
Subject: Information: NEA LTO forum

I spoke to Diane Jackson as a follow-up from our discussion this morning. Attached is the latest LTO forum agenda but this could change. The CNRA Chairman and Vice Chairs are going to have a meeting this afternoon to talk about any changes that need to be made to the agenda in light of recent events.

As for the logistics of Session 4 –

Echavarri is chairing the session. He will introduce the Chairs of the previous sessions – (Weightman, Repussard and Galliger from Exellon)
Each Chair will have 5 minutes to give a summary of what happened in his session.
Then the Jaczko and Lacoste will have 10-12 minutes each to speak.
A representative from Japanese Industry and one for the European Municipalities were also invited to on the panel with Jaczko and Lacoste. Neither have responded and may not show up. If they show up – they will also have 10 minutes to speak. If not – it will just be Jaczko and Lacoste.
Then the session will be opened to Q's and A's
Echavarri will moderate and Weightman, Repussard and Galliger will be on the stage but off to the side.
The idea is that most of the questions should go to Jaczko, Lacoste (and Japanese

E9

industry and European Municipalities if there) but the three chairs are available if needed. The entire session will be 1.5 hours.

Heather Astwood
International Team Leader
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
301-415-1075

Phalen, Martin

From: Shaffer, Vered
Sent: Monday, March 28, 2011 10:49 AM
To: Baggett, Steven; Bartlett, Matthew; Bernal, Sara; Brock, Terry; Burrows, Ronald; Burrows, Sheryl; Bush-Goddard, Stephanie; Cecere, Bethany; Clement, Richard; Conatser, Richard; Garry, Steven; Powers, George; Gibson, Kathy; Giebel, Stephen; Gran, Zachary; Hart, Michelle; Hernandez, Pete; Hogan, Rosemary; Holahan, Patricia; Holahan, Vincent; Holiday, Sophie; Kellner, Robert; Killian, Michelle; Klementowicz, Stephen; Kurian, Varughese; Kurian, Varughese; Lai, Sandra; LaVera, Ronald; LaVie, Steve; Lu, Shanlai; Lukes, Robert; Mamish, Nader; Cervera, Margaret; Markley, Michael; McCoppin, Michael; Meighan, Sean; Milligan, Patricia; Naquin, Tyrone; O'Donnell, John; Orendi, Monica; Pedersen, Roger; Saba, Mohammad; Sahle, Solomon; Sakai, Stacie; Hawkins, Sarenee; Schaffer, Steven; Schmitt, Ronald; Schneider, Stewart; Shaffer, Mark; Shaffer, Vered; Sherbini, Sami; Smith, Arthur; Struckmeyer, Richard; Sullivan, Randy; Oxenberg, Tanya; Taylor, Torre; Thaggard, Mark; Virgilio, Rosetta; Waters, Michael; Reed, Wendy; Whaley, Sheena; Williams, Stephen; Yin, Xiaosong; Young, Thomas; Youngblood, Thomas; Zelac, Ronald; Barr, Cynthia; Benton, Laray; Reed, Elizabeth; Bolling, Lloyd; Brandon, Lou; Broaddus, Doug; Brock, Kathryn; Brown, David; Camper, Larry; Carrera, Andrew; Chapman, Gregory; Clements, John; Clemons-Webb, Candace; Cockerham, Ashley; Compton, Keith; Cook, John; Cool, Donald; Damon, Dennis; DeCicco, Joseph; Dehmel, Jean-Claude; Dickson, Elijah; Dimmick, Lisa; Flannery, Cindy; Foster, Jack; Gambone, Kimberly; Goldfeiz, Eliezer; Gray, Anita; Hall, Holly; Hayes, John; Hinson, Charles; Howe, Donna-Beth; Hsueh, Kevin; Huffert, Anthony; Kowalczik, Jeffrey; Jones, Andrea; Jones, Cynthia; Karagiannis, Harriet; Keegan, Elaine; Kock, Andrea; Gibson, Lauren; Lee, Jay; Lewis, Doris; Lohr, Edward; Markley, Anthony; Mattsen, Catherine; Maupin, Cardelia; McCraw, Aaron; McIntosh, Angela; McKenney, Christepher; Mike Boyd; Morell, Gregory; MorganButler, Kimyata; Palmrose, Donald; Persinko, Andrew; Pstrak, David; Purdy, Gary; Quichocho, Jessie; Roach, Edward; Schmidt, Duane; Schneider, Kathleen; Snyder, Amy; Sollenberger, Dennis; Streit, Katherine; Sturz, Fritz; Sun, Casper; Thompson, Elizabeth; Tobin, Jennifer; Tomon, John; Villamar, Glenda; Watson, Bruce; Webb, James; Weber, Michael; White, Duane; White, Duncan; Abogunde, Maryann; Alldredge, Casey; Bermudez, Hector; Bloomer, Tamara; Bonano, Eugenio; Bonser, Brian; Bramnik, Andrew; Cain, Chuck; Campbell, Vivian; Carrico, J Bruce; Carson, Louis; Casey, Colleen; Cassidy, John; Collins, David; Cook, Jackie; Courtemanche, Steven; Diaz, Jose; Dickson, Billy; DNMSIII; Donovan, Larry; Dykes, Carmen; Bonano, Eugenio; Evans, Robert; Everett, Vincent; Foster, Jennifer; Frazier, Cassandra; Furia, Joseph; Gabriel, Sandra; Gaines, Anthony; Gaskins, Farrah; Gattone, Robert; Gepford, Heather; Gersey, Linda; Gibson, Richard; Gloersen, William; Go, Tony; Gordon, Craig; Graves, Chris; Greene, Natasha; Griffis, Jeff; Guerra, Gilbert; Hamilton, Ruben; Hammann, Stephen; Hammond, Michelle; Hanson, Latischa; Hays, Robert; Henson, Jay; Herr, Michael; Jackson, Todd; Katanic, Janine; Kauffman, Laurie; Kulzer, Edward; Kuzo, George; LaFranzo, Michael; Lambert, Kenneth; Lanzisera, Penny; Lawyer, Dennis; Learn, Matthew; Lee, Peter; Lodhi, Sattar; Loo, Wade; Lynn, Henry; Mahlahla, Latonya; McCann, Mike; Mitchell, Mark; Modes, Kathy; Moslak, Thomas; Mulay, Sam; Munoz, Rick; Murnahan, Colleen; Myers, Valerie; Nguyen, Janice; Nicholson, John; Nielsen, Adam; Nimitz, Ronald; Noggle, James; Null, Kevin; Oxenberg, Tanya; Parker, Bryan; Patterson, Jan; Pelchat, John; Phalen, Martin; Piskura, Deborah; Poston-Brown, Martha; Powers, Dale; Pursley, William; Ragland, Randolph; Razo, Jason; Reed, Rodican; Reichard, Michael; Reichhold, William; Ricci, John; Ricketson, Larry; Rivera, Jonathan; Roberts, Mark; Rodriguez, Lionel; Roldan, Lizette; Rolph, Ronald; Schlapper, Gerald; Seeley, Shawn; Simmons, Michelle; Simmons, Toye; Slawinski, Wayne; Stearns, Don; Tapp, Jeremy; Taylor, Cynthia; Thomas, MaryLynne; Thompson, James; Thompson, Thomas; Torres, RobertoJ; Tran, Frank; Tripp, Lester; Ullrich, Elizabeth; Warren, Geoffrey; Weidner, Tara; Werner, Greg; White, John; Whitten, Jack; Wiedeman, Darrel; Wilson, Scott
Subject: NCRP Publications and Current Activities Related to the Fukushima Nuclear Reactor Accident
Attachments: Fukushima.pdf

For general interest to the HP group:

Please find attached a Press Release regarding NCRP Publications and Current Activities Related to the Fukushima Nuclear Reactor Accident.

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Additionally, NCRP has made its Commentary No. 10, *Advising the Public About Radiation Emergencies* available for free download. The report can be found here:

http://www.ncrponline.org/Publications/Commentaries/NCRP%20Comm%20No.%2010.pdf

National Council on Radiation Protection & Measurements

Immediate Release
March 26, 2011

Fukushima Nuclear Reactor Accident

The National Council on Radiation Protection and Measurements (NCRP) is actively advising U.S. federal and state agencies as they assist the Japanese government in their response to the Fukushima nuclear reactor accident. NCRP is also working closely with members of the media (*i.e.*, television, radio and print) to provide timely and accurate information related to the potential human and environmental health impacts of releases of radionuclides from the damaged reactors and spent fuel pools.

Once the situation in Japan is stabilized, the focus will shift to late-phase recovery and site restoration. In 2010, NCRP formed a scientific committee to define the process and procedures to be used in optimizing recovery and restoration following a radiological or nuclear incident. This effort is being funded by the U.S. Department of Homeland Security with an emphasis on incidents involving radiological dispersal devices and improvised nuclear devices.

The next meeting of the NCRP Committee on April 11-12, 2011 has been expanded to include a discussion of the Fukushima nuclear reactor accident. Members of the Committee are actively monitoring the situation and assembling relevant information to be discussed at the meeting. The lessons learned section of the report will include this accident.

NCRP has published a number of important reports that provide guidance at each phase of a nuclear or radiological accident.

Human Health

- Report No. 161, *Management of Persons Contaminated with Radionuclides*
- Report No. 159, *Risk to the Thyroid from Ionizing Radiation*
- Report No. 116, *Limitation of Exposure to Ionizing Radiation*

Environmental Health

- Report No. 154, *Cesium-137 in the Environment: Radioecology and Approaches to Assessment and Management*
- Report No. 109, *Effects of Ionizing Radiation on Aquatic Organisms*
- Report No. 52, *Cesium from the Environment to Man: Metabolism and Dose*

Emergency Response

- Commentary No. 19, *Key Elements of Preparing Emergency Responders for Nuclear and Radiological Terrorism*

Immediately following the Fukushima nuclear reactor accident, NCRP made Commentary No. 10, *Advising the Public About Radiation Emergencies*, available for free download from its website (http://NCRPonline.org).

All NCRP reports and commentaries are available from the NCRP website, http://NCRPpublications.org. For additional information contact David A. Schauer, ScD, CHP at schauer@NCRPonline.org, 301.657.2652 (x20) or 301.907.8768 (fax).

The National Council on Radiation Protection and Measurements

7910 Woodmont Avenue, Suite 400
Bethesda, Maryland 20814-3095
Telephone: (301) 657-2652
Fax: (301) 907-8768
http://NCRPonline.org
http://NCRPpublications.org

From: Nuclear Plant Journal
To: Wang, Weijun
Subject: NPJ E-News March 29, 2011 Fukushima Update
Date: Tuesday, March 29, 2011 5:07:35 PM

Having trouble viewing this email? Click here

Nuclear Plant Journal E-News

Japan Update
March 29, 2011

Dear WEIJUN,
In this issue of NPJ E-News you'll find an update of the Fukushima Nuclear Plants in Japan. Information is current as of March 29, 2011, 15:00 CDT. All items are directly quoted, without any editing.

In this issue

TEPCO Update

From the TEPCO website:

- From 2:17pm to 6:18pm, March 29th, water was injected into Unit 3 from a concrete pumping vehicle. Until March 28th, we had been injecting sea water, however, from March 29th, we started injecting fresh water.
- At Unit 2, seawater had been injected from the fire fighting pump, but at 4:30pm, March 29th, we started injecting fresh water from a temporary motor driven pump instead. The water was injected until 6:25pm, March 29th.
  Click for more...

JAIF Status Update

Update 46, March 29, 2011
A PDF document provides a simple summary of each of the units at Fukushima nuclear power plants. This is a multi-page document that also provides a chronology of events and a map that details the status of each of the Japanese nuclear units.

Earthquake Update 36.

E 11

US NRC FAQs related to Fukushima eatchquake and subsequent events

NRC frequently asked questions related to the March 11, 2011 Japanese Earthquake and Tsunami. Some sample questions:

- Can an earthquake and tsunami as large as happened in Japan also happen here?
- Did the Japanese underestimate the size of the maximum credible earthquake and tsunami that could affect the plants?
- How high was the tsunami at the Fukushima nuclear plants?
- Was the damage to the Japanese nuclear plants mostly from the earthquake or the tsunami?

Quick Links...

- NPJ Website
- Cost-free Subscription (to NPJ)
- JAIF
- TEPCO
- NISA
- U.S. NRC Actions on Japan

Like Nuclear Plant Journal's new page on Facebook!

Contact Information
phone: 630-313-6739
email: NPJ@goinfo.com

Forward email to an associate.

From:	Sheron, Brian
To:	Weber, Michael; Virgilio, Martin; Leeds, Eric; Johnson, Michael; Wiggins, Jim
Subject:	FW: FYI- News Article on SOARCA
Date:	Tuesday, March 29, 2011 12:01:10 PM

FYI.

From: Gibson, Kathy
Sent: Tuesday, March 29, 2011 11:38 AM
To: Sheron, Brian; Uhle, Jennifer
Cc: Scott, Michael
Subject: Fw: FYI- News Article on SOARCA

From: Armstrong, Kenneth
To: Gibson, Kathy
Sent: Tue Mar 29 11:34:18 2011
Subject: FW: FYI- News Article on SOARCA

FYI

From: Chang, Richard
Sent: Tuesday, March 29, 2011 7:35 AM
To: Schaperow, Jason; Tinkler, Charles; Santiago, Patricia; Ghosh, Tina; Armstrong, Kenneth
Subject: FYI- News Article on SOARCA

http://news.yahoo.com/s/ap/20110329/ap_on_re_us/us_us_japan_nuclear_blackouts_2

Richard Chang
Program Manager
RES/DSA/SPB
301-251-7980

E12

Ng, Raymond

From: West, Steven
Sent: Tuesday, March 29, 2011 8:54 AM
To: DRPIII
Cc: Reynolds, Steven; OBrien, Kenneth; Boland, Anne; Louden, Patrick
Subject: Inspector Guidance For Dealing with Licensee Information Regarding Positive Samples for I-131

By now you've probably seen reports of positive sample results for radioactive iodine-131 and other isotopes, which are being reported in the United States by NRC licensees and linked to the damaged reactors in Japan. Given the numerous inquiries the agency has and expects to receive on these results, the agency has developed a protocol for handling such information. You should follow the new agency protocol, which may differ from what you've been asked to do in the past, as outlined below.

For now, the Environmental Protection Agency is the lead federal agency for handling communications on this issue. NRC coordination with EPA is being handled by Headquarters. The agency has also arranged for the Nuclear Energy Institute to collect all such data from the licensees, which they will then provide to the NRC. Please follow the steps below if you receive any such information or requests from your licensee:

1) If the licensee voluntarily provides REMP (or other) sample results to you (particularly those indicating I-131 or other elevated isotopes believed to be tied to the Japanese events), ask the licensee if it has provided the information to NEI, per the arrangement reached between the NRC and NEI. If not, ask the licensee to do so.

2) You should also ask the licensee to provide any future sample results directly to NEI. They need only inform you for awareness and to keep you updated, as appropriate, on any information that may implicate the licensee's own REMP for the site.

3) Obviously, the licensee should continue to communicate to you any radiological information that may pose a threat to health and safety of NRC inspectors or plant workers.

4) Reporting requirements or arrangements for normal REMP activities should not be affected or altered by this direction.

5) Please communicate any interactions between you and the licensee with your branch chief, as appropriate.

If you have any questions about this guidance, please contact your branch chief. Finally, it's always a good idea to keep Billy's group informed of any unexpected or unusual results. Continue to use your best judgment in this regard.

Steve

Steven West, Director
Division of Reactor Projects
NRC, Region III
630-829-9600
Steven.West@nrc.gov

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

E13

From: Weber, Michael
To: Wiggins, Jim
Cc: Zimmerman, Roy; Leeds, Eric; Johnson, Michael; Sheron, Brian; Casto, Chuck; Dorman, Dan; ET05 Hoc; Virgilio, Martin; Borchardt, Bill; Boger, Bruce; Collins, Elmo
Subject: RESPONSE - IDEAS FOR COVERING THE DAILY 8:00pm CONSORTIUM CALL
Date: Wednesday, March 30, 2011 6:25:35 AM

I suggest we continue to provide support for the consortium calls out of the Ops Center for now, pending adjustments to the agency's overall response. The teams support for the consortium directly supports our Site Team in Japan. During yesterday morning's call, the Liaison Team took action to consolidate the list of requests for assistance and to vet that list with the Site Team, other agencies, and industry to have a single list for all to use and track the status of fulfilling the requests. This will help to stabilize our support for the consortium. In addition, we are still waiting for a high level decision on which agency (DOD?) will take the lead for the government in partnering with the industry (INPO lead) on the consortium. Once that decision is made (expected within the next several days), that agency can assume the lead for the consortium and NRC can support that agency by participating off-hours through the Ops Center.

Did we establish a new time for the call with the Site Team? As of yesterday (day shift), the consortium members were shooting to conduct the call at 1900 EDT, but the Liaison Team had action to coordinate with the Site Team to confirm feasibility of the new time for the call. Liaison Team also had action to request the Site Team to designate one or two individuals to serve as the lead Point(s) of Contact on the Site Team on consortium matters.

Thanks

From: Wiggins, Jim
Sent: Wednesday, March 30, 2011 5:18 AM
To: ET05 Hoc; Virgilio, Martin; Weber, Michael
Cc: Zimmerman, Roy; Leeds, Eric; Johnson, Michael; Sheron, Brian; Casto, Chuck; Dorman, Dan
Subject: FYI: IDEAS FOR COVERING THE DAILY 8:00pm CONSORTIUM CALL

After considering options for senior stateside coverage of the daily (8:00pm) Consortium call, I come out that the responsibility should go to the line – i.e. in NRR, RES or NRO.

Pros –

- Continuity – will provide for a recognized POC for the call that will not be affected by rotating ET Directors
- Can provide for a consistent, durable response
- Looks forward to the eventual staff-down of the Ops Ctr while mitigation and recovery actions continue in country

Cons

- Will require commitment of an SES staffer daily at night for the call
- Potentially disconnected from the watch in the Ops Ctr

Other options considered – ET Director, RST Director, Japan site team director or deputy....

Seems this should be an OEDO decision since if the recommendation is taken, it obligates a line organization.

From: Weber, Michael
To: Boger, Bruce
Cc: Borchardt, Bill; Virgilio, Martin; Uhle, Jennifer; Leeds, Eric; Johnson, Michael; Haney, Catherine
Subject: RESPONSE - Draft: Request from U.S. Ambassador in Japan for Pessimistic Case Modeling Run
Date: Wednesday, March 30, 2011 1:03:06 PM

Thanks for the update, Bruce.

From: Boger, Bruce
Sent: Wednesday, March 30, 2011 1:00 PM
To: Weber, Michael; Wiggins, Jim; Zimmerman, Roy; Sheron, Brian
Subject: FW: Draft: Request from U.S. Ambassador in Japan for Pessimistic Case Modeling Run

FYI—We've already started to work on the Ambassador's request, because DOE had also received a similar request and alignment was reached. A couple of folks from RES are coming down to the Ops Center this afternoon for discussions with RST and PMT to shape the source term requested. We won't launch fully until agreement from the White House is received.

From: Hoc, PMT12
Sent: Wednesday, March 30, 2011 12:37 PM
To: Julie_A._Bentz@nss.eop.gov; Fetter, Steve
Cc: OST02 HOC; Blount, Tom; Miller, Marie; Jackson, Todd; Cool, Donald; Boger, Bruce; FOIA Response.hoc Resource; Holahan, Vincent; LIA01 Hoc; NITOPS; 'narac@llnl.gov'; Hoc, PMT12; PMT02 Hoc; David.Bowman@nnsa.doe.gov
Subject: Draft: Request from U.S. Ambassador in Japan for Pessimistic Case Modeling Run

The U.S. Ambassador in Japan has requested modeling to support decisions on the return of individuals who were voluntarily evacuated. NRC was informed of this request through members of our team in Japan, for a modeling run for a "Pessimistic Case" of future releases from the Fukushima plants. We understand that the Ambassador requested that this product be completed by Wednesday April 6, with a draft available on Sunday April 3.

The case, as we understand it, would involve a set of events, starting on April 15, 2011. This date was selected because the Ambassador is planning for individuals to return to Tokyo around that time. Our understanding is that the case should include new energetic event in the Unit 1 reactor core, followed by an additional event 24 hours later at the Unit 4 spent fuel pool.

We are currently in the process of developing a radiological source term for this assessment. We plan to include more specific considerations of the timing of events since March 11th and take into account the radiological decay of short half-life fission products. Assumptions on meteorology conditions would include representative conditions and winds moving toward Tokyo from the Fukushima site. We will be prepared to interact directly with DOE, the NIT, and with NARAC, once this tasking has been agreed by the NTAG and the White House, and a tasking established to NARAC for the modeling to support the Ambassador request.

We understand that this request may also being brought forward through other pathways.

E/15

We await White House agreement and tasking to move forward to meet the Ambassador's request.

Protective Measures Team
Nuclear Regulatory Commission

From:	Gallagher, Johanna
To:	Ash, Darren; Borchardt, Bill; Boyce, Thomas (OIS); Buchholz, Jeri; Burns, Stephen; Carpenter, Cynthia; Casto, Chuck; Cohen, Miriam; Collins, Elmo; Dapas, Marc; Dean, Bill; Doane, Margaret; Dorman, Dan; Dyer, Jim; Evans, Michele; Gallagher, Johanna; Greene, Kathryn; Haney, Catherine; Holahan, Gary; Howell, Art; Johns, Nancy; Johnson, Michael; Kelley, Corenthis; Leeds, Eric; Lew, David; Mamish, Nader; McCree, Victor; Miller, Charles; Moore, Scott; Muessle, Mary; Pederson, Cynthia; Satorius, Mark; Schaeffer, James; Sheron, Brian; Tallarico, Alison; Tracy, Glenn; Uhle, Jennifer; Virgilio, Martin; Weber, Michael; Wert, Leonard; Wiggins, Jim
Subject:	ERB FYI - Acting NMSS Deputy
Date:	Thursday, March 31, 2011 7:43:15 AM
Importance:	High

To ERB Members:

This is to inform you that Lawrence Kokajko will serve as the Acting NMSS Deputy while Dan is serving on the task force to conduct near-term evaluation of the need for NRC actions following the events in Japan. Cathy plans to announce to her staff this morning and HR is working on the yellow announcement about all the temporary senior management changes.

Johanna

E/16

From:	Weber, Michael
To:	LIA06 Hoc; LIA08 Hoc
Cc:	Thaggard, Mark; Sheron, Brian; ET05 Hoc; ET01 Hoc; OST02 HOC; FOIA Response.hoc Resource; RST01 Hoc; PMT01 Hoc; Hoc, PMT12; Brenner, Eliot; Hayden, Elizabeth; Dean, Bill; McCree, Victor; Satorius, Mark; Howell, Art; Pederson, Cynthia; Wert, Leonard; Lew, David; Haney, Catherine; Moore, Scott; Zimmerman, Roy; McCrary, Cheryl; Johnson, Michael; Leeds, Eric; Wiggins, Jim; Evans, Michele; Powell, Amy; Schmidt, Rebecca; Rihm, Roger; Andersen, James; Landau, Mindy
Subject:	FYI - NRR Q&A Database
Date:	Thursday, March 31, 2011 6:31:56 PM
Importance:	High

Wow! This is quite a useful trove of information. Thanks, NRR and others who contributed!

From: Leeds, Eric
Sent: Thursday, March 31, 2011 5:37 PM
To: Weber, Michael; Virgilio, Martin
Cc: Landau, Mindy; Andersen, James; Muessle, Mary
Subject: FYI: NRR Q&A Database
Importance: High

Try it, you'll like it! We've shared with the regions and other offices.

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

From: Nelson, Robert
Sent: Thursday, March 31, 2011 12:46 PM
To: Leeds, Eric; Grobe, Jack; Boger, Bruce; Bahadur, Sher; Blount, Tom; Brown, Frederick; Cheok, Michael; Evans, Michele; Ferrell, Kimberly; Galloway, Melanie; Giitter, Joseph; Givvines, Mary; Hiland, Patrick; Holian, Brian; Howe, Allen; Lee, Samson; Lubinski, John; McGinty, Tim; Quay, Theodore; Ruland, William; Skeen, David; Thomas, Brian; Westreich, Barry
Subject: FYI: NRR Q&A Database
Importance: High

Up and running & populated with OPA approved Qs & As. EDO may announce in an EDO Update. Content control maintained by DORL. Link below.

http://portal.nrc.gov/edo/nrr/dorl/japan/Shared%20Documents/Questions%20and%20Answers.aspx

E/17

From: One-Week Look Ahead
To: EDO GroupAccount
Cc: Pena, Alex
Subject: One-Week Look Ahead for March 31, 2011
Date: Thursday, March 31, 2011 4:05:50 PM

One-Week Look Ahead for March 31, 2011

NMSS

(OUO-SII)

On April 7, senior management from NMSS, R-II, NFS, and B&W NOG will meet at the NFS site to discuss the status of activities in preparation for the Licensee Performance Review (LPR) meeting. The senior managers will tour the facility and will also attend the LPR meeting scheduled for the evening of April 7 which will be open to the public.

NRR

(OUO-SII)

On April 5, the staff plans to participate in a Category 1 public meeting at NRC Headquarters to discuss Omaha Public Power District's plans to submit a request for an extended power uprate for Fort Calhoun Station Unit 1 in early 2011.

(OUO-SII)

On April 7, the staff plans to participate in a Category 1 public meeting at NRC Headquarters to discuss TVA's Watts Bar Nuclear Plant, Unit 2, Final Safety Analysis Report Submittals Related to Section 7 Instrumentation and Control.

(OUO-SII)

On April 7, the staff plans to participate in a Category 1 public meeting at NRC Headquarters to discuss Southern California Edison's planned submittal of an amendment request to revise the fire protection requirements in the operating licenses for the San Onofre Nuclear Generating Station, Units 2 and 3.

F/18

RI

(OUO-SII)

On April 4, the Director of the Division of Reactor Projects (DRP) will make a presentation to the New Hampshire State Legislature in Concord, NH. The legislature requested this briefing in response to the events at the Fukushima Daiichi reactors in Japan. Region I staff expects media coverage and questions before and after the briefing. The DRP Director will be accompanied by the Region I State Liaison Officer and the Region I Senior Public Affairs Officer.

From:	Cook, Christopher
To:	Bauer, Laurel; Bieganousky, Wayne; Candelario, Luissette; Cruz, Zahira; Devlin, Stephanie; Graizer, Vladimir; Karas, Rebecca; Li, Yong; Martin, Karnisha; Munson, Clifford; Plaza-Toledo, Meralis; Rodriguez, Ricardo; Seber, Dogan; Stieve, Alice; Stirewalt, Gerry; Tabatabai, Sarah; Thompson, Jenise; Vega, Frankie; Wang, Weijun; Xi, Zuhan
Subject:	FW: USGS Slides on the March 11 Earthquake
Date:	Thursday, March 31, 2011 6:25:13 PM

FYI...it's a nice slide show.

From: Karas, Rebecca
Sent: Wednesday, March 30, 2011 1:05 PM
To: Cook, Christopher; Flanders, Scott
Subject: FW: USGS Slides on the March 11 Earthquake

Rebecca Karas, Chief
Geosciences and Geotechnical Engineering Branch 1
Division of Site and Environmental Reviews
Office of New Reactors
U.S. Nuclear Regulatory Commission
Phone: 301-415-7533
Fax: 301-415-5397

From: Lee, Mike
Sent: Wednesday, March 30, 2011 9:06 AM
To: Murphy, Andrew; Bagchi, Goutam; Karas, Rebecca; Munson, Clifford; Kammerer, Annie; Ake, Jon; Seber, Dogan; Chokshi, Nilesh; Flack, John; Nourbakhsh, Hossein; Powers, Dana; William Hinze; Michael Corradini
Subject: USGS Slides on the March 11 Earthquake

... the USGS has prepared a slide show (34 slides) on the recent earthquake for those who might be interested...it can be downloaded from the following location

http://earthquake.usgs.gov/learn/topics/Tohoku2011.pdf

E/19

Eagle, Eugene

From: Joe Colvin [president@ans.org]
Sent: Thursday, March 31, 2011 3:50 AM
To: Eagle, Eugene
Subject: ANS Member Activities and Fukushima

Dear ANS Member,

In the days since Japan's earthquake and tsunami combined to create the situation at Fukushima, nuclear professionals across the country have been united in our deep concern over the events in Japan and have contributed countless hours working to ensure that information provided to the public and media was based on fact and reason rather than hysteria and misinformation. I want to take this opportunity to express my appreciation to the many ANS Members who stepped forward to support the efforts of the Society in this time of great need.

The Society has played—and is continuing to play—a major role in addressing the scientific and technical aspects of the accident at Fukushima with the public, policy makers and the media. ANS Headquarters, the ANS Corporate Officers, and our media, social media and federal consultants have worked diligently, with the support of many members, to improve the public understanding of the situation in Japan. Within several hours of the events at Fukushima, ANS initiated the Crisis Communications Team, which has met daily by conference call since the accident to coordinate the Society's activities, including media outreach. Though ANS Members could not be everywhere, we have had a significant and positive effect.

ANS Members have participated in more than 150 interviews in venues like *The Today Show*, *CBS Evening News*, *NBC Nightly News*, *CBS Morning News* & local affiliates, *CNN*, *NPR*, *Good Morning America*, the *New York Times*, the *Washington Post*, and the *Wall Street Journal*—to name a few. Over one hundred members volunteered their services when Candace Davison, ANS Public Information Committee Chair, explained the urgent need for media resources.

Thanks to your efforts, ANS Members reached more than 81 million people through proactive media outreach. That's over one in four U.S. households—a truly remarkable effort!

While some ANS Members could not serve as media spokespersons due to company restrictions, they provided essential analysis of the ongoing technical events in Japan. That analysis helped to formulate documents such as the *Japan Backgrounder* and the *ANS Talking Points*. ANS Social Media Group members actively engaged in positive, proactive media outreach—something they have done so successfully in the past. They identified and shared media opportunities and formed the backbone of the early media efforts.

Those who could not speak helped those who could by lending information, analysis, and advice.

The ANS Nuclear Cafe blog site was repurposed as an information clearinghouse during the early morning hours of March 11. As ANS Members shared links to factual, non-alarmist information provided on the blog, traffic to the site increased by a factor of 100.

The strength of the Society is rooted in our membership and catalyzed by effective and talented expertise. ANS Student Sections, Nuclear Engineering Departments, and Local Sections have engaged in efforts across the country to reach out via public forums, webinars, presentations, conversations with friends and colleagues, and social networks. Visit the ANS website and be inspired by the wealth of activities catalogued under 'Featured Content.'

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ANS Members have engaged in the vital grassroots efforts that drive greater understanding—and thus greater acceptance—of nuclear science and technology.

In response to your overwhelming feedback, ANS established the ANS Japan Relief Fund to help our friends, colleagues, and their families in Japan who have been affected by the earthquake and tsunami. This fund symbolizes how the international nuclear community stands together to help one another.

ANS will continue to play a key role in placing the Fukushima incident into perspective, as well examining the factors that have contributed to the incident. We are in the process of outlining the important role that the Society can play in developing a greater understanding into the scientific and technical issues surrounding the accident at Fukushima. Nuclear professionals will continue to set the bar high for nuclear energy, which remains the safest source of electricity generation.

I look forward to working with you, the dedicated and passionate members of this Society, as we continue to promote the awareness and understanding of nuclear science and technology.

Sincerely,

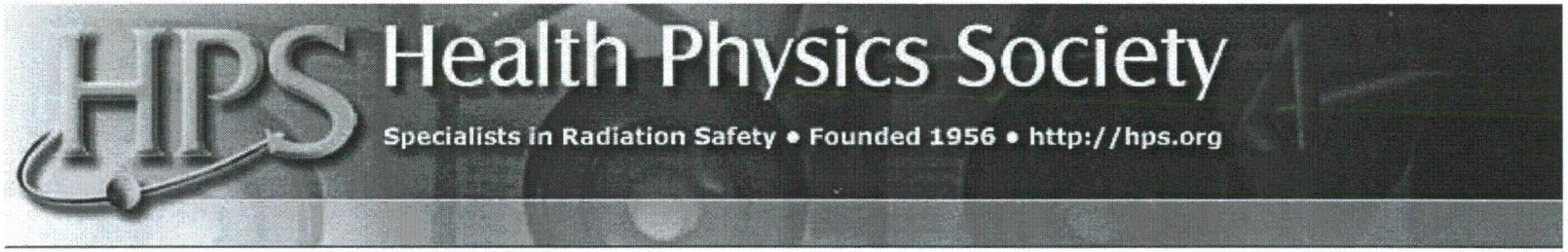
Joe Colvin
ANS President

Visit the ANS Nuclear Cafe: http://ansnuclearcafe.org/
Follow ANS on Twitter: @ans_org
Like ANS on Facebook: American Nuclear Society
Join the ANS LinkedIn Group: ANS (reserved for ANS Members)

Burza, Justine

From: Phalen, Martin
Sent: Tuesday, April 19, 2011 2:24 PM
To: Burza, Justine
Subject: FW: HPS Actions and Updates on Japan

From: HPS Headquarters [mailto:HPS@BurkInc.com]
Sent: Friday, April 01, 2011 8:50 PM
To: Phalen, Martin
Subject: HPS Actions and Updates on Japan



Dear HPS Member,

The Health Physics Society has been engaged for the past three weeks responding to the crisis in Japan related to the reactors at the Fukushima Daiichi nuclear power station. I would like to bring you up to date on some of those initiatives. Additionally, I want to take this opportunity to express my appreciation to the many HPS members who volunteered to support the efforts of the Society in this endeavor.

The Society has played—and continues to play—a major role in addressing the radiation safety aspects of the accident at Fukushima with the public, policy makers, and the media. Although the HPS does not have a full-time dedicated team available to cope with radiological events of such a magnitude, considerable effort has been mounted and numerous actions and activities have been performed. Since much of this effort may be transparent to the casual observer, I would like to make you aware of what has been done.

The HPS Web Operations group provides the bulk of our outreach to members, media, and the public. Outreach to media since March 11 has included 65 separate media interactions by phone, email, etc. Media contacts have included ABC News, ABC

Nightly News, AP, Ashbury News, CBS Evening News, Boing Boing, Canadian Clinical Endocrinology News, Discovery Channel, DotMed, Everyday Health, Electrical Contractor, Globe & Mail, Harvard Health Letter, Los Angeles Times, National Public Radio, New York Times, Popular Mechanics, Science, USA TODAY, and the Washington Post.

Additionally, at least 22 HPS volunteers are known to have addressed the media and reported that contact to our Outreach Editor. While many HPS members could not serve as media spokespersons due to employer restrictions, they provided essential support to help identify the most credible and comprehensive sources of current information regarding the radiation environment in Japan. Those who could not speak helped those who could by lending information, analysis, and advice. I encourage all of you who contribute in any significant way to make your contributions known to our Outreach Editor (media@hps.org).

Our HPS Web site (www.hps.org) is one of our principal means of communication. Our Ask the Expert (ATE) section is one of the most popular and highly accessed portions of the Web site. Specifically with respect to the Fukushima incident:

- We posted an FAQ and a number of links on the ATE part of the Web site to provide information about the Fukushima situation.
- Our ATE editors have personally answered 24 Fukushima-related questions in the past three weeks. These varied from concern about concentrations of radioactivity in food products from Japan to exposure from flying over Japan to questions about radioactivity in other products, such as metals produced in Japan.
- The statistics about interactions on our ATE portion of the Web site show that we typically had ~8,000 ATE page views per day before March 11. Views went up to a peak of ~35,000 on March 15 and the number now has leveled off to ~16,000 page views per day. I think we can safely assume that the increases are due to people looking for information related to the Fukushima accident.

In our companion Radiation Answers (www.radiationanswers.org) Web site, which is focused on the public, we have experienced an unprecedented amount of traffic. We normally average about 7,000 visits a month, but from March 11-31, we've had over 32,600 visits. Apparently, our credibility is making a difference and people are seeking information from a reliable source.

Other Web site actions taken in support of the Society's response to the Fukushima accident include:

- Identified reliable sources of information and data and made them known to anyone accessing the Web site.
- Enhanced the Health Physics Society News Café, resulting in a 10-fold increase in traffic.
- Created and populated a targeted Fukushima page on our Web site front page.
- Added significant amount of new material to the Web site in addition to the Fukushima page.
- Updated the Fukushima page on essentially a daily basis.
- Updated and posted Fact Sheets on Potassium Iodide (KI) and Tritium.

The Society leadership has seized the opportunity to contribute in several other significant ways:

- Contributed to Harvard Health Magazine article on the expected health effects from the Japanese accident.
- Videotaped an interview with a science reporter for WCVB-TV, Boston Channel 5 News Team on the RadNet sampling and expected health outcomes from Japan. (The tape aired on March 25 at the 6:00 and 11:00 p.m. evening news.)
- Provided a phone interview to a Vermont reporter regarding the Japanese accident and seismic risk in New England and provided a copy of the new HPS Fact Sheet on KI.

- Wrote a letter to the Susan G. Komen Foundation requesting the correction of misinformation that the foundation was providing the public.
- Communicated with other scientific and technical organizations to share information and collaborate on actions.
- Communicated with Congressional and Agency contacts to share information and collaborate on appropriate actions, e.g., we provided CDC with a list of prospective health physics consultants who might be available to staff the 1-800 number that CDC is establishing in Atlanta to field calls from the public.
- Supported the Nuclear Energy Institute media initiative, arranging for HP experts to be made available to the media in Washington, DC.
- Provided informational interviews to the New York Times, Scientific American, Environment & Energy Publishing, and NPR Philadelphia.
- Conducted taped and aired radio interviews with the John Tesh Radio Show in Los Angeles and W Radio (broadcast in Spanish in North and South America and Europe).

As I mentioned in my first broadcast to you regarding the Fukushima incident, I continue to endorse contributions to the American Red Cross to support its humanitarian relief efforts in Japan at:
http://american.redcross.org/site/PageServer?pagename=ntld_main&s_src=RSG000000000&s_subsrc=RCO_ResponseStateSection

HPS will continue to play a key role in placing radiation safety concerns regarding the Fukushima incident into perspective. I look forward to working with you to continue our efforts to inform the public regarding radiation safety and health to ensure that the general public and decision makers have the best scientific information upon which to make personal and policy decisions.

Sincerely,

Ed Maher
HPS President

Visit the HPS Web site: http://hps.org
Participate in sharing news on the HPS News Café: http://www.facebook.com/pages/Health-Physics-Society-News-Cafe/157387224301493

Burza, Justine

From: Phalen, Martin
Sent: Thursday, April 21, 2011 3:46 PM
To: Burza, Justine
Subject: FW: Have you seen this?

From: Burza, Justine
Sent: Tuesday, April 19, 2011 11:54 AM
To: Phalen, Martin; Cassidy, John
Subject: Have you seen this?

http://www.popsci.com/technology/article/2011-04/video-robots-finally-enter-crippled-japanese-nuclear-reactor-find-high-radiation-levels

Justine Burza
Division Administrative Assistant(TL)
DRS, Region III

E/99

Japan Meteorological Agency - Meteorological Stations Along Coastline of Fukushima Reactor															
Area	Prefecture	Station	Type	Lat (N)	Lon (E)	Elev (m)	Dist to Site (km)	WS	WD	Temp	Hum	Precip	Pres	Sunshine Duration	Snow Depth
Tohoku	Fukushima	Soma	Auto	37o 47.0'	140o 55.5'	9	41.34	X	X	X		X		X	
		Haramachi	Auto	37o 38.3'	140o 59.1'	10	24.47					X			
		Namie	Auto	37o 29.5'	140o 57.9'	47	9.77	X	X	X		X		X	
		Tomioka	Auto	37o 20.8'	141o 1.0'	50	8.45					X			
		Hirono	Auto	37o 14.0'	141o 0.0'	43	21.15	X	X	X		X		X	
		Onahama	Wx Stn	36o 56.8'	140o 54.2'	3	54.09	X	X	X	X	X	X	X	
Tohoku	Miyagi	Watari	Auto	38o 1.5'	140o 51.5'	4	68.87	X	X	X		X		X	
		Natori	Auto	38o 8.3'	140o 55.0'	2	80.42	X	X	X		X			
		Sendai	Observ	38o 15.7'	140o 53.8'	39	94.26	X	X	X	X	X	X	X	X
		Shiogama	Auto	38o 20.3'	141o 0.8'	105	102.05	X	X	X		X		X	
	Reactor			37o 25.3'	141o 1.9'										

(1)
2

From:	Weber, Michael
To:	Doane, Margaret; Mamish, Nader
Cc:	LIA06 Hoc; LIA08 Hoc; Brenner, Eliot; Schmidt, Rebecca; Boger, Bruce; Thaggard, Mark; Muessle, Mary; Andersen, James; Leeds, Eric; Haney, Catherine; Sheron, Brian; Johnson, Michael; Virgilio, Martin
Subject:	QUERY - CSIS INVITATION: Nuclear Safety After Fukushima
Date:	Friday, April 01, 2011 4:48:49 PM

Does OIP want to take the lead in participating in this seminar for NRC? Someone should attend, listen, and share highlights back here to the rest of our team. If OIP cannot support, please advise.

From: CSIS Proliferation Prevention Program [mailto:tspitzer-hobeika@csis.org]
Sent: Friday, April 01, 2011 4:11 PM
To: Weber, Michael
Subject: CSIS INVITATION: Nuclear Safety After Fukushima

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

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

Nuclear Safety After Fukushima

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

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

Thursday, April 7, 2011
from 2:00pm to 5:00pm
B1 Conference Center
CSIS, 1800 K Street NW, Washington, DC 20006

Speakers:

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

2:15-3:45: National Responses

F/23

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

3:45-5:00: International Responses
Dr. Olli Heinonen, Senior Fellow, Belfer Center for Science and International Affairs, Harvard Kennedy School
Mr. Carlton Stoiber, Chair of the Nuclear Security Working Group, International Nuclear Law Association
Ms. Carol Kessler, Chair of the Nonproliferation and National Security Department, Brookhaven National Laboratory

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

From: Taylor, Renee

To: Andersen, James; Ash, Darren; Blount, Tom; Boger, Bruce; Borchardt, Bill; Bowman, Adriane; Boyce, Thomas (OIS); Boyd, Lena; Buckley, Patricia; Cannady, Ashley; Carpenter, Cynthia; Casby, Marcia; Casto, Chuck; Cianci, Sandra; Cohen, Miriam; Collins, Elmo; Collins, Jay; Cooper, LaToya; Corley, Cherrie; Damiano, Debra; Dapas, Marc; Dean, Bill; Dubose, Sheila; EDO_ETAs; Evans, Michele; Flory, Shirley; Garland, Stephanie; Givvines, Mary; Greene, LaTosha; Grobe, Jack; Haney, Catherine; Hasan, Nasreen; Higginbotham, Tina; Holahan, Gary; Howard, Patrick; Johnson, Michael; Kelley, Corenthis; Landau, Mindy; Lee, Pamela; Leeds, Eric; Lockhart, Denise; Lubinski, John; Mamish, Nader; Matakas, Gina; Mayberry, Theresa; McClain, Nicole; McCrary, Cheryl; McCree, Victor; McGinty, Tim; Miles, Patricia; Miller, Charles; Mitchell, Matthew; Muessle, Mary; ODaniell, Cynthia; Owen, Lucy; Pederson, Cynthia; Penny, Melissa; Plisco, Loren; Quesenberry, Jeannette; Riddick, Nicole; Ronewicz, Lynn; Ross, Brenda; Salus, Amy; Satorius, Mark; Scarbrough, Thomas; Schaeffer, James; Schumann, Stacy; Schwarz, Sherry; Sheron, Brian; Sprogeris, Patricia; Tannenbaum, Anita; Taylor, Renee; Terry, Leslie; Thomas, Loretta; Tomczak, Tammy; Uhle, Jennifer; Veltri, Debra; Virgilio, Martin; Walker, Dwight; Weber, Michael; Wiggins, Jim; Williams, Barbara; Zimmerman, Roy

Subject: EDO Alignment/Pre-briefs for Commission Meetings

Date: Friday, April 01, 2011 12:51:45 PM

Attachments: EDO Alignment, Prebriefs for CM Meetings.doc

Please see the attached updated list. Note the 4/14 CM on Japanese Status – Focus on Health Effects of Radiation and the 4/6 Pre-brief have been cancelled.

Thank you,
Renee

5/24

EDO ALIGNMENT/PRE-BRIEFS FOR COMMISSION MEETINGS

Updated: 04/01/11

04/14/11 (CANCELLED)
(9:00 – 12:00)
Japanese Earthquake Status – Focus on Health Effects of Radiation

EDO Alignment: **03/28/11 @ 3:00 pm (Joint meeting with 4/28 CM Alignment)**
EDO Pre-brief: **CANCELLED - 04/06/11 @ 4:00 pm**

04/19/11
(9:00 – 12:00)
Part 37 Rulemaking – Physical Protection & Byproduct Material

EDO Alignment: **02/10/11 @ 1:00 pm**
EDO Pre-brief: **03/31/11 @ 10:00 am**

04/28/11
(9:00 – 12:00)
Japanese Earthquake Status – Focus on Station Black-Out

EDO Alignment: **03/28/11 @ 3:00 pm (Joint meeting with 4/14 CM Alignment)**
EDO Pre-brief: **04/14/11 @ 1:00 pm (Rescheduled from 10:00am)**

04/28/11 (POSTPONED – New Date TBD)
(9:00 – 12:15)
ITAAC Related Activities

EDO Alignment: **CANCELLED - 02/28/11 @ 3:30 pm**
EDO Pre-brief: **CANCELLED - 04/18/11 @ 4:00 pm**

05/03/11 (Rescheduled from 05/12/11)
(9:00 – 12:00)
Information Briefing on Emergency Preparedness

EDO Alignment: **04/07/11 @ 1:00 pm (Rescheduled from 04/06/11)**
EDO Pre-brief: **04/18/11 @ 4:00 pm (Rescheduled from 05/02/11)**

05/12/11 (Rescheduled from 05/03/11)
(9:30 – 11:30)
Task Force Review – 30 Day Quick Look Following the Events in Japan

EDO Alignment: **04/07/11 @ 4:00 pm**
(Tentative – Joint meeting with 6/16 CM Alignment)
EDO Pre-brief: **05/02/11 @ 3:00 pm (Rescheduled from 04/18/11)**

05/12/11 (POSTPONED – New Date TBD)
(9:00 – 12:00)
Cumulative Effects of Reactor Regulation

EDO Alignment: **CANCELLED - 03/22/11 @ 9:00 am**
EDO Pre-brief: **CANCELLED - 05/02/11 @ 3:00 pm**

05/27/11
(9:00 – 12:00)
Briefing on Results of AARM

EDO Alignment: **CANCELLED NOT NEEDED - 03/28/11 @ 3:00 pm**
EDO Pre-brief: **05/12/11 @ 3:00 pm**

06/02/11 (Rescheduled from 05/03/11)
(9:30 – 10:30)
Human Capital and EEO

EDO Alignment: **03/17/11 @ 1:00 pm**
EDO Pre-brief: **05/19/11 @ 3:00 pm (Rescheduled from 05/04/11)**

06/06/11
(10:00 – 12:00)
Potential Meeting w/ACRS

EDO Alignment: **CANCELLED NOT NEEDED - 03/29/11 @ 4:00 pm**
EDO Pre-brief: **CANCELLED NOT NEEDED - 05/19/11 @ 3:00 pm**

06/16/11
(9:30 – 11:30)
Task Force Review – 60 Day Quick Look Following the Events in Japan

EDO Alignment: **04/07/11 @ 4:00 pm**
(Tentative – Joint meeting with 5/3 CM Alignment)
EDO Pre-brief: **06/02/11 @ 4:00 pm**

06/16/11 (POSTPONED – New Date TBD)
(9:00 – 12:00)
International Activities or Potential Meeting w/ACRS

EDO Alignment:	**CANCELLED - 04/26/11 @ 1:00 pm**
EDO Pre-brief:	**CANCELLED - 06/06/11 @ 3:00 pm**

NOTE: Please be aware that this list is organized by the Commission meeting date. EDO Alignment meetings are generally scheduled approximately 60 days prior to the Commission meeting. EDO Pre-briefs are scheduled approximately 2 weeks prior to the Commission meeting. All meetings are scheduled based on the availability of the EDO/DEDOs calendars. All meetings are held in conference room O-17B4.

Rosales-Cooper, Cindy

From: Schum, Constance
Sent: Friday, April 01, 2011 12:09 PM
To: NRO_Distribution
Subject: WAIVER OF WORK SCHEDULE/PAY CAP RULES IN RESPONSE TO THE EVENTS IN JAPAN

To: All NRO Employees
Subject: WAIVER OF WORK SCHEDULE/PAY CAP RULES IN RESPONSE TO THE EVENTS IN JAPAN

In a memorandum dated March 16, 2011, to the Office Directors, the Office of Human Resources (OHR) issued a waiver of work schedule and pay cap rules for work in response to the events in Japan (ML11075A003). A number of employees who supported the Operations (Ops) Center recently called OHR because the biweekly cap on combined salary plus premium has not yet been lifted. As a result, they have not been paid for all of their premium work. To assist NRO employees with the process for lifting the cap, you should contact the NRO T&L Coordinator, Lisa Applestein. She will assure that your name is included on the office roster that is maintained and provided to the Office of the Chief Financial Officer (OCFO) each pay period. The OCFO will then makes the necessary changes to the payroll system to lift the biweekly cap. If you or your manager are in contact with OCFO or OHR directly on this matter, please be sure to notify the NRO T&L Coordinator such that NRO master roster of Ops Center supporters is updated with your working status.

Lastly, the OCFO established the following agency wide guidance for time reporting:

> "TAC (ZG0061) was established to track activity related to staff that are supporting the recent events in Japan. Managers that are performing managerial functions relating to the events in Japan should continue to use the TAC (ZM0000). In the situation where a manager is required to perform duties which would be considered different than managerial responsibilities should record their time under the new TAC ZG0061. Support staff that are performing Japan events should use TAC's that relate to their normal responsibilities. In the situation where administrative support staff is required to perform duties that would be considered different than routine administrative support responsibilities should record their time under the new TAC ZG0061."

If you have additional questions, please send an e-mail to the NRO_TLCOORDINATOR Resource.

Connie Schum, Acting Director
Program Management, Policy Development
and Analysis Staff
Office of New Reactors
301.415.1207

E|25

Rosales-Cooper, Cindy

From: NRO_TLCOORDINATOR Resource
Sent: Monday, April 04, 2011 9:45 AM
To: NRO_TLCOORDINATOR Resource
Subject: New Japan TACs

To: All NRO Employees

Subject: NEW TACS ASSOCIATED WITH SUPPORTING THE EVENTS IN JAPAN

In the HRMS Bulletin issued the afternoon of April 1, 2011, the OCFO announced new TACs effective this pay period (beginning March 27). If you need the TAC added to your time entry profile, please reply with an e-mail to this account, NRO_TLCOORDINATOR Resource, listing the TACs you need. Your support in assuring time is reported completely and accurately supports the cost recovery reporting for the agency.

From: HRMSBulletin Resource
Sent: Friday, April 01, 2011 1:59 PM

NRC will need to provide information relating to the costs associated with supporting the events in Japan that directly relates to the Earthquake and Tsunami. For pay periods 6 and 7 we created TAC ZG0061, this was used by all staff that directly performed duties that supported the Japan event. Going forward starting with pay period 8(March 27 – April 9), we will need to track any costs associated with support of the Japan event relating to the earthquake and tsunami in greater detail. Please do not use TAC ZG0061 after pay period 7 (PP 7 ended March 26, 2011). The separation into multiple TAC's for different activities is necessary for appropriate fee billing.

The new TAC's are listed below with a brief description.

ZG0064 – Japan Support Team (In Japan). This TAC is to be used to record hours worked while employees are in Japan, for those employees who traveled to Japan to support the earthquake and tsunami.

ZG0063 – Japan Event HQ Operations Watchstanders. This TAC is to be used to record hours worked when employees are working in the Operations Center. This is for employees who are working directly on activities that are supporting the Japan events relating to the earthquake and tsunami and who did not travel to Japan.

ZG0062 – Work Performed, Lessons Learned relating to the Japan Event. This TAC is to be used for work that will be performed by staff in the agency as a lessons learned approach to improve the NRC's ability relating to operating reactors. This TAC is not to be used for any work that is described in the TAC's above.

Administrative Assistants: Admin staff sees an increase in document processing and it is just because the agency is responding to the Japan event – this would be considered normal routine admin work (ZS0000). If the administrative assistant is actually manning the OP center they should use the new TAC.

Management: Managers should use the management TAC (ZM0000) unless they are manning the OP Center. For example: Mike Johnson our Director, is called to do shift work in the OP Center, he should use the new TAC. If Mike Johnson has been repeatedly called to find additional NRO reactor specialists relating to the Japan Crisis, that is normal management work.

It will not be necessary to do corrected cards for pay periods prior to pay period 8, the Division of the Controller will make all necessary corrections.

Rosales-Cooper, Cindy

From: Rosales-Cooper, Cindy
Sent: Friday, April 01, 2011 7:22 AM
To: Smiroldo, Elizabeth
Cc: Abrams, Charlotte
Subject: FW: DSER Response Attached: Russian Request for Information on Seismic Safety Standards
Attachments: Response to Russian Question on Seismic Criteria.docx

Hi Elizabeth,
Below, see NRO's response to the inquiry from Russia.

Cindy

From: Lauron, Carolyn — NRO/DSER attachment
Sent: Thursday, March 31, 2011 12:57 PM
To: Rosales-Cooper, Cindy
Cc: Flanders, Scott; Chokshi, Nilesh; Clayton, Brent; Hatchett, Gregory; Dent, Kimberly; Cook, Christopher
Subject: DSER Response Attached: Russian Request for Information on Seismic Safety Standards

Hi –

Attached is DSER's response to the Russian request.

Embedded in the attached Word document are references to the NRC regulations that can be accessed via links to: NRC regulations (10 CFR) and RG 1.208.
It may be more effective to provide the references in this manner since there are other links to information that the Russians would find interesting.

Thanks,
Carolyn
2736

From: Rosales-Cooper, Cindy
Sent: Thursday, March 24, 2011 4:36 PM
To: Lauron, Carolyn
Cc: Flanders, Scott
Subject: RE: DSER Response: safety standards

Carolyn,
Next Friday should be okay, but as far as context is concerned, I think DSER will have to infer it from the emails. Russians are not very good in English, thus the initial email is bound to be the clearest communication on the request.

Cindy

From: Lauron, Carolyn
Sent: Thursday, March 24, 2011 4:32 PM
To: Rosales-Cooper, Cindy
Subject: DSER Response: safety standards

E/26

Taking into account tragic events in Japan (especially incidents at NPP Fukushima-1) we began to study an international experience in the field of safety requirements for NPP designs, which are sited or is planned to be sited in the areas with high level of seismicity (possible 8-9-points earthquakes). In this connection I would like to address you with a request. Which specific requirements are used in the USA for the NPP designs located in such areas? And which regulations are set these safety standards?

NRC seismic siting criteria for nuclear power plants are the same regardless of the geologic setting or tectonic environment in region surrounding the site. The recent Japanese earthquake occurred on a "subduction zone", which is the type of tectonic region that produces earthquakes of the largest magnitude. A subduction zone is a tectonic plate boundary where one tectonic plate is pushed under another plate. Subduction zone earthquakes are also required to produce the kind of massive tsunami seen in Japan. In the continental US, the only subduction zone is the Cascadia subduction zone which lies off the coast of northern California, Oregon and Washington. Thus, a continental earthquake and tsunami as large as in Japan could only happen there. The only nuclear plant near the Cascadia subduction zone is the Columbia Generating Station. This plant is located a large distance from the coast (approximately 225 miles) and the subduction zone (approximately 300 miles), so the ground motions estimated at the plant are far lower than those seen at the Fukushima plants. This distance also precludes the possibility of a tsunami affecting the plant. Outside of the Cascadia subduction zone, earthquakes are not expected to exceed a magnitude of approximately 8.

The seismic regulatory basis for licensing of the currently operating nuclear power reactors is contained in the following regulations: 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," including the "General Design Criteria for Nuclear Power Plants," and 10 CFR Part 100 ("Seismic and Geologic Siting Criteria For Nuclear Power Plants") and Appendix A to that Part, which describes the general criteria that guide the evaluation of the suitability of proposed sites for nuclear power plants.

General Design Criterion (GDC) 2, "Design Bases for Protection Against Natural Phenomena," in Appendix A requires that that the structures and components in nuclear power plants be designed to withstand the effects of natural phenomena, including earthquakes and tsunamis, without loss of capability to perform their intended safety functions. GDC 2 also requires that the design bases include sufficient margin to account for the limited accuracy, quantity, and period of time in which the historical data have been accumulated. The earthquake which could cause the maximum vibratory ground motion at the site is designated as the **Safe Shutdown Earthquake (SSE)**. Under SSE ground motions, nuclear power plant structures and components must remain functional and within applicable stress, strain, and deformation limits. Each plant must also have seismic instrumentation to determine if the **Operating Basis Earthquake (OBE)**, typically one-half or one-third the level of the SSE, has been exceeded. If the OBE is exceeded or significant plant damage has occurred, then the nuclear power plant must be shutdown.

Each plant is designed to a ground-shaking level (the SSE) that is appropriate for its location, given the possible earthquake sources that may affect the site and its tectonic environment. Ground shaking is a function of both the magnitude of the earthquake, the distance of the earthquake to the site, and the local geology. The magnitude alone cannot be used to predict ground motions. The existing plants were designed on a "deterministic" or "scenario earthquake" basis that accounted for the largest earthquake expected in the area around the plant. This required an assessment of earthquakes that had occurred in the region around each plant site.

Design basis loads for nuclear power plant structures include combined loads for seismic, wind, tornado, normal operating conditions (pressure and thermal), and accident conditions. Codes and standards, such as the American Society of Mechanical Engineers, the American Concrete Institute, and the American Institute of Steel Construction, are used in the design of nuclear power plant structures to ensure a conservative, safe design under design basis loads. The NRC also requires that adequate margin beyond the design basis ground shaking levels is assured. The NRC further enhances seismic safety for beyond-design-basis events through the use of a defense-in-depth approach.

The NRC reviews the seismic risk at operating reactors as needed when information may have changed. In the mid to late 1990s, NRC staff reviewed the potential consequences of severe earthquakes (earthquakes beyond the safety margin included in each plant's design basis), as part of the Individual Plant Examination of External Events (or IPEEE) program. From this review, the staff determined that seismic designs of operating plants in the United States have adequate safety margins, for withstanding earthquakes, built into the designs. Currently, the NRC staff is reassessing the seismic designs of operating plants through our Generic Issues program. The initial results of this assessment found that: 1) seismic hazard estimates have increased at some operating plants in the central and eastern US; 2) there is no immediate safety concern, plants have significant safety margin and overall seismic risk estimates remain small; and 3) assessment of updated seismic hazards and plant performance should continue.

In 1997, new rules governing reactor siting were established. 10 CFR Part 50 Appendix A (GDC 2), 100.23 and Appendix S establish the seismic design basis for plants licensed after January 10,1997. Similar to pre-1997, Appendix S defines the SSE as *"the Safe-shutdown earthquake ground motion* is the vibratory ground motion for which certain structures, systems, and components must be designed to remain functional." 10 CFR Part 100.23 "Geologic and Seismic Siting Criteria" requires that the applicant determine the SSE and its uncertainty, the potential for surface tectonic and nontectonic deformations. Regulatory Guide 1.165 (and subsequently Regulatory Guide 1.208) provides guidance on satisfying 10 CFR Part 100.23, one of which is performing a probabilistic seismic hazard assessment (PSHA). Appendix S to 10 CFR Part 50 requires for SSE ground motions, SSCs will remain functional and within applicable stress, strain, and deformation limits. The required safety functions of SSCs must be assured during and after the vibratory ground motion through design, testing, or qualification methods. The evaluation must take into account soil-structure interaction effects and the expected duration of the vibratory motions. Appendix S also requires that the horizontal component of the SSE ground motion in the free field at the foundation elevation of structures must be an appropriate response spectrum with a peak ground acceleration (PGA) of at least 0.10g. In addition to the nominal seismic design, all new generation reactors have to demonstrate a seismic margin of 1.67 relative to the site-specific seismic demands. These designs are required to perform a Probabilistic Risk Assessment (PRA) based seismic margins analysis (SMA) to identify the vulnerabilities of their design to seismic events. The minimum high confidence, low probability of failure (HCLPF) for the plant should be at least 1.67 times the ground motion acceleration of the design basis safe-shutdown earthquake (SSE).

Below are links to the NRC's website for additional information on the criteria referenced above:

- Title 10 of the Code of Federal Regulations (10 CFR): http://www.nrc.gov/reading-rm/doc-collections/cfr/
- Regulatory Guide 1.208, "A Performance-Based Approach to Define the Site-Specific Earthquake Ground Motion": http://www.nrc.gov/reading-rm/doc-collections/reg-guides/power-reactors/rg/division-1/division-1-201.html

From: Mamish, Nader
To: Weber, Michael
Cc: LIA06 Hoc; LIA08 Hoc; Brenner, Eliot; Schmidt, Rebecca; Boger, Bruce; Thaggard, Mark; Muessle, Mary; Andersen, James; Leeds, Eric; Haney, Catherine; Sheron, Brian; Johnson, Michael; Virgilio, Martin; Doane, Margaret
Subject: RE: QUERY - CSIS INVITATION: Nuclear Safety After Fukushima
Date: Saturday, April 02, 2011 8:34:16 PM

I'm checking on the staff's availability .

Thanks

From: Weber, Michael
Sent: Friday, April 01, 2011 4:49 PM
To: Doane, Margaret; Mamish, Nader
Cc: LIA06 Hoc; LIA08 Hoc; Brenner, Eliot; Schmidt, Rebecca; Boger, Bruce; Thaggard, Mark; Muessle, Mary; Andersen, James; Leeds, Eric; Haney, Catherine; Sheron, Brian; Johnson, Michael; Virgilio, Martin
Subject: QUERY - CSIS INVITATION: Nuclear Safety After Fukushima

Does OIP want to take the lead in participating in this seminar for NRC? Someone should attend, listen, and share highlights back here to the rest of our team. If OIP cannot support, please advise.

From: CSIS Proliferation Prevention Program [mailto:tspitzer-hobeika@csis.org]
Sent: Friday, April 01, 2011 4:11 PM
To: Weber, Michael
Subject: CSIS INVITATION: Nuclear Safety After Fukushima

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

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

Nuclear Safety After Fukushima

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

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

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

E127

CSIS, 1800 K Street NW, Washington, DC 20006

Speakers:

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

2:15-3:45: National Responses
Mr. Alex Flint, Senior Vice President for Governmental Affairs, Nuclear Energy Institute (Invited)
Ms. Ellen Vancko, Nuclear Energy and Climate Change Project Manager, Union of Concerned Scientists
Mr. Mark Holt, Specialist in Energy Policy, Congressional Research Service

3:45-5:00: International Responses
Dr. Olli Heinonen, Senior Fellow, Belfer Center for Science and International Affairs, Harvard Kennedy School
Mr. Carlton Stoiber, Chair of the Nuclear Security Working Group, International Nuclear Law Association
Ms. Carol Kessler, Chair of the Nonproliferation and National Security Department, Brookhaven National Laboratory

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

Mitchell, Mark

From: Mitchell, Mark
Sent: Friday, April 01, 2011 6:58 AM
To: Phalen, Martin
Subject: REMP data

"Air sample and standing water sample results from US nuclear plant licensees have been entered into a password protected database established by the Nuclear Energy Institute (NEI). NRC and federal partners have access to the plant data."

This is from the daily brief via the RA . Should we continue to ask them to send it if we can get it another way?

Mark

E/28

Ng, Raymond

From: Lennartz, Jay
Sent: Friday, April 01, 2011 7:25 AM
To: Cameron, Jamnes; Mitlyng, Viktoria; Chandrathil, Prema
Cc: LaFlamme, Paul; Garmoe, Alex; Briley, Thomas; Smagacz, Phillip
Subject: FW: Article from Cook
Attachments: Document.pdf

Jamnes, Vika and Prema,

FYI - see attached site newsletter (Plan-It) that contains an article regarding the Japan event from Larry Weber, CNO that will be printed in the local newspaper (Herald Palladium).

The public affairs manager told me yesterday that the site plans to get more pro-active in their communications with the public regarding the Japan event, which drove this article.

Jay

-----Original Message-----
From: JAY.LENNARTZ@NRC.GOV [mailto:jay.lennartz@nrc.gov]
Sent: Friday, April 01, 2011 8:15 AM
To: Lennartz, Jay
Subject:

E/29

INDIANA MICHIGAN POWER
A unit of American Electric Power

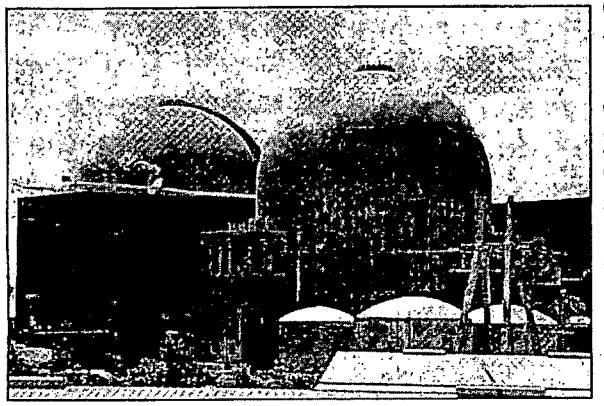
Friday, April 1, 2011

the PLAN-IT
News for employees at Cook Nuclear Plant

Guest newspaper editorial from Larry Weber this Sunday addresses concerns about Japan

Face-to-face

The following guest editorial will be featured in this coming Sunday's local newspaper, The Herald-Palladium. The editorial provides answers to some common questions concerning Cook's ability to safeguard the health and safety of the public — or maybe even your friends and family — in the face of a natural disaster or terrorist threat. If the opportunity arises, you may wish to use some of these points in conversation with folks you know who may have similar questions.



By Larry Weber

As the world continues to watch the tragic circumstances in Japan, we at the Cook Nuclear Plant understand that you may have new questions about living near a nuclear power plant. We have always tried to be open and available to the community, however, we understand the situation in Japan likely calls for increased dialogue.

Cook and all U.S. nuclear plants are designed to handle extreme environmental hazards including tornados, earthquakes or floods. Our plant is located more than 400 miles from the nearest fault line and is engineered to withstand an earthquake of up to 6.4 on the Richter scale. This translates into an even larger earthquake as measured at the epicenter.

Since Cook is located on Lake Michigan, a tsunami is not possible. However, we do have procedures for flooding or a *seiche* – which is a large wave on an enclosed body of water. Seiches, however, are rare occurences. The largest seiche on record near the Cook Plant was 8 feet in 1954. Cook is designed to perform properly if there is an 11-foot seiche or flood.

A tornado is the most likely natural disaster here in the Midwest. The plant is designed to safely shut down despite the effects of an F5 tornado with 300 mph winds. Still, we acknowledge that not all natural disasters are predictable. Please rest assured Cook personnel plan and prepare for severe conditions that may be greater than our design basis.

We all know that the lack of power following the tsunami was a problem in Japan. The transmission switchyards at Cook are a hub of electrical distribution for our region and we have seven separate high-voltage connections to the grid. Each of the two Cook reactors has two locomotive-sized back-up diesel generators that start automatically if offsite power is lost. Only one is required to safely shut down each reactor. These are located in seismically secure rooms 9 feet above lake level. There is also a supplemental diesel generator, something the Japanese plants didn't have, that could safely shut down either unit. This is located 23 feet above lake level.

Cook is participating in a U.S. nuclear industry initiative to verify our capability to protect the public under severe adverse conditions. The Nuclear Regulatory Commission (NRC) is also performing an independent review of our capabilities and has established a task force to develop safety improvement initiatives based on the Japanese events.

Continued on page 2

Industrial Safety

Current 12-Month Rolling OSHA Recordable Rate Estimate.....0.16
Current Combined Site 12-Month Rolling OSHA Recordable Rate Estimate.....0.15
Total Industrial Safety Accident Rate, Current Estimate 0.03
March Safety POPs..... 157 of 167

ALARA Non-Outage Dose

Goal: 6.561R Current.....1.780R

Human Performance Tool

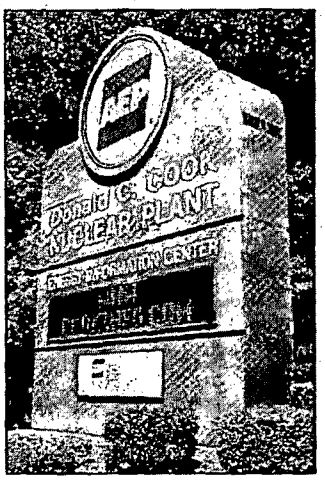
.....Procedure Use & Adherence

Days of Excellence Resets 1
Cook Unit 1 Days on Line 16
Cook Unit 2 Days on Line 117
ERO Team on Duty 3
AEP Stock .....$35.34 -0.16

The Plan-It is published Monday, Wednesday and Friday. Call x2955 or e-mail NGG_Plan-It with questions or ideas for publishing.

Continued from page 1

The emergency response plans at Cook are very detailed and we regularly train and practice with the Berrien County and State of Michigan emergency management groups. On March 1, the NRC and Federal Emergency Management Agency (FEMA) evaluated Cook's emergency preparedness exercise and determined we successfully demonstrated our ability to protect the public in the event of an emergency at the plant.



If you have additional questions, please call (800-548-2555) or email (cookinfo@acp.com). We also have speakers available to talk to your service club, school or church group.

Our thoughts and prayers continue to be with the people in Japan. I personally participate in a daily teleconference with other chief nuclear officers to investigate how we can help. But importantly for you, we will use the lessons learned from Japan's tragic event to ensure that we continue to operate to the highest standards. Your health, safety and security are, and always will be our number one focus. More than 1,100 men and women at Cook – your neighbors – are standing with me on that promise.

Outage preparation: Now recruiting for Area Coordination Team personnel

For folks that are looking for an exciting opportunity to be a part of something big, the Outage Area Coordination Team is looking for new people. Due to the training and familiarity required to get a new person up to speed, the Outage Team is looking for people who can commit to three outages in a row (or more). Specifically, they need people who can contribute at a high energy level for the entire outage and not just on a part-time basis.

But most importantly, this is a major growth opportunity for individuals looking for a challenge. Area Coordinators work with many people all over the plant, interfacing with nearly every production group. They get to see the majority of refueling activities, including reactor disassembly and reassembly.

The Area Coordination Team will be sending out an interactive e-mail this week with more information and an opportunity for you to push a button if you're interested in joining the team.

Don't be shy... you can make a difference! Talk to your manager, check out the e-mail and then push the button. Or contact ***Dean Hubble,*** x2707 with further questions.

Latest ALARA parking spot winner

The RP/ALARA Department would like to recognize ***Mike Crider*** of I&C for making ALARA part his activities during the calibration of transmitter 1-CFA-454. His actions earned him the ALARA parking spot for one week.

Mike and a coworker were calibrating the instrument in the Unit 1 Annulus. The job was estimated for 12 mRem. However, Mike and his teammate worked efficiently and utilized the low dose waiting areas to their advantage, ultimately lowering the dose received to 3.6 mRem total.

Congratulations Mike, and thanks for making ALARA an everyday word.

New Cook Run Club is a fun club

Kal-Haven Runners—(from left): ***Fritz Heimbigner, Mike Dschida, Dave Aubrey, Pete Neu, Kyra Richter, Jim Petro, KateLin Gossman, Stephanie Meyer, Samantha Reyes, Justin Barry, Jocelyn Anleitner,*** and ***Ira Bilancio.***

Calling all runners, casual and serious: Cook has an outlet for you, and it's a lot of fun! Cook Plant recently started its very own Running Club where participants are getting an opportunity to enjoy their sport and each others' company on casual and scheduled running excursions.

Most Thursdays, members gather for a leisurely run on the Grand Mere Trails in Stevensville. But they also participate in a number of organized events as well.

This past weekend, 12 Cook runners participated in a relay run of the 33-mile Kal-Haven trail that runs from South Haven to Kalamazoo. It was a cold morning start, but the bright sun warmed things up as it climbed into the sky for our two six-person relay teams (appropriately named "Unit 1" and "Unit 2"). In spite of some chilly faces and fingers, the group had a great time.

And you can too... Just visit the Wellness page on the Cook Intranet. On the left side bar, click on the "Running Club" link for a calendar of all upcoming opportunities to "get your run on." Or if you have questions, send an e-mail to ***Samantha Reyes*** for more information.

From: Johnson, Michael
To: Chokshi, Nilesh
Subject: FW: EDO Alignment/Pre-briefs for Commission Meetings
Date: Monday, April 04, 2011 9:01:00 AM
Attachments: EDO Alignment, Prebriefs for CM Meetings.doc

Here is the schedule of meetings.

From: Taylor, Renee
Sent: Friday, April 01, 2011 12:51 PM
To: Andersen, James; Ash, Darren; Blount, Tom; Boger, Bruce; Borchardt, Bill; Bowman, Adriane; Boyce, Thomas (OIS); Boyd, Lena; Buckley, Patricia; Cannady, Ashley; Carpenter, Cynthia; Casby, Marcia; Casto, Chuck; Cianci, Sandra; Cohen, Miriam; Collins, Elmo; Collins, Jay; Cooper, LaToya; Corley, Cherrie; Damiano, Debra; Dapas, Marc; Dean, Bill; Dubose, Sheila; EDO_ETAs; Evans, Michele; Flory, Shirley; Garland, Stephanie; Givvines, Mary; Greene, LaTosha; Grobe, Jack; Haney, Catherine; Hasan, Nasreen; Higginbotham, Tina; Holahan, Gary; Howard, Patrick; Johnson, Michael; Kelley, Corenthis; Landau, Mindy; Lee, Pamela; Leeds, Eric; Lockhart, Denise; Lubinski, John; Mamish, Nader; Matakas, Gina; Mayberry, Theresa; McClain, Nicole; McCrary, Cheryl; McCree, Victor; McGinty, Tim; Miles, Patricia; Miller, Charles; Mitchell, Matthew; Muessle, Mary; ODaniell, Cynthia; Owen, Lucy; Pederson, Cynthia; Penny, Melissa; Plisco, Loren; Quesenberry, Jeannette; Riddick, Nicole; Ronewicz, Lynn; Ross, Brenda; Salus, Amy; Satorius, Mark; Scarbrough, Thomas; Schaeffer, James; Schumann, Stacy; Schwarz, Sherry; Sheron, Brian; Sprogeris, Patricia; Tannenbaum, Anita; Taylor, Renee; Terry, Leslie; Thomas, Loretta; Tomczak, Tammy; Uhle, Jennifer; Veltri, Debra; Virgilio, Martin; Walker, Dwight; Weber, Michael; Wiggins, Jim; Williams, Barbara; Zimmerman, Roy
Subject: EDO Alignment/Pre-briefs for Commission Meetings

Please see the attached updated list. Note the 4/14 CM on Japanese Status – Focus on Health Effects of Radiation and the 4/6 Pre-brief have been cancelled.

Thank you,
Renee

EDO ALIGNMENT/PRE-BRIEFS FOR COMMISSION MEETINGS

Updated: 04/01/11

04/14/11 (CANCELLED)
(9:00 – 12:00)
Japanese Earthquake Status – Focus on Health Effects of Radiation

EDO Alignment: **03/28/11 @ 3:00 pm (Joint meeting with 4/28 CM Alignment)**
EDO Pre-brief: **CANCELLED - 04/06/11 @ 4:00 pm**

04/19/11
(9:00 – 12:00)
Part 37 Rulemaking – Physical Protection & Byproduct Material

EDO Alignment: **02/10/11 @ 1:00 pm**
EDO Pre-brief: **03/31/11 @ 10:00 am**

04/28/11
(9:00 – 12:00)
Japanese Earthquake Status – Focus on Station Black-Out

EDO Alignment: **03/28/11 @ 3:00 pm (Joint meeting with 4/14 CM Alignment)**
EDO Pre-brief: **04/14/11 @ 1:00 pm (Rescheduled from 10:00am)**

04/28/11 (POSTPONED – New Date TBD)
(9:00 – 12:15)
ITAAC Related Activities

EDO Alignment: **CANCELLED - 02/28/11 @ 3:30 pm**
EDO Pre-brief: **CANCELLED - 04/18/11 @ 4:00 pm**

05/03/11 (Rescheduled from 05/12/11)
(9:00 – 12:00)
Information Briefing on Emergency Preparedness

EDO Alignment: **04/07/11 @ 1:00 pm (Rescheduled from 04/06/11)**
EDO Pre-brief: **04/18/11 @ 4:00 pm (Rescheduled from 05/02/11)**

05/12/11 (Rescheduled from 05/03/11)
(9:30 – 11:30)
Task Force Review – 30 Day Quick Look Following the Events in Japan

EDO Alignment: **04/07/11 @ 4:00 pm**
(Tentative – Joint meeting with 6/16 CM Alignment)
EDO Pre-brief: **05/02/11 @ 3:00 pm (Rescheduled from 04/18/11)**

05/12/11 (POSTPONED – New Date TBD)
(9:00 – 12:00)
Cumulative Effects of Reactor Regulation

EDO Alignment: **CANCELLED - 03/22/11 @ 9:00 am**
EDO Pre-brief: **CANCELLED - 05/02/11 @ 3:00 pm**

05/27/11
(9:00 – 12:00)
Briefing on Results of AARM

EDO Alignment: **CANCELLED NOT NEEDED - 03/28/11 @ 3:00 pm**
EDO Pre-brief: **05/12/11 @ 3:00 pm**

06/02/11 (Rescheduled from 05/03/11)
(9:30 – 10:30)
Human Capital and EEO

EDO Alignment: **03/17/11 @ 1:00 pm**
EDO Pre-brief: **05/19/11 @ 3:00 pm (Rescheduled from 05/04/11)**

06/06/11
(10:00 – 12:00)
Potential Meeting w/ACRS

EDO Alignment: **CANCELLED NOT NEEDED - 03/29/11 @ 4:00 pm**
EDO Pre-brief: **CANCELLED NOT NEEDED - 05/19/11 @ 3:00 pm**

06/16/11
(9:30 – 11:30)
Task Force Review – 60 Day Quick Look Following the Events in Japan

EDO Alignment: **04/07/11 @ 4:00 pm**
(Tentative – Joint meeting with 5/3 CM Alignment)
EDO Pre-brief: **06/02/11 @ 4:00 pm**

06/16/11 (POSTPONED – New Date TBD)
(9:00 – 12:00)
International Activities or Potential Meeting w/ACRS

EDO Alignment:	**CANCELLED - 04/26/11 @ 1:00 pm**
EDO Pre-brief:	**CANCELLED - 06/06/11 @ 3:00 pm**

NOTE: Please be aware that this list is organized by the Commission meeting date. EDO Alignment meetings are generally scheduled approximately 60 days prior to the Commission meeting. EDO Pre-briefs are scheduled approximately 2 weeks prior to the Commission meeting. All meetings are scheduled based on the availability of the EDO/DEDOs calendars. All meetings are held in conference room O-17B4.

From: Correa, Yessie
To: NRO_Distribution
Subject: Support for Japan
Date: Monday, April 04, 2011 11:58:38 AM

Good Afternoon,

We are seeking volunteers to fold cranes for the "Support for Japan" See link below for more detail information:

http://www.internal.nrc.gov/announcements/items/7781.html

If you have some time and want to learn how to fold them, teach others, or willing to help in organizing this endeavor, please contact the individuals listed below.

We have over 800 cranes folded. We have had such large turnouts at our folding sessions that we are looking for bigger rooms!

While folding is fun and while it is the primary focus of what we are doing now, we still need people to assist in logistical, organizational, recordation, crane wrangling, and other areas. So if folding is not your thing, please know that your talents in other areas will be much appreciated.

Here is the schedule for the week of April 4 to 8.

Monday, April 4, noon to 1 pm, in OWFN 7B4, Susan Uttal and Linh Tran are leading this session.
Tuesday, April 5, 11 am to noon, in the TWFN Technical Library on the 2nd floor, next to the ACRS room, Beth Mizuno is leading this session.
Wednesday, April 6, noon to 1 pm, in OWFN 7B4, Lisa London and Richard Harper are leading this session.
Wednesday, April 6, 11:30 am to 1 pm, at Church Street, Beth Mizuno is leading this session.
Thursday, April 7, noon to 1 pm, in TWFN T-10C2, David Terao is leading this session.
Friday, April 8, noon to 1 pm, in OWFN 7B4, Christine Jochim Boote is leading this session.
Friday, April 8, noon to 1 pm, at Twinbrook, Beth Mizuno is leading this session.

If you have learned how to fold, please come and mentor people who are new to this art.

Coordinators for the various locations:
Beth Mizuno, OWFN, OGC, beth.mizuno@nrc.gov (301) 415-3122
Lisa Regner, OWFN, NRR, lisa.regner@nrc.gov (301) 415-1906
Max Smith, OWFN, OGC, maxwell.smith@nrc.gov (301) 415-1246
Yessie Correa, TWFN, Yessie.Correa@nrc.gov (301) 415-6522

E/31

Elizabeth Deahl, TWFN, Elizabeth.deahl@nrc.gov (301) 415-5684
Kimberly Tene, Church Street, Kimberly.Tene@nrc.gov (301) 251-7533
Stacy Schumann, Twinbrook, stacy.schumann@nrc.gov (301) 492-3500
Glenn Dentel, Region I, glenn.dentel@nrc.gov (610) 337-5233
Kathleen O'Donohue, Region II, Kathleen.ODonohue@nrc.gov, (404) 997-4469
Hironori Peterson, Region III, hironori.peterson@nrc.gov (630) 829-9707

Please feel free to give the coordinator for your office or building a call if you have any questions.

Thanks,
Yessie Correa
Office of New Reactors
U. S. Nuclear Regulatory Commission
Yessie.correa@nrc.gov
301-415-6522

From: Weber, Michael
To: Mamish, Nader
Cc: Dembek, Stephen; LIA06 Hoc; LIA08 Hoc; Williams, Shawn; Virgilio, Martin; Miller, Charles; Sanfilippo, Nathan; Leeds, Eric; Wiggins, Jim; Johnson, Michael; Haney, Catherine; Sheron, Brian; Droggitis, Spiros; Schmidt, Rebecca; Powell, Amy; Brenner, Eliot; Hayden, Elizabeth
Subject: RESPONSE - CSIS INVITATION: Nuclear Safety After Fukushima
Date: Monday, April 04, 2011 10:44:53 AM

Great. Thanks, Nader

From: Mamish, Nader
Sent: Monday, April 04, 2011 8:37 AM
To: Weber, Michael
Subject: FW: QUERY - CSIS INVITATION: Nuclear Safety After Fukushima

Steve Dembek will participate and share insights w/the team.

From: Weber, Michael
Sent: Friday, April 01, 2011 4:49 PM
To: Doane, Margaret; Mamish, Nader
Cc: LIA06 Hoc; LIA08 Hoc; Brenner, Eliot; Schmidt, Rebecca; Boger, Bruce; Thaggard, Mark; Muessle, Mary; Andersen, James; Leeds, Eric; Haney, Catherine; Sheron, Brian; Johnson, Michael; Virgilio, Martin
Subject: QUERY - CSIS INVITATION: Nuclear Safety After Fukushima

Does OIP want to take the lead in participating in this seminar for NRC? Someone should attend, listen, and share highlights back here to the rest of our team. If OIP cannot support, please advise.

From: CSIS Proliferation Prevention Program [mailto:tspitzer-hobeika@csis.org]
Sent: Friday, April 01, 2011 4:11 PM
To: Weber, Michael
Subject: CSIS INVITATION: Nuclear Safety After Fukushima

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The CSIS Proliferation Prevention Program is pleased to bring two expert panels

together to analyze the current situation and its impact on U.S. and international nuclear safety.

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from 2:00pm to 5:00pm
B1 Conference Center
CSIS, 1800 K Street NW, Washington, DC 20006

Speakers:

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

2:15-3:45: National Responses
Mr. Alex Flint, Senior Vice President for Governmental Affairs, Nuclear Energy Institute (Invited)
Ms. Ellen Vancko, Nuclear Energy and Climate Change Project Manager, Union of Concerned Scientists
Mr. Mark Holt, Specialist in Energy Policy, Congressional Research Service

3:45-5:00: International Responses
Dr. Olli Heinonen, Senior Fellow, Belfer Center for Science and International Affairs, Harvard Kennedy School
Mr. Carlton Stoiber, Chair of the Nuclear Security Working Group, International Nuclear Law Association
Ms. Carol Kessler, Chair of the Nonproliferation and National Security Department, Brookhaven National Laboratory

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

From: NRO_TLCOORDINATOR Resource
To: NRO_TLCOORDINATOR Resource
Subject: New Japan TACs
Date: Monday, April 04, 2011 9:45:42 AM

To: All NRO Employees

Subject: NEW TACS ASSOCIATED WITH SUPPORTING THE EVENTS IN JAPAN

In the HRMS Bulletin issued the afternoon of April 1, 2011, the OCFO announced new TACs effective this pay period (beginning March 27). If you need the TAC added to your time entry profile, please reply with an e-mail to this account, NRO_TLCOORDINATOR Resource, listing the TACs you need. Your support in assuring time is reported completely and accurately supports the cost recovery reporting for the agency.

From: HRMSBulletin Resource
Sent: Friday, April 01, 2011 1:59 PM

NRC will need to provide information relating to the costs associated with supporting the events in Japan that directly relates to the Earthquake and Tsunami. For pay periods 6 and 7 we created TAC ZG0061, this was used by all staff that directly performed duties that supported the Japan event. Going forward starting with pay period 8(March 27 – April 9), we will need to track any costs associated with support of the Japan event relating to the earthquake and tsunami in greater detail. Please do not use TAC ZG0061 after pay period 7 (PP 7 ended March 26, 2011). The separation into multiple TAC's for different activities is necessary for appropriate fee billing.

The new TAC's are listed below with a brief description.

ZG0064 – Japan Support Team (In Japan). This TAC is to be used to record hours worked while employees are in Japan, for those employees who traveled to Japan to support the earthquake and tsunami.

ZG0063 – Japan Event HQ Operations Watchstanders. This TAC is to be used to record hours worked when employees are working in the Operations Center. This is for employees who are working directly on activities that are supporting the Japan events relating to the earthquake and tsunami and who did not travel to Japan.

ZG0062 – Work Performed, Lessons Learned relating to the Japan Event. This TAC is to be used for work that will be performed by staff in the agency as a lessons learned approach to improve the NRC's ability relating to operating reactors. This TAC is not to be used for any work that is described in the TAC's above.

Administrative Assistants: Admin staff sees an increase in document processing and it is just because the agency is responding to the Japan event – this would be considered

normal routine admin work (ZS0000). If the administrative assistant is actually manning the OP center they should use the new TAC.

Management: Managers should use the management TAC (ZM0000) unless they are manning the OP Center. For example: Mike Johnson our Director, is called to do shift work in the OP Center, he should use the new TAC. If Mike Johnson has been repeatedly called to find additional NRO reactor specialists relating to the Japan Crisis, that is normal management work.

It will not be necessary to do corrected cards for pay periods prior to pay period 8, the Division of the Controller will make all necessary corrections.

Raione, Richard

From: Raione, Richard
Sent: Monday, April 04, 2011 2:55 PM
To: See, Kenneth
Subject: FW: Briefing external flooding events to Japan Near-Term Evaluation Task Force

---

From: Jones, Henry
Sent: Monday, April 04, 2011 2:48 PM
To: Chokshi, Nilesh
Cc: Raione, Richard
Subject: FW: Briefing external flooding events to Japan Near-Term Evaluation Task Force

-----Original Appointment-----
From: Jones, Henry
Sent: Monday, April 04, 2011 10:52 AM
To: Sanfilippo, Nathan
Subject: Accepted: Briefing external flooding events to Japan Near-Term Evaluation Task Force
When: Thursday, April 07, 2011 9:00 AM-11:00 AM (GMT-05:00) Eastern Time (US & Canada).
Where: T6C1

Raione, Richard

From: Raione, Richard
Sent: Monday, April 04, 2011 2:55 PM
To: See, Kenneth
Subject: FW: tsunami briefing
Attachments: Request for briefing to the Japan Near-Term Task force on tsunami and other flooding issues

FYI

From: Jones, Henry
Sent: Monday, April 04, 2011 2:50 PM
To: Chokshi, Nilesh; Raione, Richard
Subject: tsunami briefing

When: Wednesday, April 06, 2011 9:00 AM-12:00 PM (GMT-05:00) Eastern Time (US & Canada).
Where: T-6C01

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

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

Tsunami discussion added to Wednesday agenda to accommodate Annie's availability. Thursday meeting on flooding will continue as planned to discuss other flooding issues.

When: Thursday, April 07, 2011 9:00 AM-11:00 AM (GMT-05:00) Eastern Time (US & Canada).
Where: T6C1

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

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

Additional backgroud in attached email

Henry Jones, Ph.D.

Hydrologist
Hydrologic Engineering Branch, Office of New Reactors
U.S. Nuclear Regulatory Commission
Mail Stop: T-7E18
11545 Rockville Pike, Rockville, MD 20852
Tel: (301) 415-1463
E-mail: Henry.Jones@nrc.gov (NEW)

Raione, Richard

From: Cubbage, Amy
Sent: Friday, April 01, 2011 2:16 PM
To: Kammerer, Annie; See, Kenneth; Jones, Henry
Cc: Raione, Richard; Hogan, Rosemary; Case, Michael; Chokshi, Nilesh; Richards, Stuart; Flanders, Scott
Subject: Request for briefing to the Japan Near-Term Task force on tsunami and other flooding issues

Henry/Ken/Annie:

The Japan Near-Term Evaluation Task force is requesting an informal information briefing on the design basis for tsunami and other external flooding events. I spoke to Scott Flanders this afternoon and he recommended you as the experts in this area. Your support on this request is greatly appreciated. There is no need to develop any new presentation materials. You can speak from existing presentation materials and talking points. I will be sending you an outlook appointment for next week. If you have any presentation materials you plan to use please email them to me in advance and we can get copies made and display them on the computer/projector already setup in the room.

Please contact me if you have any questions,

Thanks,

Amy Cubbage
Japan Near-Term Evaluation Task Force

Palmrose, Donald

From: Palmrose, Donald
Sent: Monday, April 04, 2011 3:39 PM
To: Roach, Edward
Subject: FW: Article of Interest: Arrival time and magnitude of airborne fission products from the Fukushima.....

Ed,

People in your Branch might be interested in this paper also.

Don

From: Palmrose, Donald
Sent: Monday, April 04, 2011 3:26 PM
To: Schaaf, Robert
Cc: Brown, David; Emch, Richard; Clayton, Brent
Subject: Article of Interest: Arrival time and magnitude of airborne fission products from the Fukushima.....

Bob,

Thought you and others in the RSAC Branch might find a technical article of interest about air monitoring in the US of the accident in Japan. The article can be found at http://arxiv.org/abs/1103.4853.

Don

Don Palmrose
Sr. Project Manager
NRO/DSER/RAP3
301-415-3803
T7-F38

E136

Ng, Raymond

From: Phillips, Monte
Sent: Monday, April 04, 2011 3:39 PM
To: Cushman, Brian; Haeg, Lucas; Hartman, Thomas; Jones, Robert; Kemker, Brian; Lords, David; Marshfield, Mark; McGhee, James; Melendez-Colon, Daneira; Morris, R. Michael; Murray, Robert; Orlikowski, Robert; Phillips, Charles; Ramirez, Frances; Thomas, Christopher; Benjamin, Jamie; Betancourt, Diana; Briley, Thomas; Cardona-Morales, Pedro; Carrington, Kenya; Chyu, Doris; Draper, Jason; Jandovitz, John; Lerch, Robert; Nance, James; Ng, Raymond; Phillips, Monte; Sand, Duane; Scarbeary, April; Scott, Christian; Shah, Nirodh; Shah, Swetha; Smagacz, Phillip; Thorpe-Kavanaugh, Meghan; Tran, Frank; Voss, Patricia; Kozak, Laura; Passehl, Dave; Valos, Nicholas; Bilik, Tom; Bozga, John; Hills, David; Holmberg, Mel; Jones, Donald; Jose, Benny; Meghani, Vijay; Neurauter, James; Sanchez Santiago, Elba; Shaikh, Atif; Brown, Carey; Corujo-Sandin, Jorge; Dunlop, Andrew; Feliz-Adorno, Nestor; Jones, Larry; Jones, Michael; O'Dwyer, Gerard; Sheldon, Stuart; Stone, AnnMarie; Tilton, Caroline; Dahbur, Alan; Daley, Robert; Falevits, Zelig; Gilliam, Jasmine; Hafeez, Ijaz; Hausman, George; Langstaff, Ronald; Munir, Mohammad; Szwarc, Dariusz; Winter, Robert; Bramnik, Andrew; Cassidy, John; Dalzell-Bishop, Jennifer; Garza, Michelle; Go, Tony; Herr, Michael; Mitchell, Mark; Orth, Steven; Phalen, Martin; Slawinski, Wayne; Smith, Desiree; Baker, Randal; Beavers, James; Bielby, Michael; Jickling, Robert; Kweiser, Janet; McNeil, Dell; Moore, Carl; Palagi, Bruce; Peterson, Hironori; Reeser, David; Walton, Raymond; Zoia, Charles; Barclay, Kevin; Bartlett, Bruce; Burton, Stephen; Ellegood, John; Garmoe, Alex; Kimble, Daniel; Krsek, Robert; LaFlamme, Paul; Lennartz, Jay; Robbins, John; Ruiz, Robert; Rutkowski, John; Stoedter, Karla; Taylor, Thomas; Wilson, Adam; Zurawski, Paul
Cc: Cameron, Jamnes; Duncan, Eric; Giessner, John; Kunowski, Michael; Lara, Julio; Riemer, Kenneth; Ring, Mark; Dickson, Billy; Skokowski, Richard
Subject: OpE - International - Tsunami Causes Complete Loss of Ultimate Heat Sink and Near Miss Incidents at Fukushima DAINI site

The Subject OpE discusses the events associated with the Earthquake/Tsunami at the Fukushima-Daini site – this is the site that did not lose offsite power, and did NOT have any issues with the core at any of the four units, unlike the situation that is still unfolding at the Fukushima-Daichi site.

You can find this, and all other OpE Coms recently (within the last couple of years) issued at the following link:

http://r3intra.nrc.gov/drp2003/REACTORWEBSITE/Operating%20Experience%20Community/OpE%20community%20forum.htm

In addition, using the NRR OpE gateway, you can select all related issues at the following website:

http://nrr10.nrc.gov/forum/forum.cfm

under All Communications

E137

Vera, Marieliz

From: Ma, John
Sent: Monday, April 04, 2011 10:56 AM
To: Vera, Marieliz
Subject: FW: Re-establish reactor cooling when offsite AC power is available - Do not rush to inject water quickly - Japan Mitigation Strategy

FOIA material

From: Ma, John
Sent: Friday, March 18, 2011 1:01 PM
To: Shams, Mohamed
Subject: RE: Re-establish reactor cooling when offsite AC power is available - Do not rush to inject water quickly - Japan Mitigation Strategy

Thank you!

From: Shams, Mohamed
Sent: Friday, March 18, 2011 1:00 PM
To: Ma, John
Subject: RE: Re-establish reactor cooling when offsite AC power is available - Do not rush to inject water quickly - Japan Mitigation Strategy

John – I gave it to the reactor safety team. Thanks.

From: Ma, John
Sent: Friday, March 18, 2011 12:28 PM
To: Shams, Mohamed; Patel, Pravin; Tegeler, Bret
Cc: Lu, Shanlai
Subject: FW: Re-establish reactor cooling when offsite AC power is available - Do not rush to inject water quickly - Japan Mitigation Strategy

Mohamed:

Please go to the OPC and let them know about this e-mail. Thanks!

From: Lu, Shanlai
Sent: Friday, March 18, 2011 11:46 AM
To: Ma, John
Subject: FW: Re-establish reactor cooling when offsite AC power is available - Do not rush to inject water quickly - Japan Mitigation Strategy

John,

I sent this to operation center. Can you get this to our team in Japan? It is crucial.

Shanlai

From: Lu, Shanlai
Sent: Thursday, March 17, 2011 4:08 PM
To: Operations Center Bulletin
Subject: Re-establish reactor cooling when offsite AC power is available - Do not rush to inject water quickly - Japan Mitigation Strategy

E/38

Dear Sir,

As a senior reactor system engineer, I hope that I can contribute to providing information to our team in Japan. The following is what I thought based on information collected at this point. If you think it is applicable, please forward it to our NRC team in Japan.

With offsite AC power becoming available in the near future, there may be an urge for the plant operator to start the cooling immediately. A sudden injection of large amount of cold water into reactors with a molten core will cause devastating explosion and hydrogen fire because of violent steaming and Zr-water reaction. At this stage, any further explosion or fire will cause further damage on the reactor vessel and containment, and, more release of radiation. We need to minimize the risk of having this situation. Therefore, my recommendation is the following,

Once the AC power is available, pump the cold water into the reactor in a pulsing mode.

1. First pulse – 50 to 100 gallons. Then, stop the pump, wait to see the steam coming out from the containment and watch the vessel internal pressure for 20 minutes or more if instrumentation is still available. By then, these water should have been vaporized and hydrogen will be generated.
2. After 20 minutes, start another pulse of injection, repeat step one.
3. Repeat these steps for 4 hours.
4. Then, shorten the 20 minutes wait time to 10 minutes for another 3 hours.
5. Then, evaluate the situation and make the decision regarding continuous injection of water into the reactor.

Shanlai Lu
NRC/NRO/DSRA/SRSB

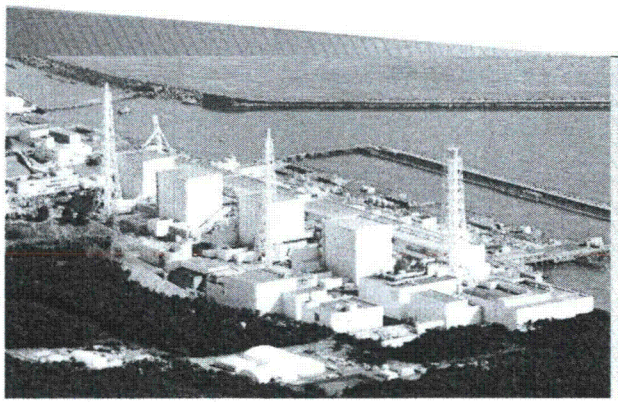
Publicly Internet

E/30

WHAT HAPPENED IN FUKUSHIMA - A TECHNICAL PERSPECTIVE

The Nuclear Accidents at the Mark 1 Boiling Water Reactors (BWR) at Fukishima Daiichi Units 1 - 4 and Implications for American BWR

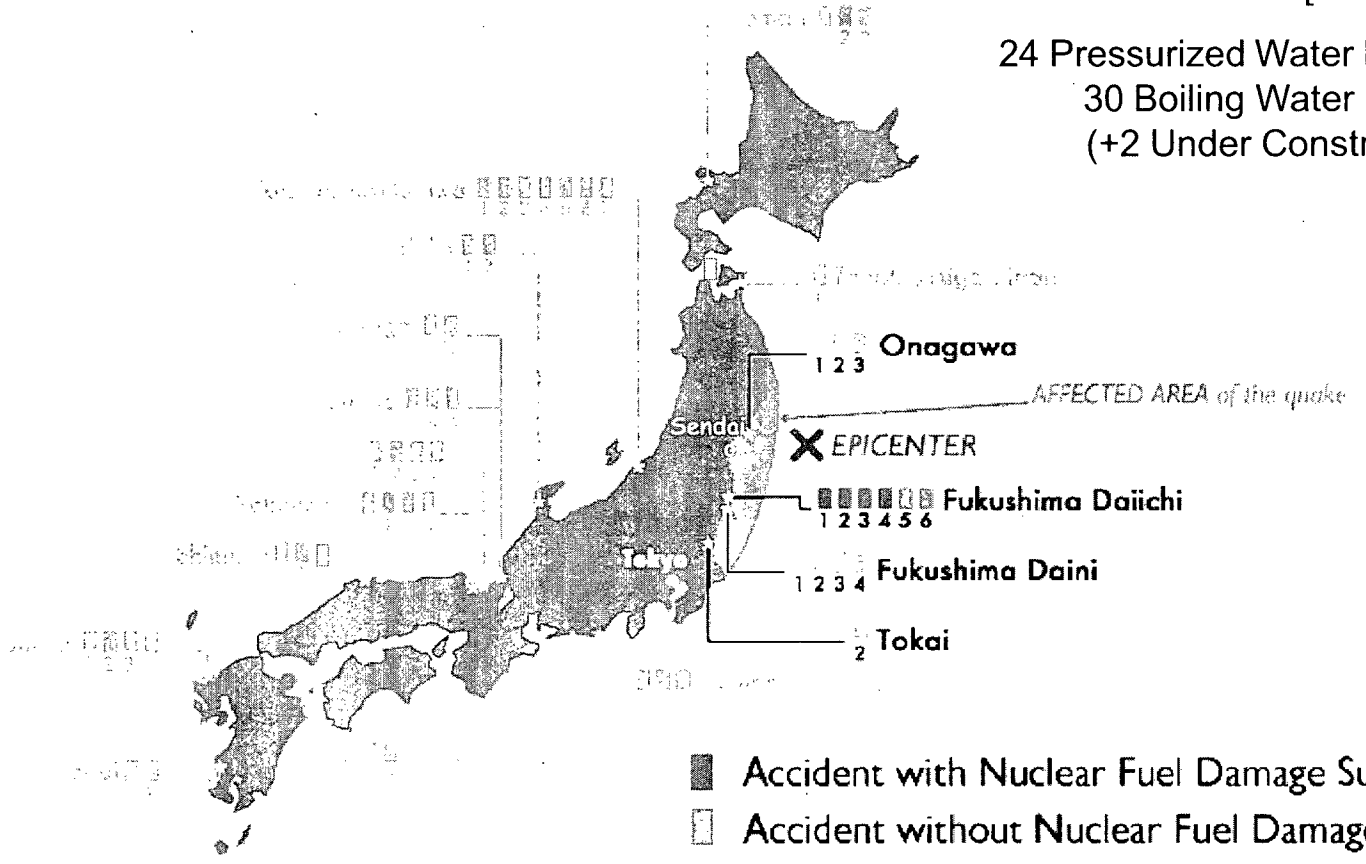
LBNL EETD noon Seminar - April 5, 2011



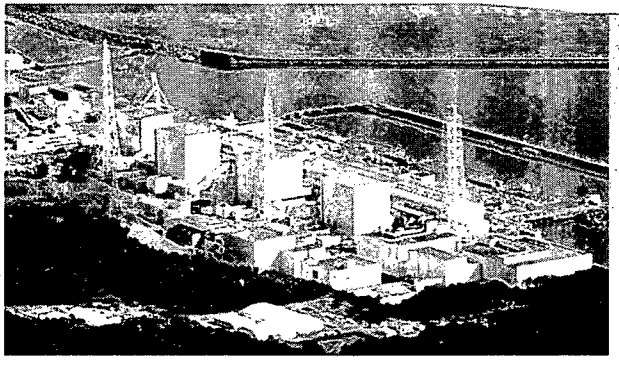
Christian Lobscheid, PE
Senior Mechanical Engineer
Advent Engineering Services, San Ramon, CA

JAPAN: HEAVY RELIANCE ON NUCLEAR POWER [2009: 29%]:

24 Pressurized Water Reactors
30 Boiling Water Reactors
(+2 Under Construction □)

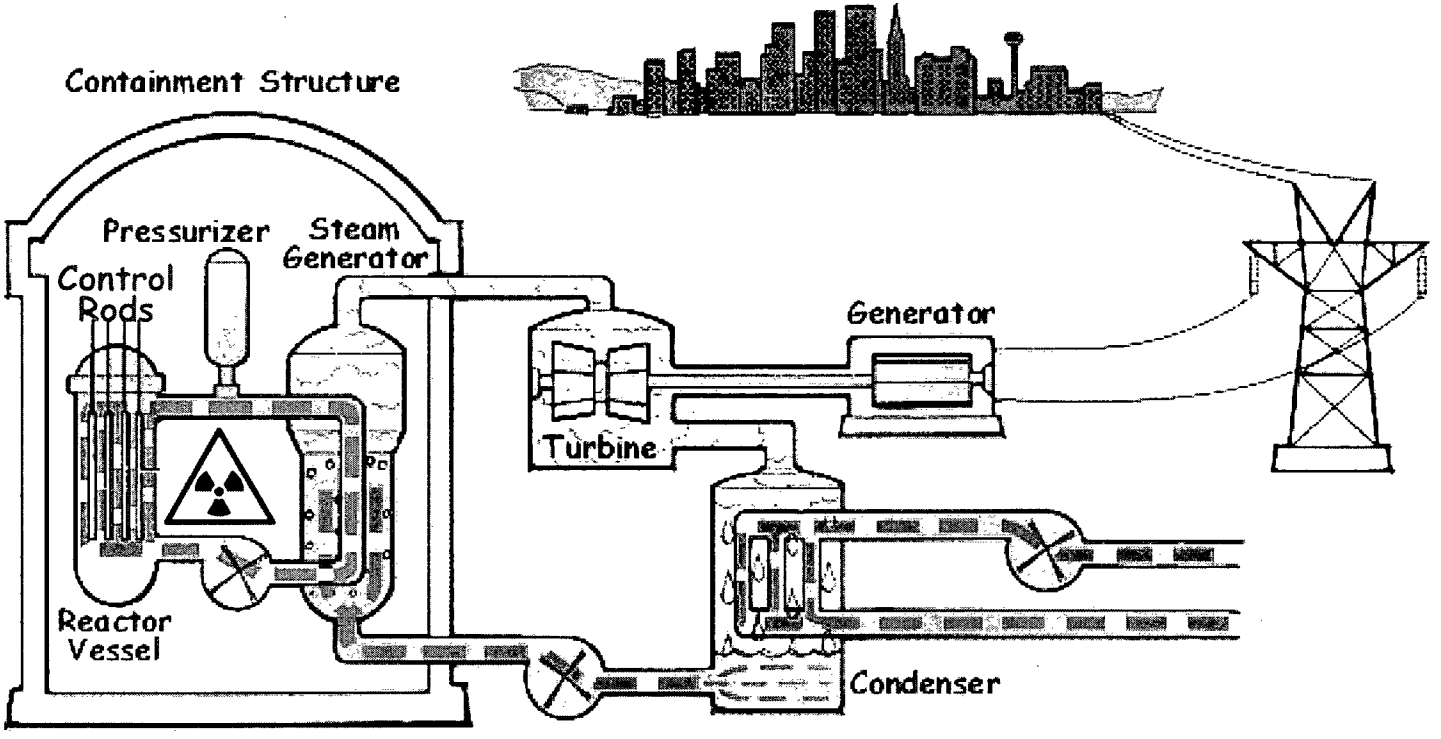


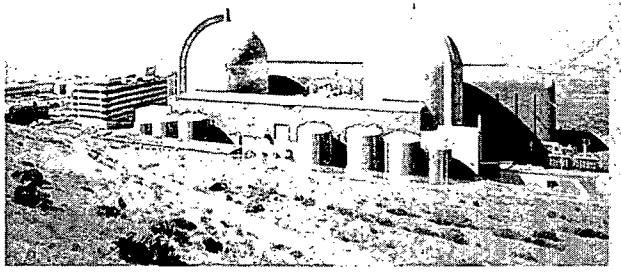
- Accident with Nuclear Fuel Damage Suspected
- Accident without Nuclear Fuel Damage Suspected
- Safe
- Safe (Not affected by the quake)



Source: Japan Atomic Industrial Forum (JAIF)

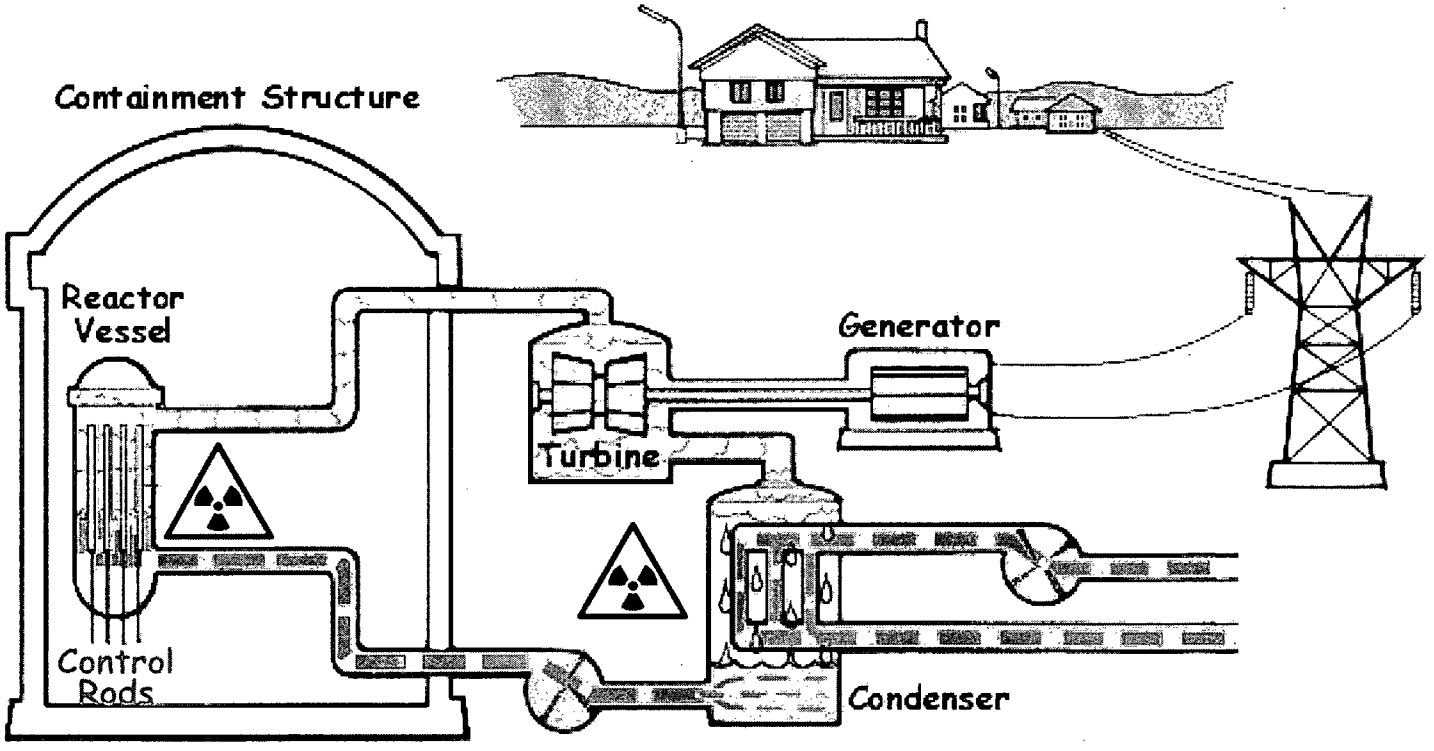
What is a Pressurized Water Reactor [PWR]?

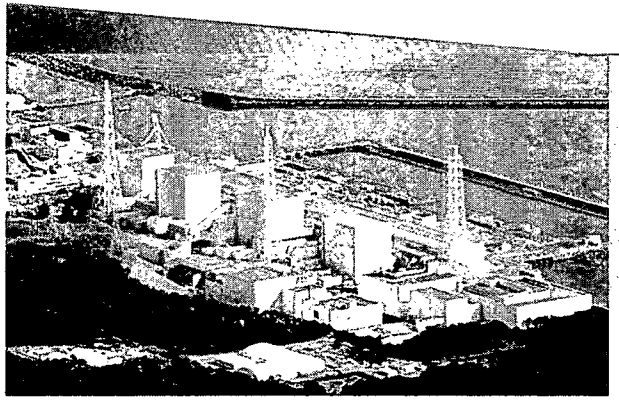




Adapted from U.S. Nuclear Regulatory Commission (NRC), PG&E (Photo)

What is a Boiling Water Reactor [BWR]?



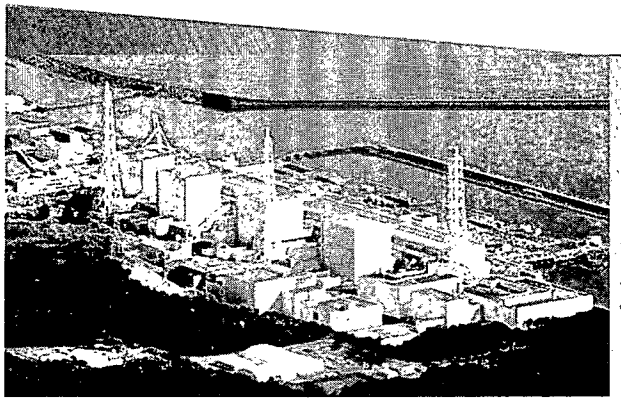


Adapted from U.S. Nuclear Regulatory Commission (NRC)

Key Advantages of Boiling Water Reactors:

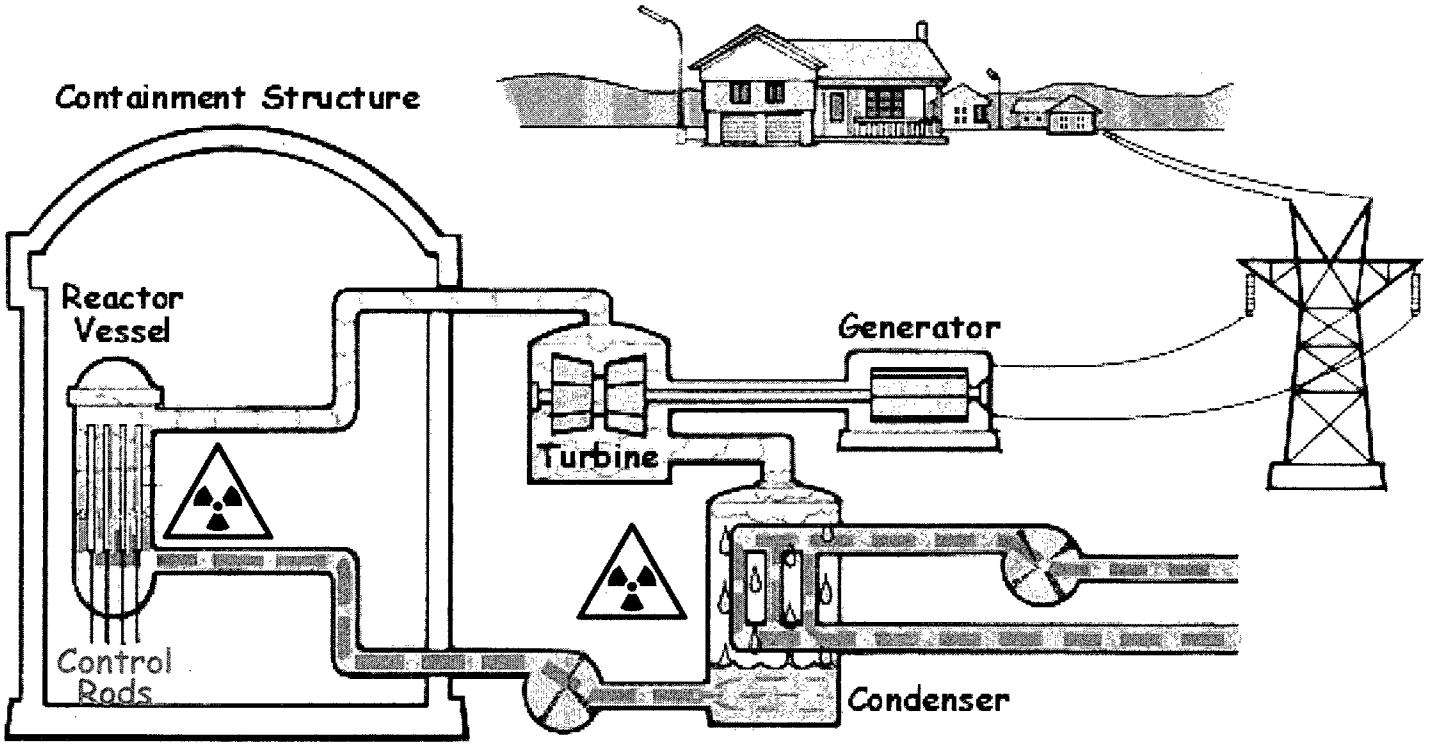
(Besides generating CO_2-free electricity)

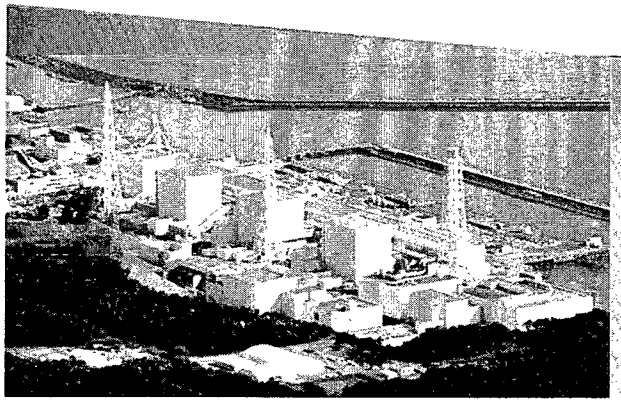
- Fewer components due to no steam generators and no pressurizer vessel (overcompensates larger reactor size due to lower enrichment)
- Operate at a substantially lower pressure (about 75 atmospheres) compared to PWR (about 158 atm) and lower fuel temperature
- Because of single major vendor (GE/Hitachi), current fleet of BWRs have predictable, uniform designs. Invaluable for first responders
- Convenient method for controlling power by simply changing pump flow
- Steam-driven Emergency Core Cooling System (ECCS) directly operated by steam produced after a reactor shutdown (but valves are controlled by battery power)



Sources: GE, Industry, Braun/Stanford Presentation (3/25/2011)

What is a Boiling Water Reactor [BWR]?

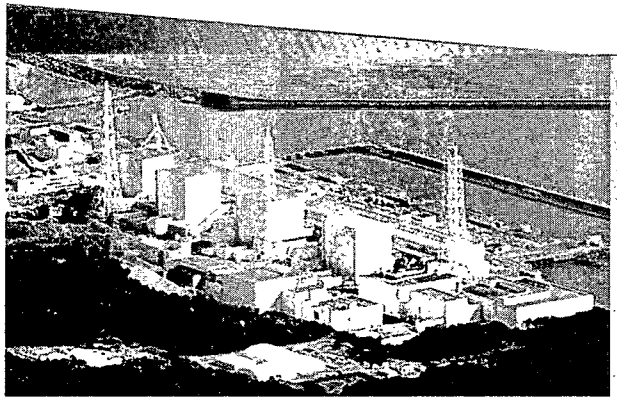




Adapted from U.S. Nuclear Regulatory Commission (NRC)

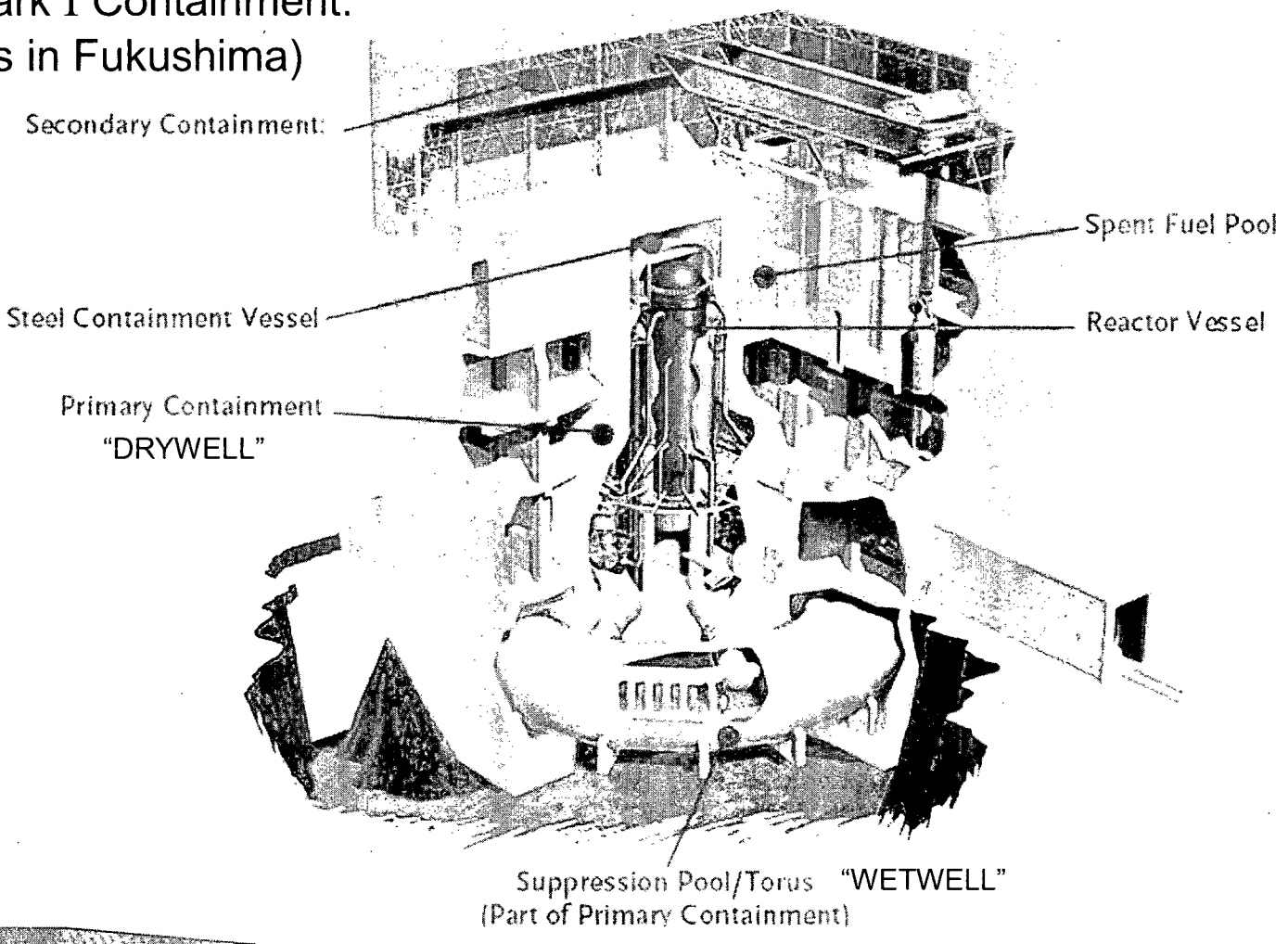
Key Disadvantages of Boiling Water Reactors:

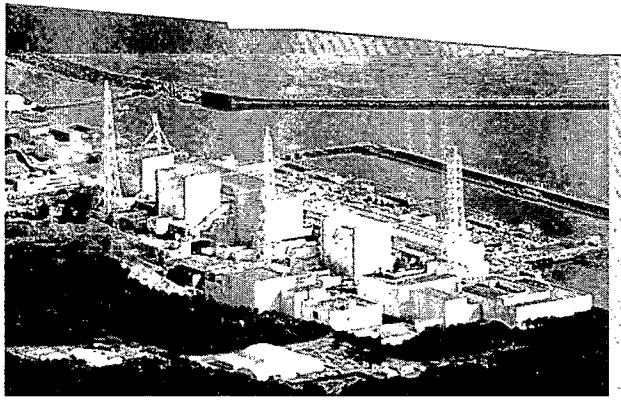
- Single Coolant Circuit - Contamination of the turbine by short-lived radiation (N_{16})
- Requires active cooling for up to to several days following shutdown. Heat generation rate initially 6% of normal power operation, ~1% after 1 day, and ~0.5% after 5 days (enough to melt reactor core)
- Spent fuel pool exposed on top of reactor building in weak secondary containment
- No major BWR reference accident ever happened until Fukushima that could be used for "benchmarking" accident frequencies – this led to overconfidence in BWR design (as explained later)



Sources: GE, Budnitz (2010), Braun/Stanford Presentation (3/25/2011)

BWR Mark I Containment:
(All Units in Fukushima)





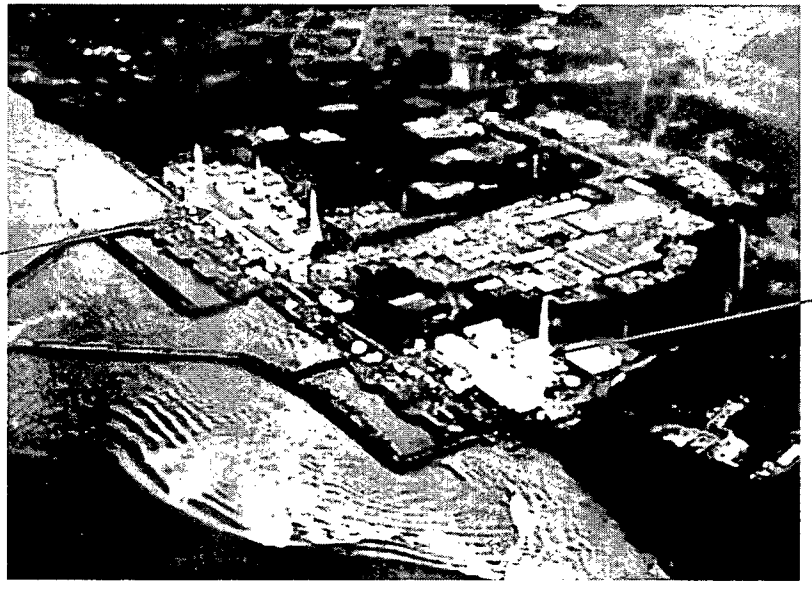
Source: Adapted from Nuclear Energy Institute (NEI, updated 3/23/2011)

What Happened in Fukushima Daiichi?

On March 11, 2011: 14:46 Local Time: 9.0 Earthquake off the coast
Control Rods Inserted as Planned – Shuts Down Units 1-3 [Units 4-6 not operating]
Power grid in Northern Japan fails

15:41 Local Time: **14 m (40 ft) Tsunami** hits. Plant designed only for 6.5 m Tsunami

Units 1, 2, 3, 4
(#4 in Outage)



Units 5 & 6
(in Outage)

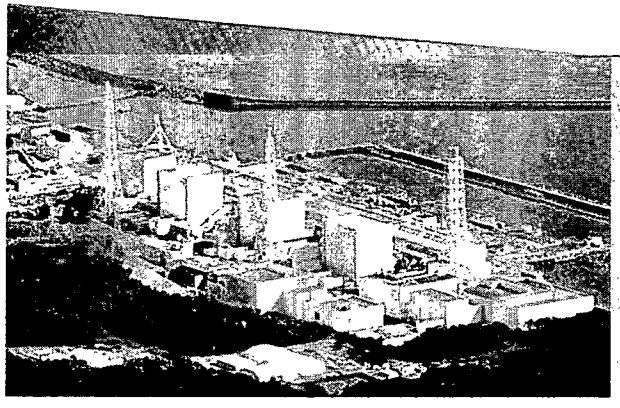
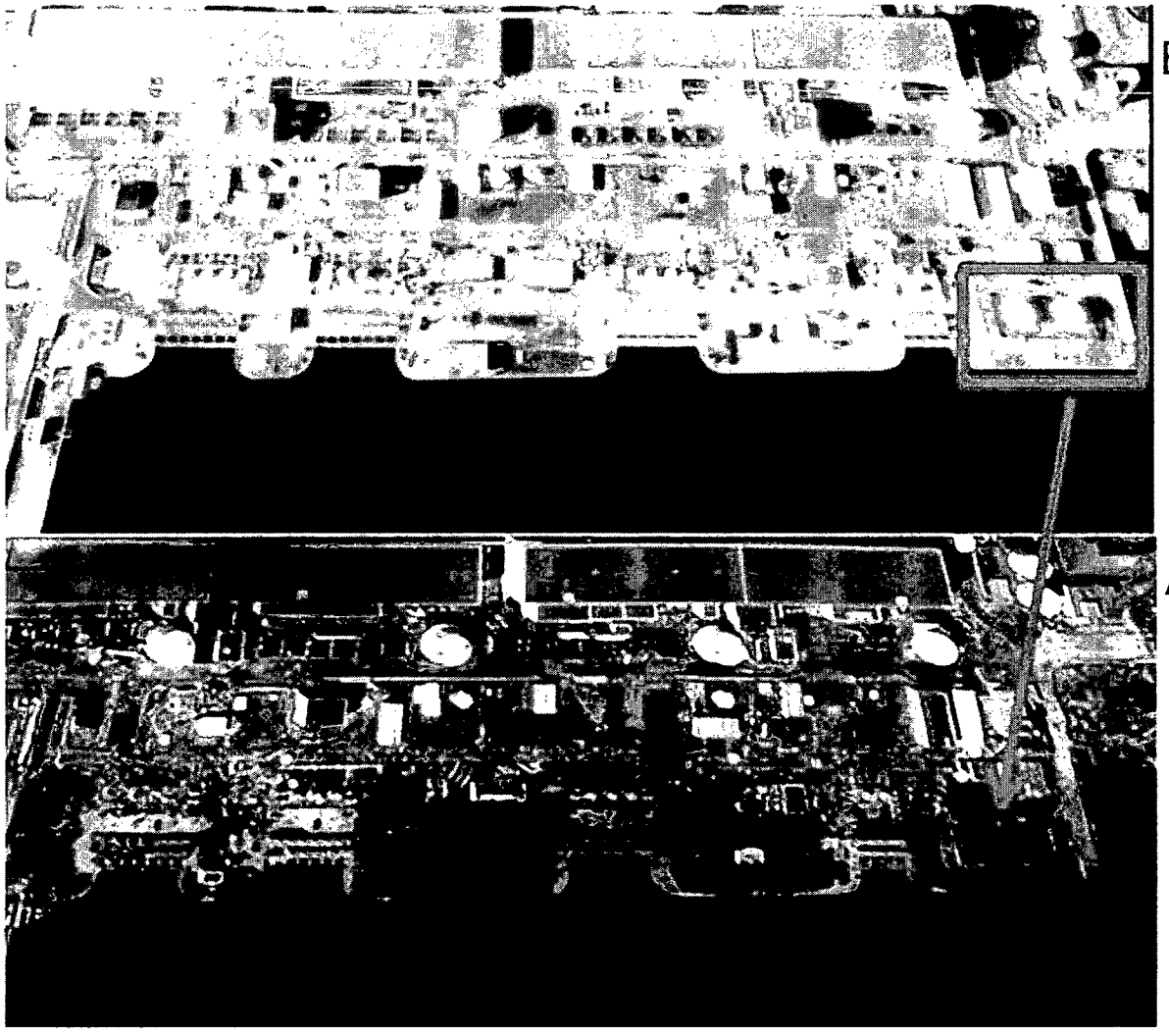


Photo: Japan Land, Infrastructure, Transport and Tourism Ministry (Kyodo)

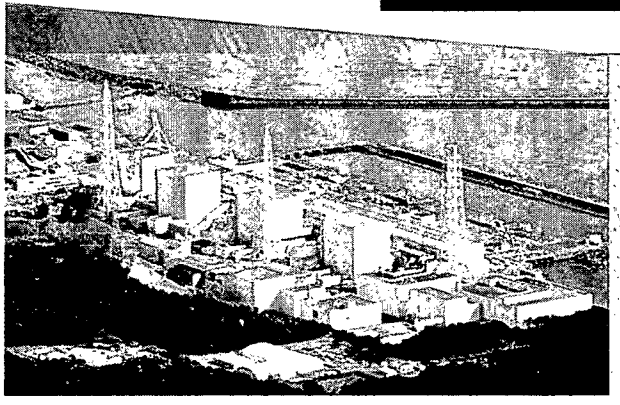
Loss of Diesel Tanks for Emergency Generators

+ Potential Flooding of the 14 Diesel Generators



Before Tsunami

After Tsunami

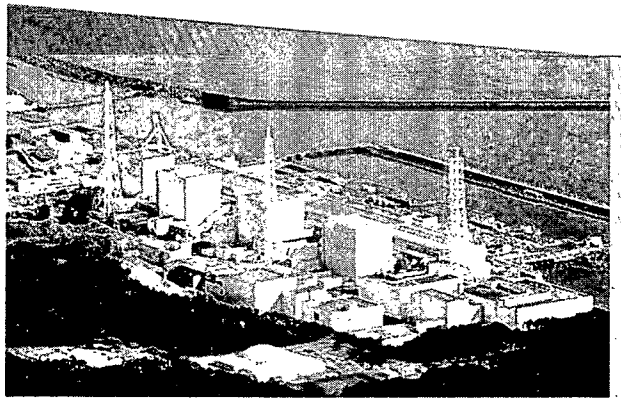


Source for Photos: Digital Globe (comparison by Forbes)

Timeline of Events Between March 11 and 14, 2011

In succession, beginning in Unit 1, then 3 and then 2:

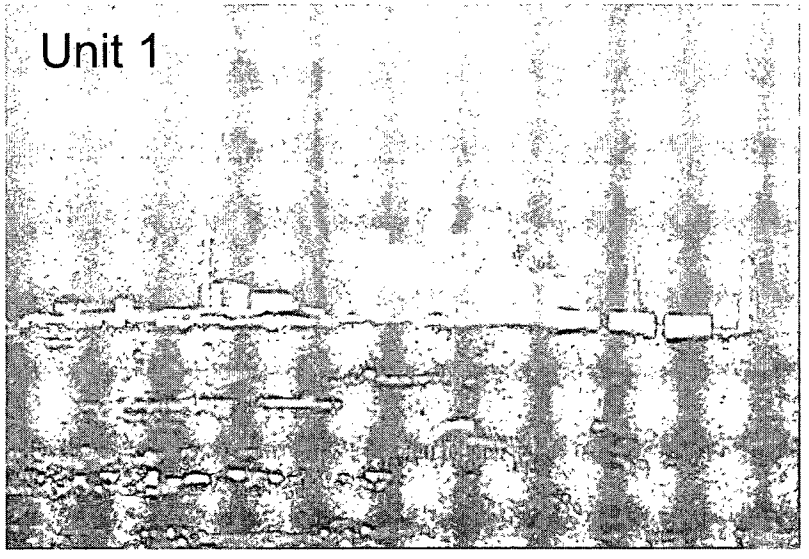
- Batteries run out / Emergency Core Cooling System (ECCS) failure
- TOTAL STATION BLACKOUT ("Beyond Design Basis Accident")
- Pressure in Reactor Vessels Rises – Steam Release Valves Open
- 300 tons of water evaporate each day
- Nuclear fuel in reactors becomes uncovered and overheats
- At ~2200°F, zirconium cladding reacts with steam and generates hydrogen
- In order to prevent containment over-pressurization and failure, hydrogen/steam is vented into atmosphere – but because of design flaw (missing hardened vent) accumulates in secondary containment buildings



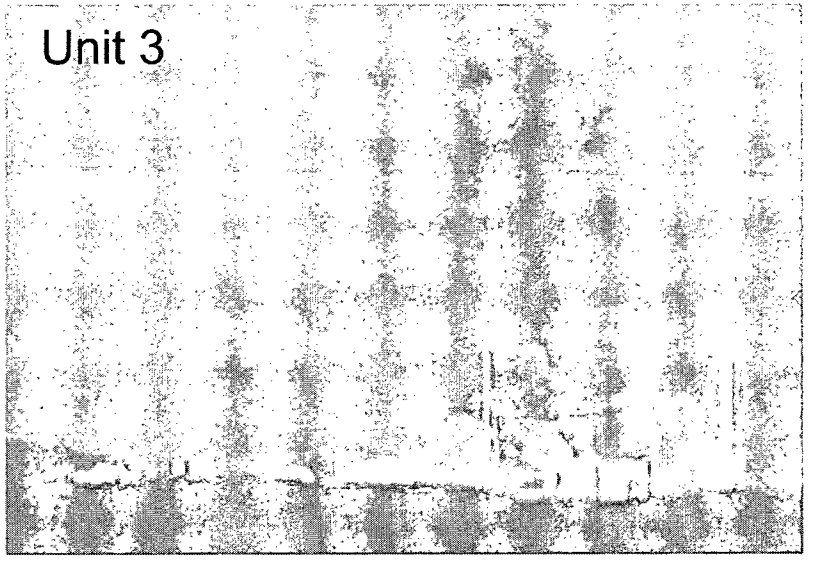
Source: Braun/Stanford Presentation (3/25/2011)

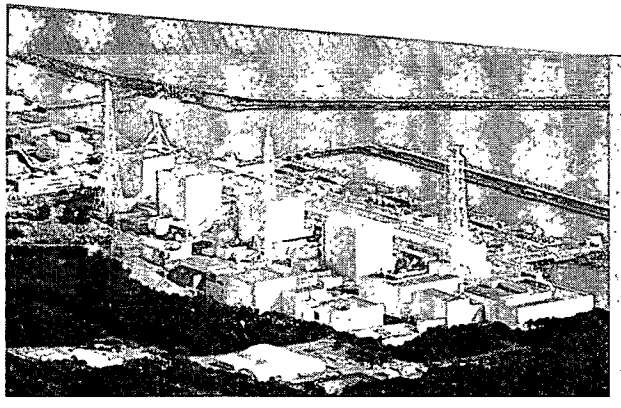
Hydrogen Explosions of outer Secondary Containment Buildings (Primary Containments Believed to be Undamaged at that Time)

March 12



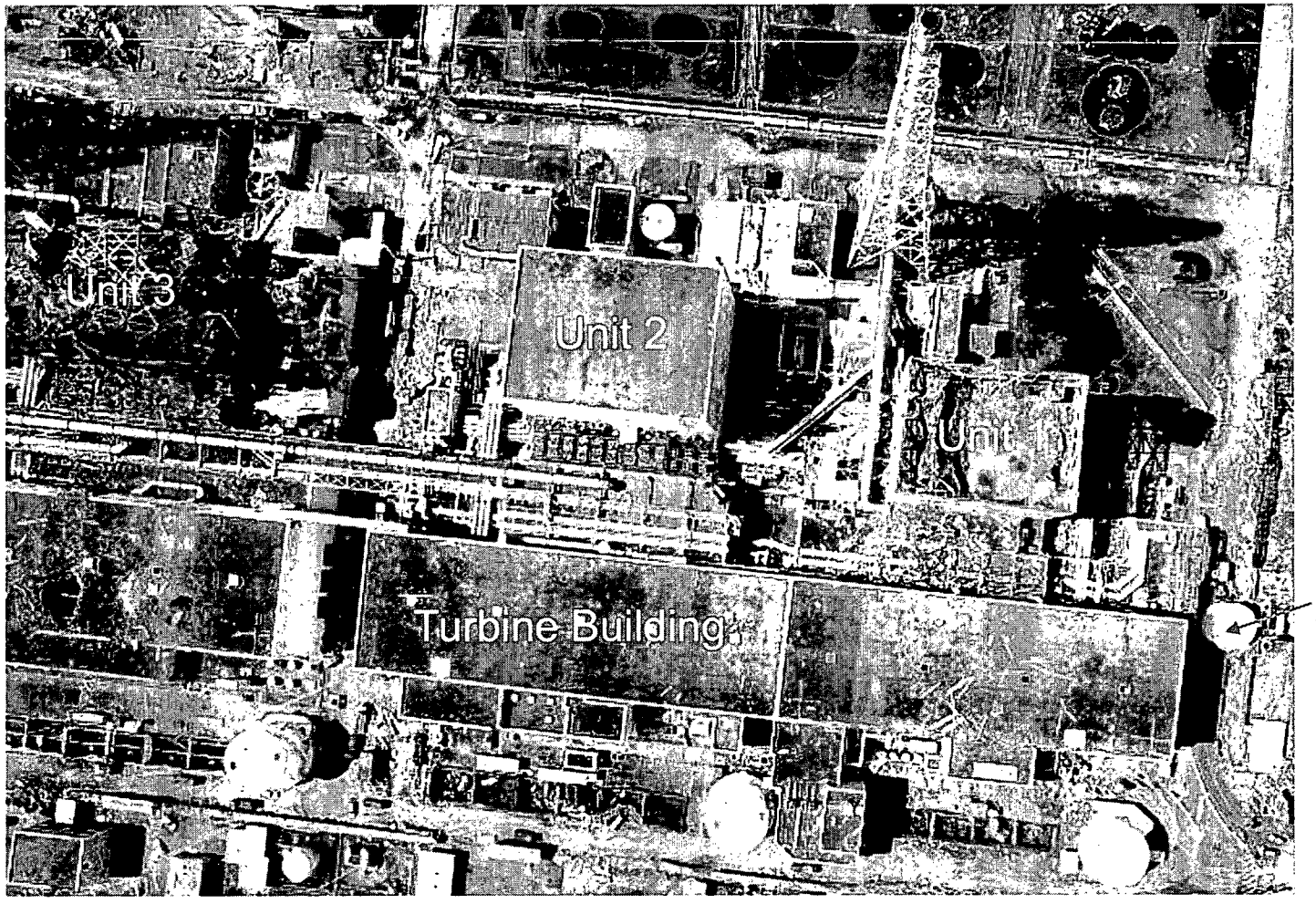
March 14

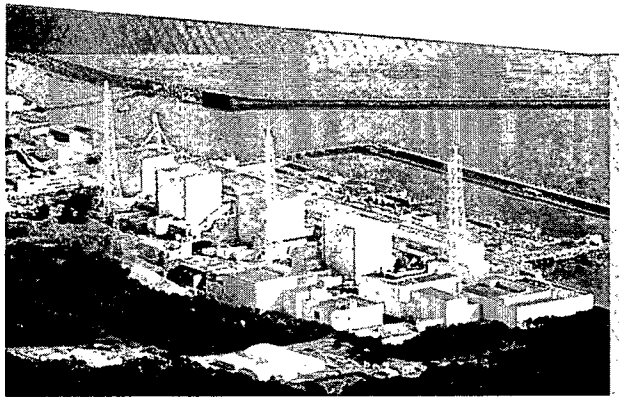




Source: Associated Press

After
March 14





Source: Associated Press / TEPCO

March 15 Hydrogen Explosion and Fires in Secondary Containment Building of Unit 4 (reactor was completely emptied before accident)

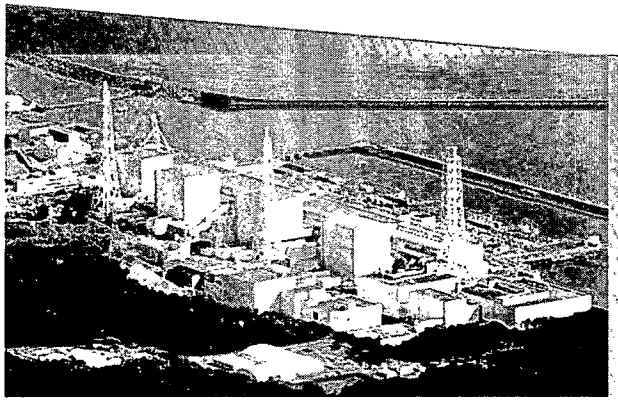
- Spent Fuel Pool uncovered at Unit 4 (Earthquake damage?)
- Nuclear fuel in pool overheats and also generates hydrogen

After March 15,

Only remaining option was to cool the reactor cores at units 1 – 3, and the spent fuel pools at all four units:

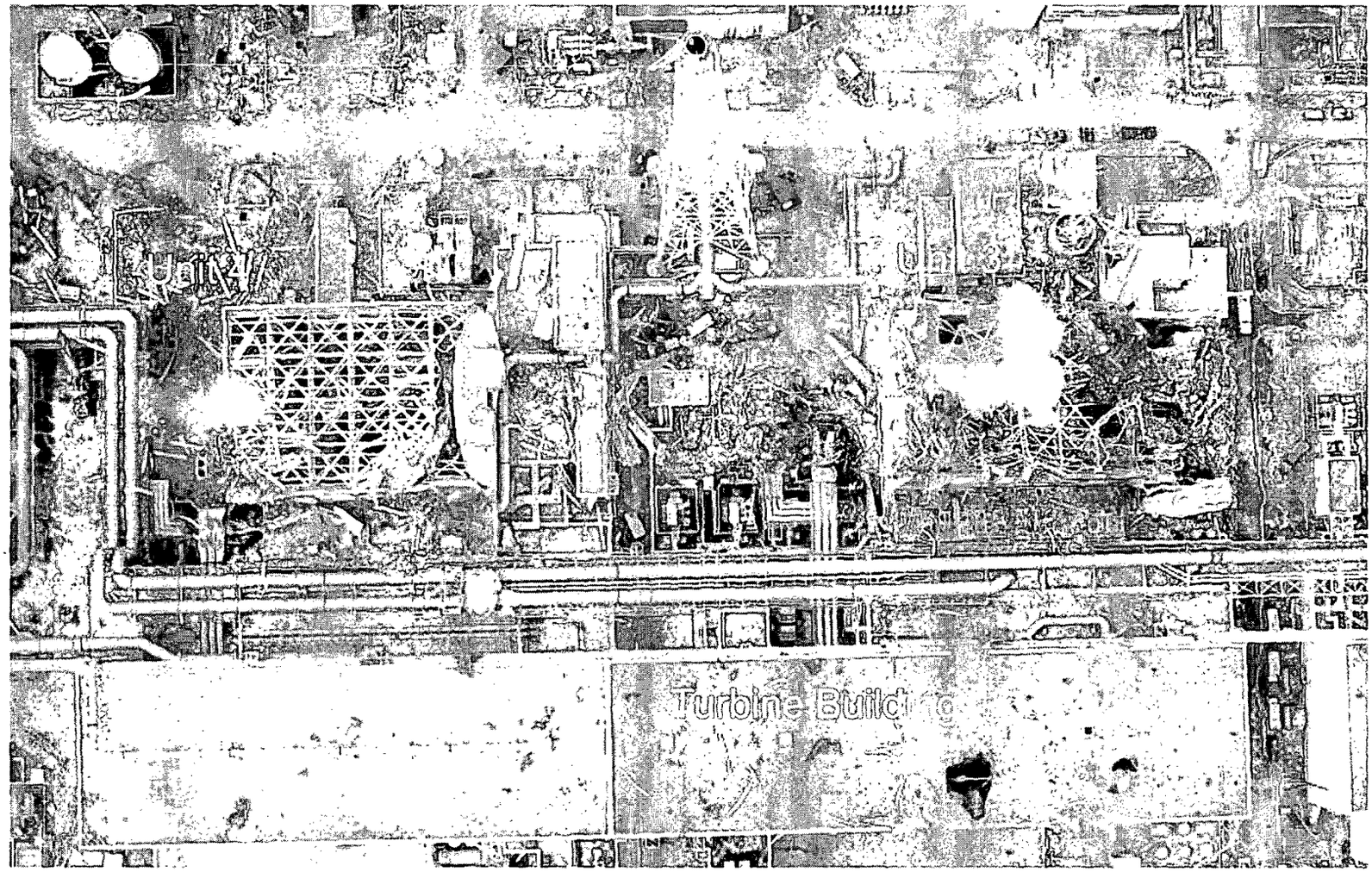
- Seawater was pumped in with mobile equipment (irreparable damage)
- Helicopters and concrete pump dump water on spent fuel pools

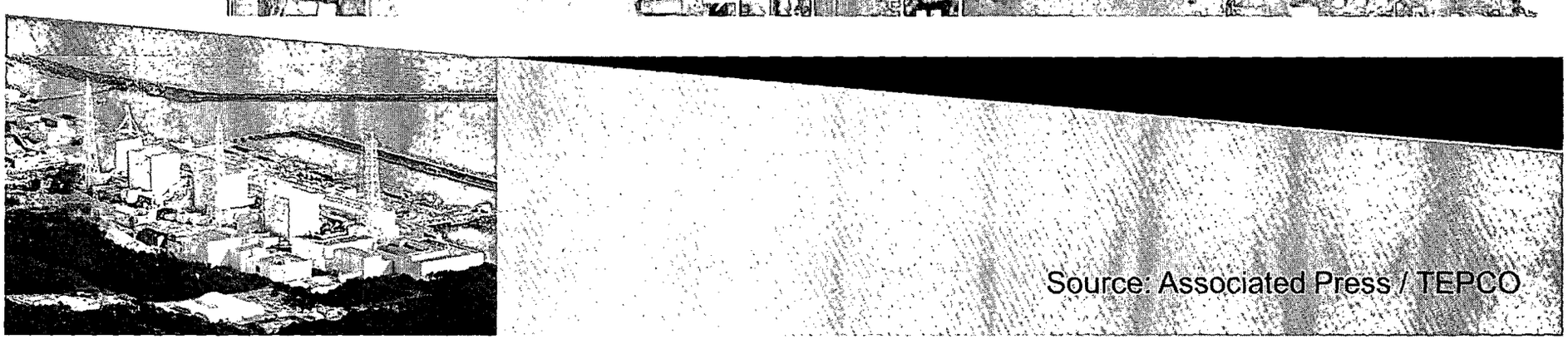
Unit 2 appears to have suffered primary containment damage, radioactive decay products (cesium, iodine) and plutonium released into environment.



Source: JAIF, Braun/Stanford Presentation (3/25/2011)

After
March 15



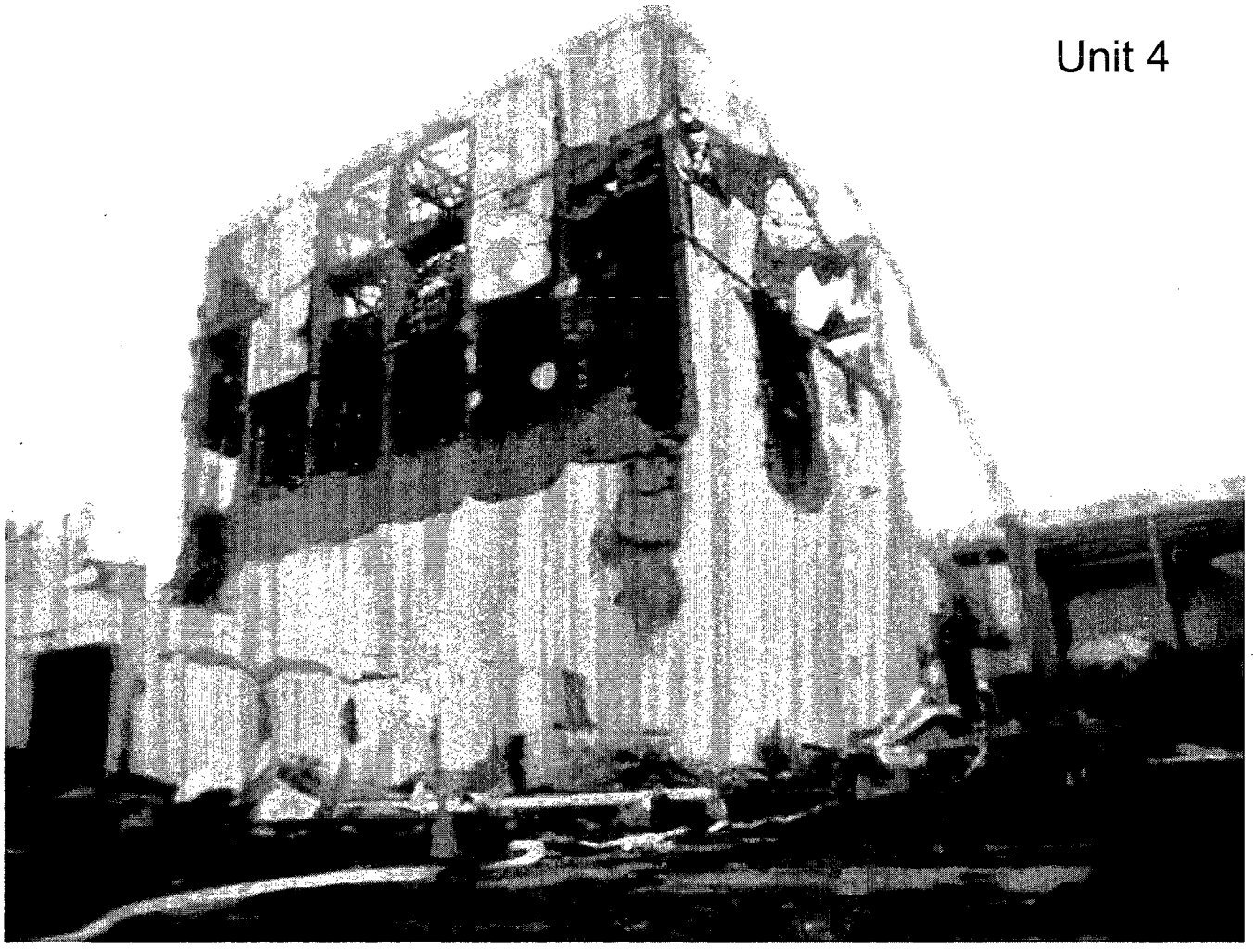


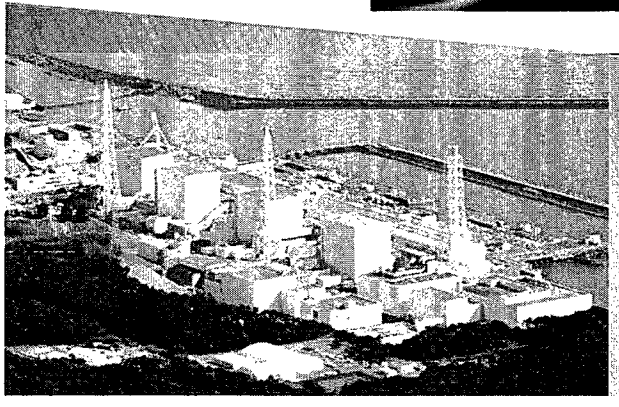
Source: Associated Press / TEPCO

Truck-mounted
concrete pump

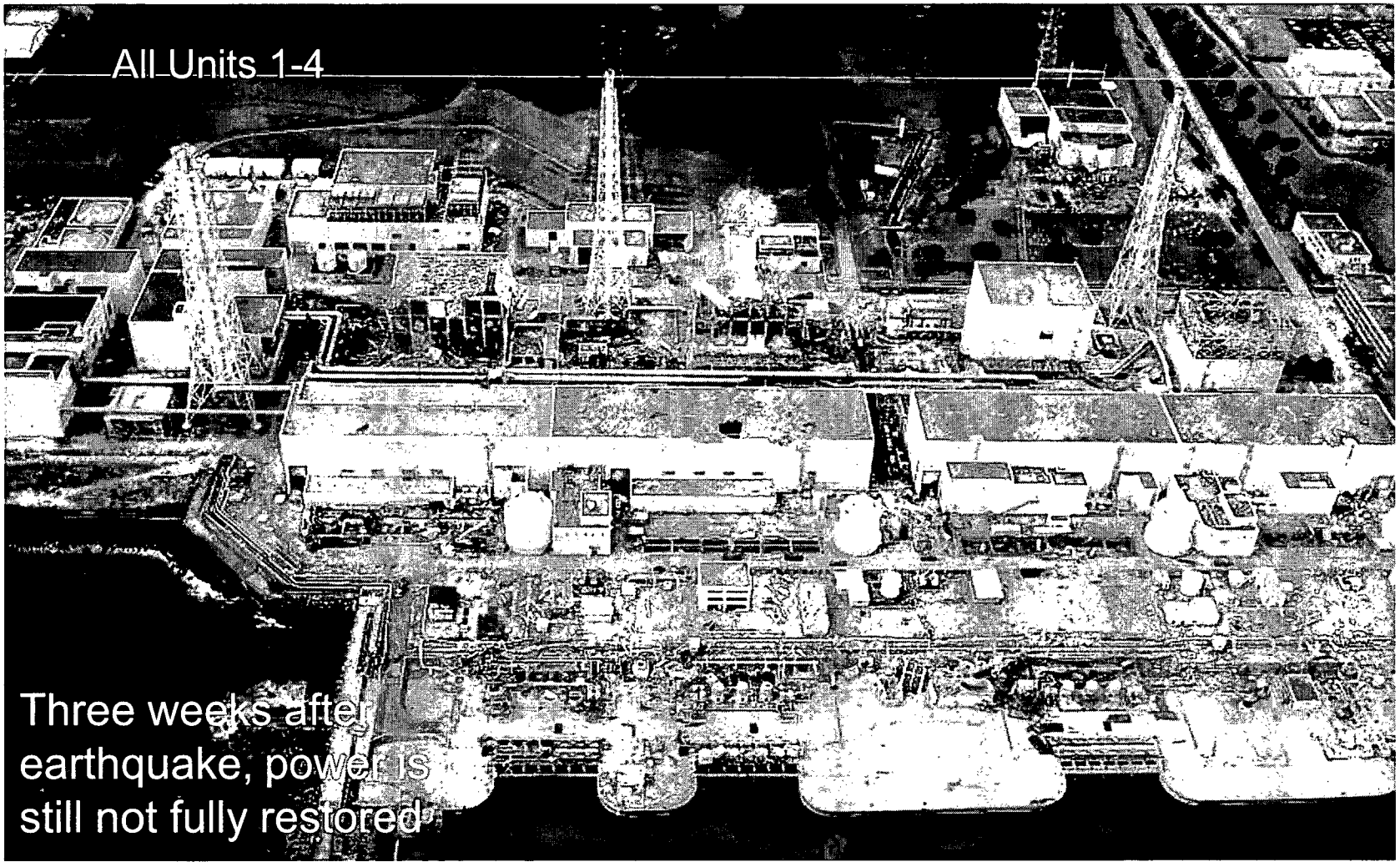
160 m³ water /h

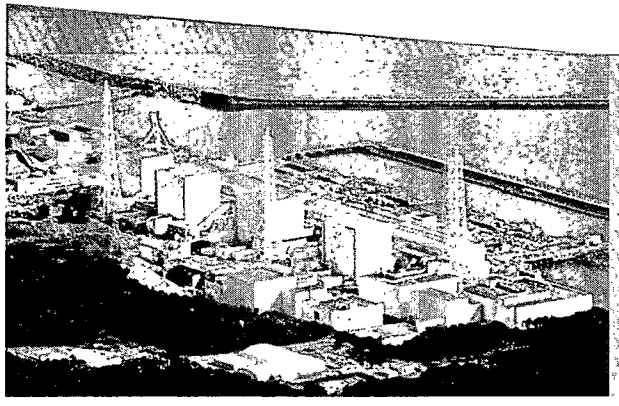
Unit 4





Source: Putzmeister / TEPCO





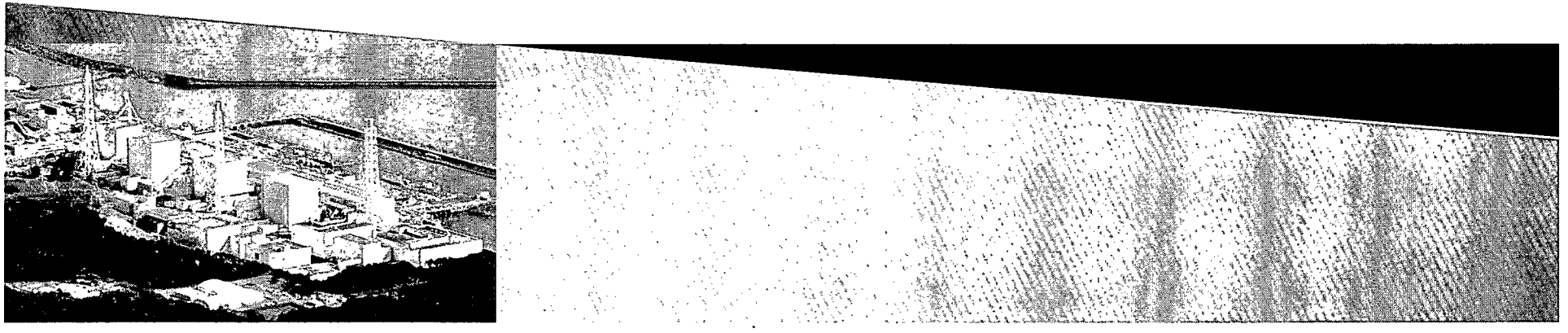
Source: Associated Press

What Went Wrong?

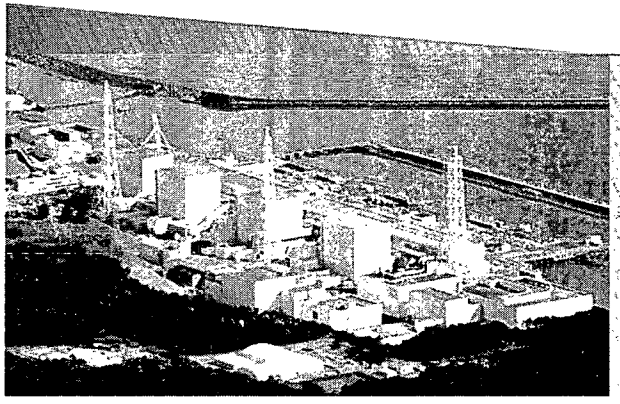
- Overconfidence in BWR design - Japan's Nuclear Safety Commission did not require improvements implemented in U.S. in 1980s.
- Historical information was ignored. Japan trench produced earthquakes of magnitude 8 or higher four times in the past 400 years - 1611, 1677, 1793, and 1896, often accompanied by Tsunamis
- Placement of diesel fuel tanks above ground on waterfront
- History of falsified records by plant owner Tokyo Electric Power (TEPCO)

Ultimately, Nothing can Prepare for at least some very huge

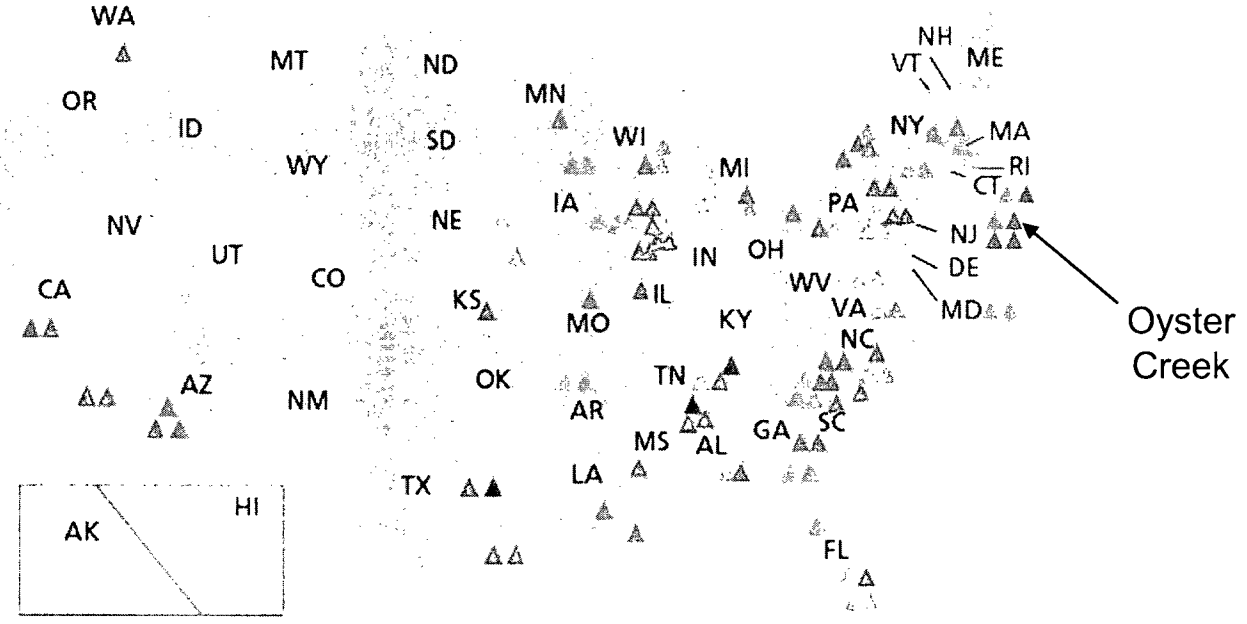
Beyond Design Basis Accidents



What are implications of Fukushima for US nuclear power plants?

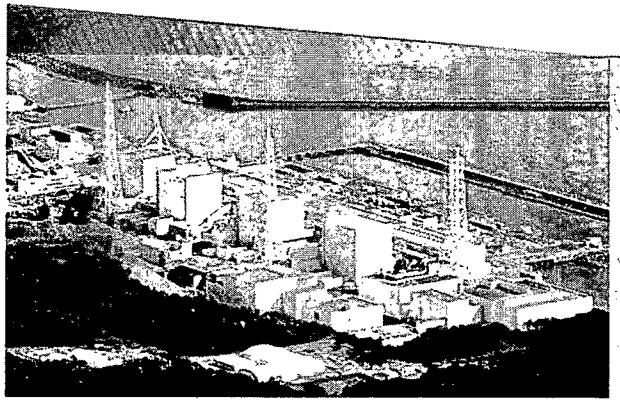


U.S. Commercial Nuclear Power Reactors—
Years of Operation by the End of 2010



Years of Commercial Operation	Number of Reactors
△ 0–9	0
▲ 10–19	3
▲ 20–29	48
▲ 30–39	46
▲ 40 plus	7

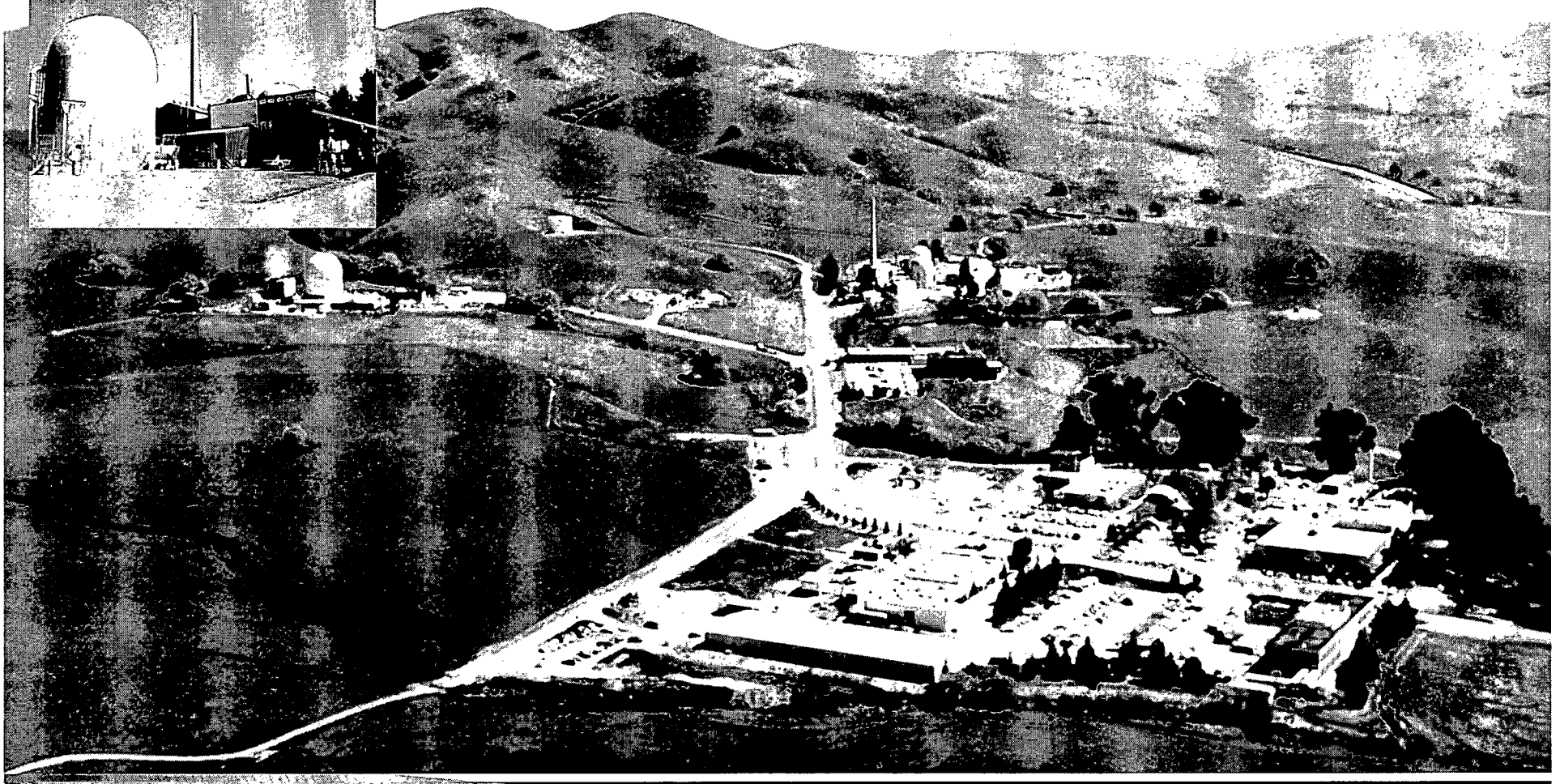
There are 23 Mark I Boiling Water Reactors Operating in the U.S. (Out of 104 PWRs and more advanced BWRs)

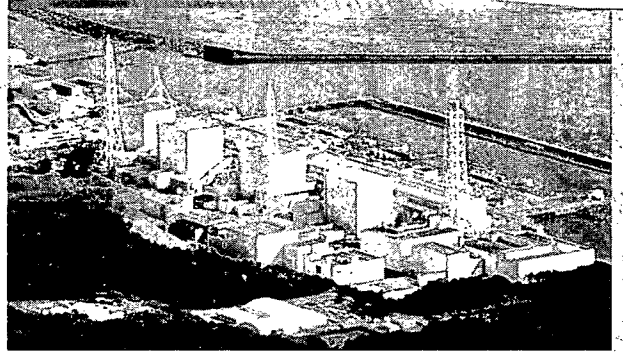


Source: from U.S. Nuclear Regulatory Commission (NRC)

VBWR Vallecitos Boiling Water Reactor, Pleasanton, CA
World's First Commercial Reactor (1957-1967): 30 MWe

GE Boiling Water Reactor Evolution





Sources: GE, Luke Welsh (NDA Tech)

GE Boiling Water Reactor Evolution

VBWR Vallecitos Boiling Water Reactor, Pleasanton, CA
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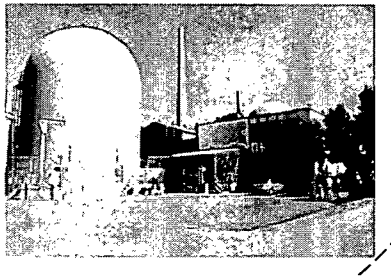
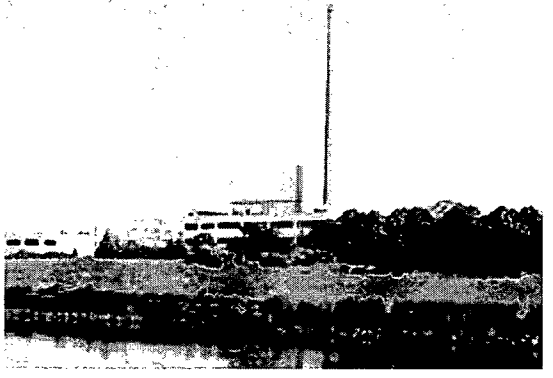


1st generation

Oyster Creek, Ocean County, NJ, Oldest U.S.
Operating Power Reactor (1969): 645 MWe



2nd generation

2nd generation BWRs come in different reactor and containment building designs:

BWR/1	*1960*	Mark I
BWR/2	*1969*	
BWR/3	*1971*	Mark II
BWR/4	*1972*	
BWR/5	*1977*	Mark III
BWR/6	*1978*	

Safer

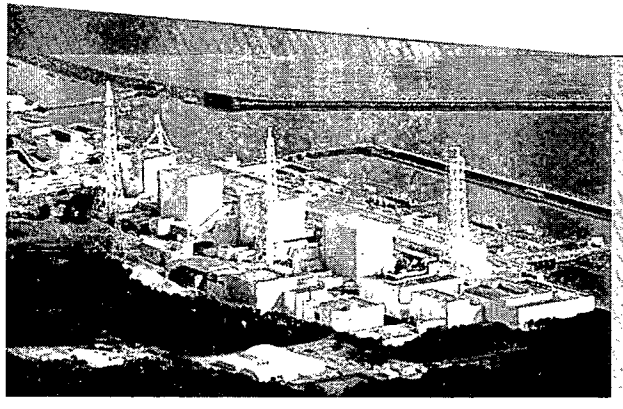


Photo Sources: GE, Luke Welsh, Exelon

GE Boiling Water Reactor Evolution

VBWR Vallecitos Boiling Water Reactor, Pleasanton, CA
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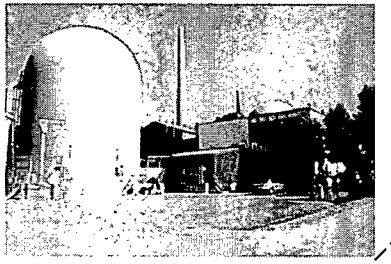

1st generation

Oyster Creek, Ocean County, NJ, Oldest U.S.
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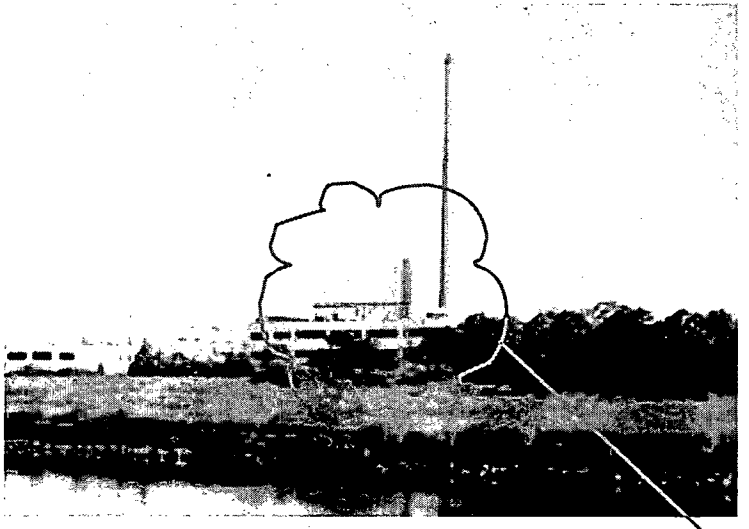


2nd generation

There are 23 Mark I Boiling Water Reactors Operating in the U.S.

Mark I Containment

Fukushima 1 Units 1-6

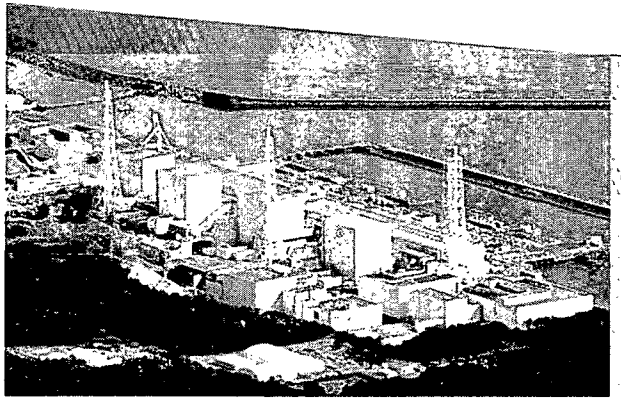
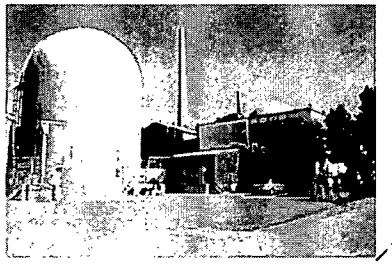


Photo Sources: GE, Luke Welsh, Exelon

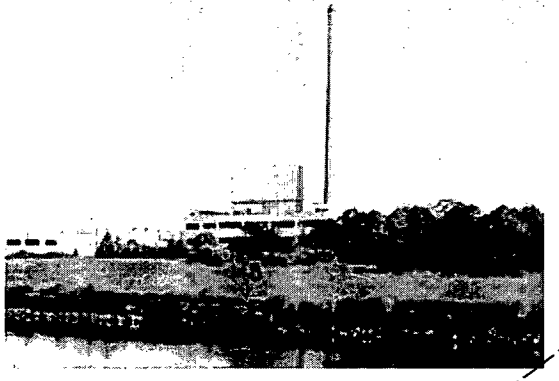
GE Boiling Water Reactor Evolution

VBWR Vallecitos Boiling Water Reactor, Pleasanton, CA
World's First Commercial Reactor (1957-1967): 30 MWe



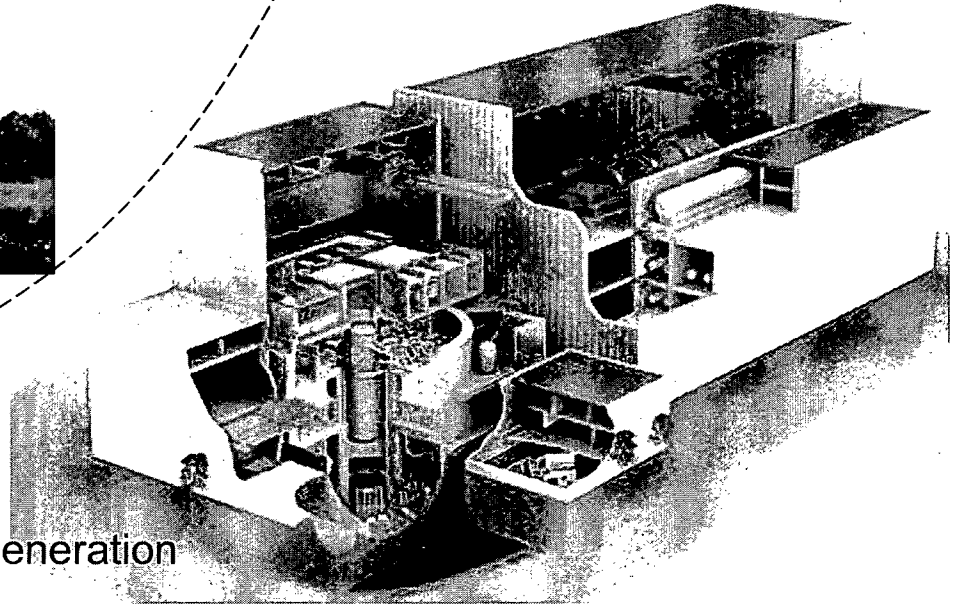
1st generation

Oyster Creek, Ocean County, NJ, Oldest U.S.
Operating Power Reactor (1969): 645 MWe



2nd generation

ABWR Advanced Boiling Water
Reactor: 1350 MWe (Japan, TX)
ESBWR: 1600 MWe (4500 MWt)



3rd generation

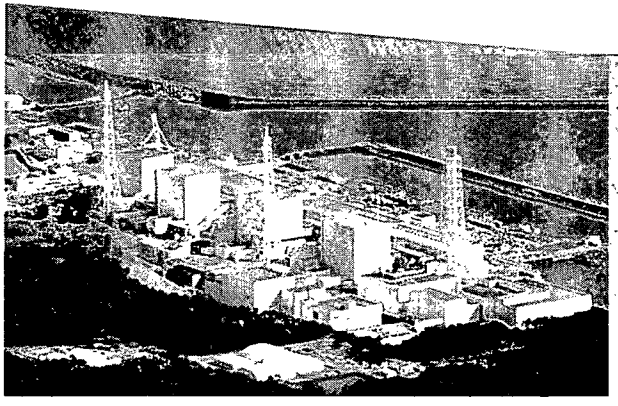


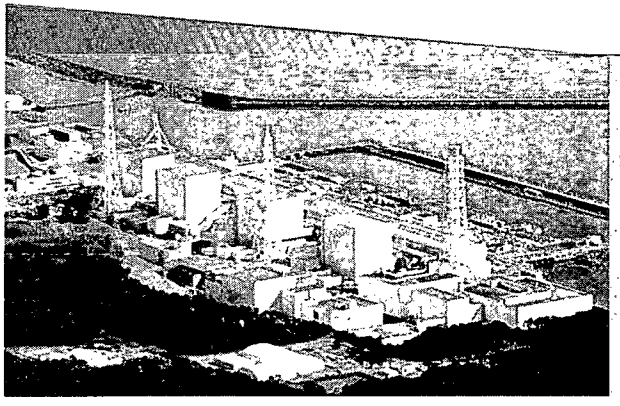
Photo Sources: GE, Luke Welsh, Exelon

BWR Mark I Containment Modifications: (e.g. $1 billion on Oyster Creek)

In the U.S., extensive modifications of Mark I containment buildings have been performed in the last 40 years, the most important being:

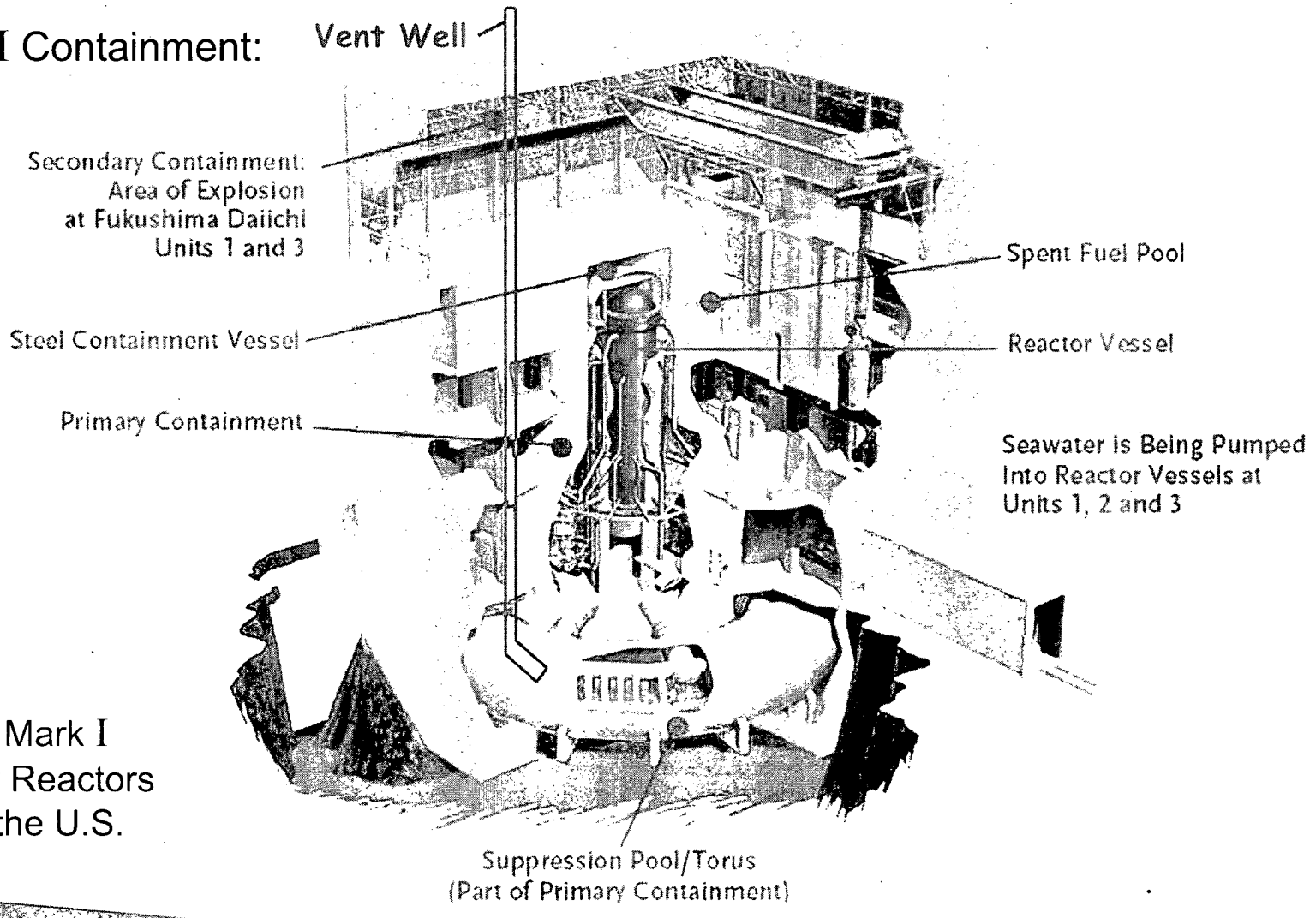
- Quenchers were installed in Torus to distribute the steam bubbles
- Deflectors were installed in Torus to break up the pressure wave
- Primary Containment, Torus, and Internal Piping (especially of the Emergency Core Cooling System) were structurally fortified
- Most importantly, the NRC required 1989 that all Mark I containments have a Hardened Wetwell Vent installed (NRC Generic Letter 89-16) (like the barrel on a rifle, strong enough to withstand explosion within)

Japan's Nuclear Safety Commission rejected requirement of Hardened Wetwell Vent in 1992 – it should be left to the plant operators to decide

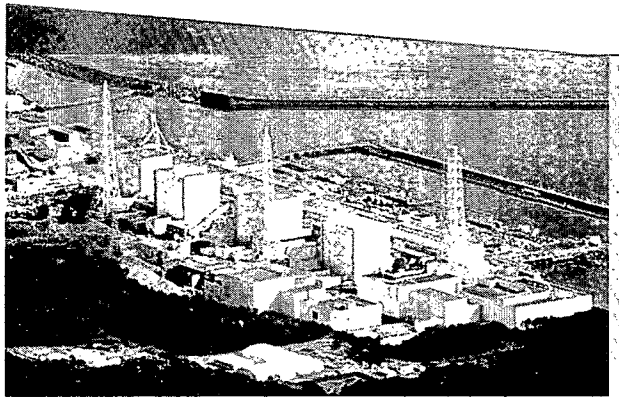


Sources: GE "Mark I Containment Report" (Revision 1, 3/19/2011), Reuters

BWR Mark I Containment:



There are 23 Mark I Boiling Water Reactors Operating in the U.S.



Source: Adapted from Nuclear Energy Institute (NEI, updated 3/23/2011)

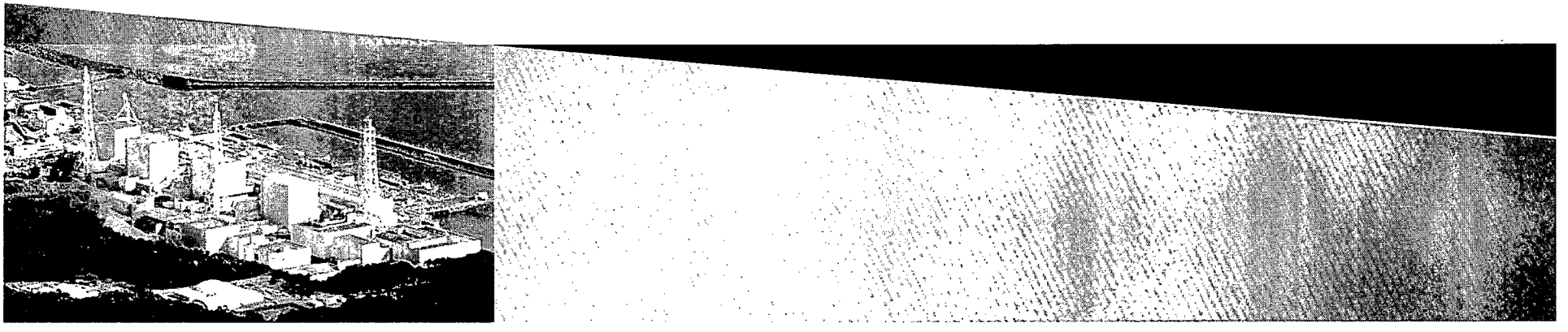
Additional Resources:

Japan Atomic Industrial Forum (JAIF) Daily Updated Information about Reactors
http://www.jaif.or.jp/english/

Stanford Center for International Studies "The Fukushima Daiichi Incident"
(Technical Slide Presentation based on Slides of Dr. Matthias Braun, AREVA NP)
http://iis-db.stanford.edu/evnts/6615/March21_JapanSeminar.pdf

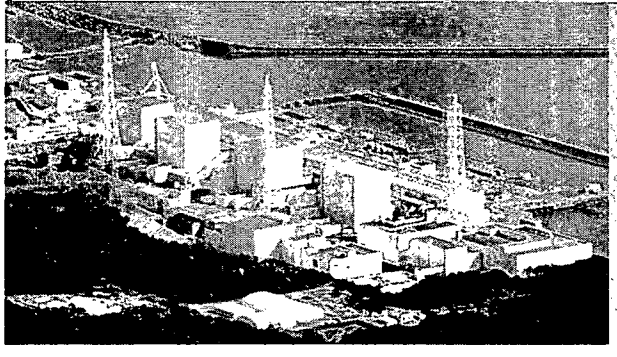
General Electric "The Mark I Containment System in BWR Reactors"
http://www.gereports.com/the-mark-i-containment-system-in-bwr-reactors/

EETD Seminar Presentation by Robert Budnitz, April 15, 2011
"Recent Progress in U.S. Nuclear Power Plant Safety"
http://eetd-seminars.lbl.gov/seminar/recent-progress-us-nuclear-power-plant-safety



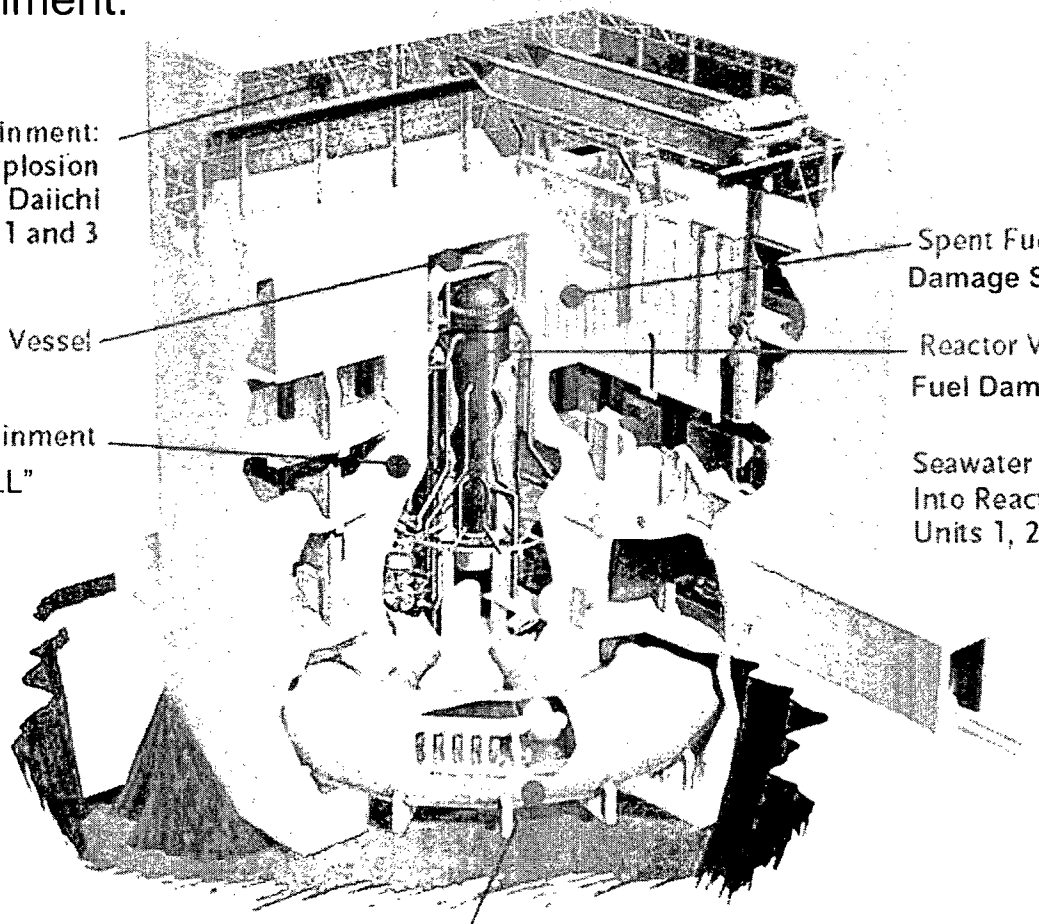
Status of nuclear power plants in Fukushima as of 10:00, April 5th (Estimated by JAIF)

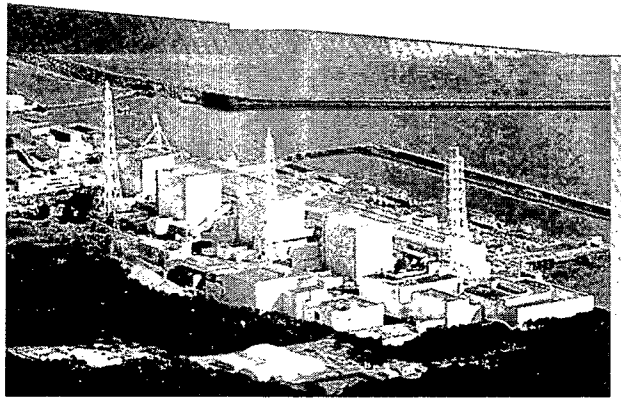
Power Station	Fukushima Dai-ichi Nuclear Power Station			
Unit	1	2	3	4
Electric / Thermal Power output (MW)	460 / 1380	784 / 2381	784 / 2381	784 / 2381
Type of Reactor	BWR-3	BWR-4	BWR-4	BWR-4
Operation Status at the earthquake occurred	In Service -> Shutdown	In Service -> Shutdown	In Service -> Shutdown	Outage
Fuel assemblies loaded in Core	400	548	548	No fuel rods
Core and Fuel Integrity (Loaded fuel assemblies)	Damaged	Damaged	Damaged	No fuel rods
Reactor Pressure Vessel structural integrity	Unknown	Unknown	Unknown	Not Damaged
Containment Vessel structural integrity	Not Damaged (estimation)	Damage and Leakage Suspected	Not damaged (estimation)	Not Damaged
Core cooling requiring AC power 1 (Large volumetric freshwater injection)	Not Functional	Not Functional	Not Functional	Not necessary
Core cooling requiring AC power 2 (Cooling through Heat Exchangers)	Not Functional	Not Functional	Not Functional	Not necessary
Building Integrity	Severely Damaged (Hydrogen Explosion)	Slightly Damaged	Severely Damaged (Hydrogen Explosion)	Severely Damaged (Hydrogen Explosion)
Water Level of the Rector Pressure Vessel	Fuel exposed partially or fully	Fuel exposed partially or fully	Fuel exposed partially or fully	Safe
Pressure / Temperature of the Reactor Pressure Vessel	Gradually increasing / Decreased a little after increasing over 400℃ on Mar. 24th	Unknown / Stable	Unknown	Safe
Containment Vessel Pressure	Decreased a little after increasing up to 0.4Mpa on Mar. 24th	Stable	Stable	Safe
Water injection to core (Accident Management)	Continuing (Switch from seawater to freshwater)	Continuing (Switch from seawater to freshwater)	Continuing (Switch from seawater to freshwater)	Not necessary
Water injection to Containment Vessel (AM)	(To be confirmed)	to be decided (Seawater)	(To be confirmed)	Not necessary
Containment Venting (AM)	Temporally stopped	Temporally stopped	Temporally stopped	Not necessary
Fuel assemblies stored in Spent Fuel Pool	292	587	514	1331
Fuel Integrity in the spent fuel pool	Unknown	Unknown	Damage Suspected	Possibly damaged
Cooling of the spent fuel pool	Water spray started (ffreshwater)	Continued water injection (Switch from seawater to freshwater)	Continued water spray and injection (Switch from seawater to freshwater)	Continued water spray and injection (Switch from seawater to freshwater) Hydrogen from the pool exploded on Mar. 15t
Main Control Room Habitability & Operability	Poor due to loss of AC power (Lighting working in the control room at Unit 1 and 2)		Poor due to loss of AC power (Lighting working in the control room at Unit 3 and 4)	
INES (estimated by NISA)	Level 5	Level 5	Level 5	Level 3
Remarks	●Progress of the work to recover injection function Water injection to the reactor pressure vessel by temporally installed pumps were switched from seawater to freshwater at Unit 1, 2 and 3. High radiation circumstance hampering the work to restore originally installed pumps for injection. Discharging radioactive water in the basement of the buildings of Unit transfer work is being made to secure a place the water to go. Lighting in the turbine buildings became partly available at Unit 1through 4. ●Function of containing radioactive material It is presumed that radioactive material inside the reactor vessel may leaked outside at Unit 1, 2 and Unit 3, based on radioactive material found outside. NISA announce			



Source: Japan Atomic Industrial Forum (JAIF) Updated April 5, 2011

BWR Mark I Containment:





Source: Adapted from Nuclear Energy Institute (NEI, updated 3/23/2011)

Maybe the current situation is

a) ~70% of injected water escaping as steam from the containment (1F1,2,3)
b) 30% of injected water (7 tons/hr) leaking to Tb/B through leakage hole in S/C air space (1F2)

Estimation from parameter adjustment to fit to pressure change history after March 21st (stabilized pressure and temperature, especially for 1F2/3)

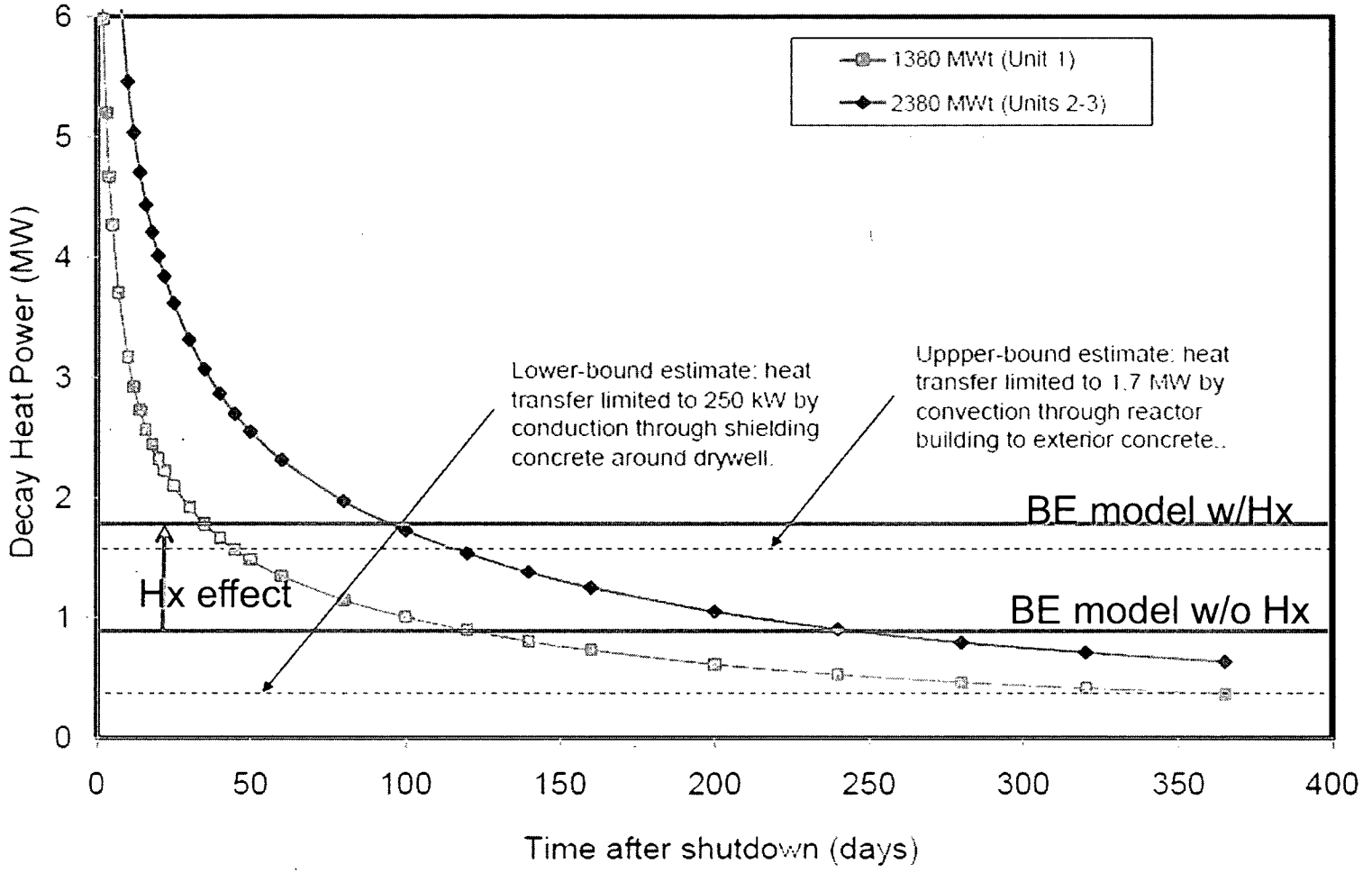
Near-term stable cooling

a) Limited leakage of steam to the air or of water Tb/B, no MCCI
b) By the use of temporary heat exchanger" to remove heat from drywell "pool"
c) Linkage with offsite actions (limited re-entry?)

Long-term stable cooling (natural heat removal)

a) Debris in water (e.g. min. feed water flow)
b) Surrounding structure on the top of reactor building and recovery of consdensate (by September/E)

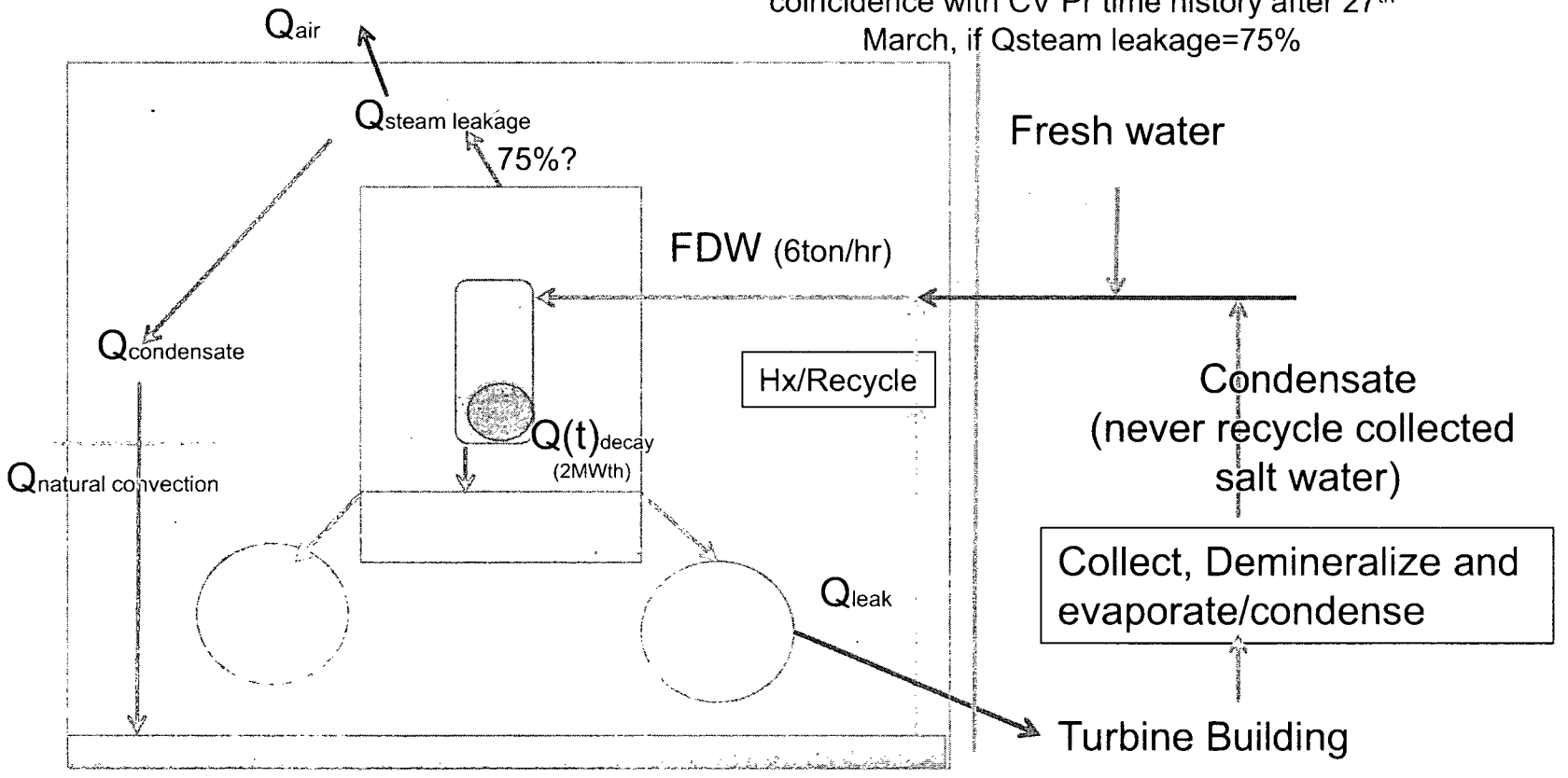
1. Can WL reach TAF level or just below the level of drywell vent line?
2. Quantify the benefit from the use of temporary Hx in terms of days
   Reduced feed flow, reduced steam leakage, reduced time to reach Near-term stable cooling
3. Long-term stable cooling with the debris in dry atmosphere ?(corrosion concern, MCCI concern)



1) Near-term safe/stable condition (Limited leakage to the air or turbine building, no MCCI) to Long-term safe/stable condition (natural heat removal) in wet condition, e.g. debris in water)
2) "bleed to the air" (maybe currently ~70% of injected water escaping as steam)
Near-term: Use of BE model considering "bleed to the air" (maybe currently ~70% of injected water escaping as steam) and "use of temporary heat exchanger" to remove heat from drywell "pool"

Containment Heat/Mass model for 1F1

Sensitivity study by changing Q_{leak} orifice size: coincidence with CV Pr time history after 27th March, if Qsteam leakage=75%



GOAL: Minimize red line flow

Modeling uncertainties:

1) Can WL reach core debris level, considering leakage from CV? (1F2/3: Maybe most of the debris in ex-vessel)
2) How much $Q_{steam\ leakage}$ condensate in the reactor building and not escape as Q_{air}?
3) How much Q_{leak} is flowing to Turbine building?
4) Level of stratification of drywell water pool

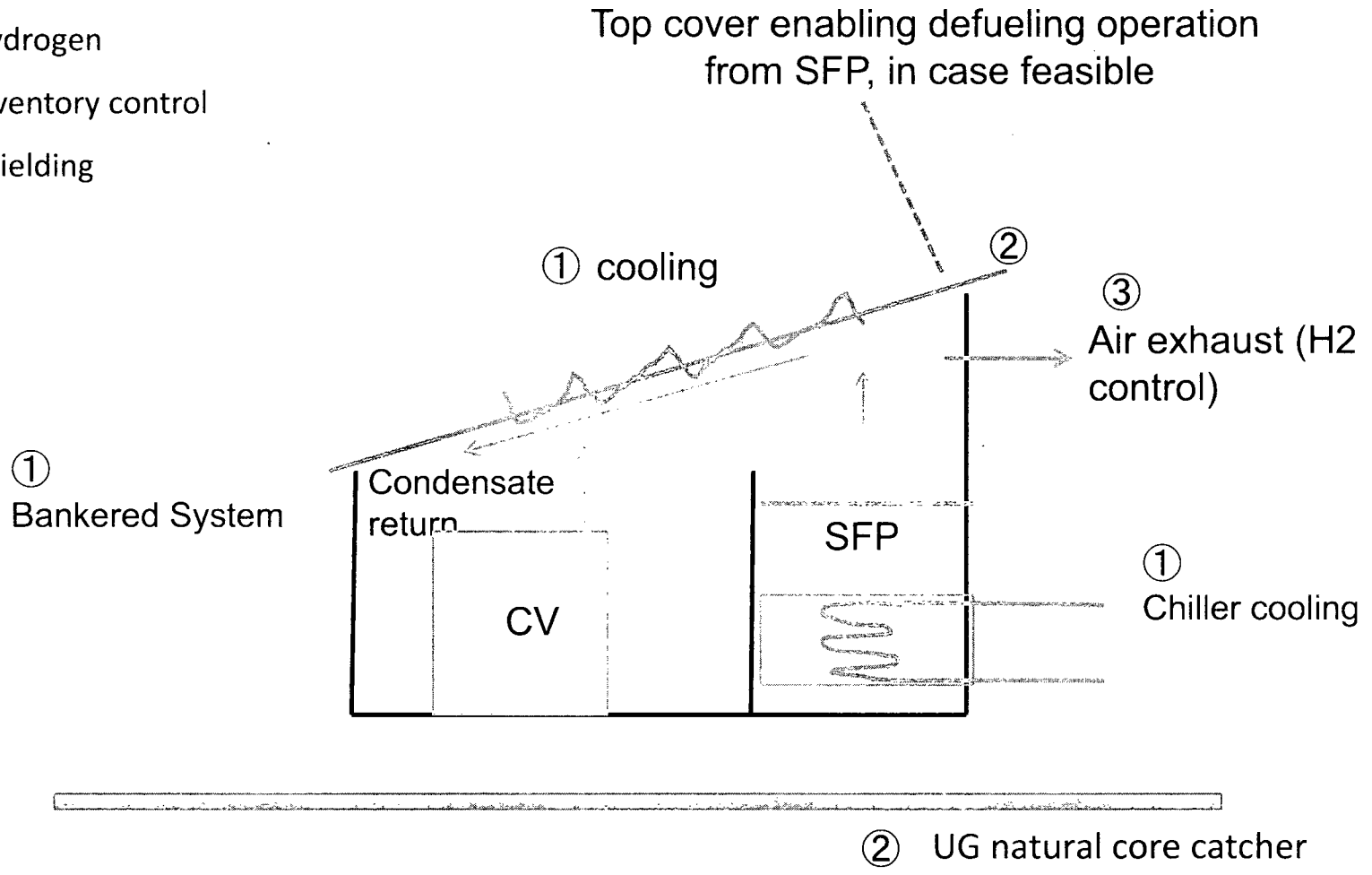
① LTC

② Dispersion

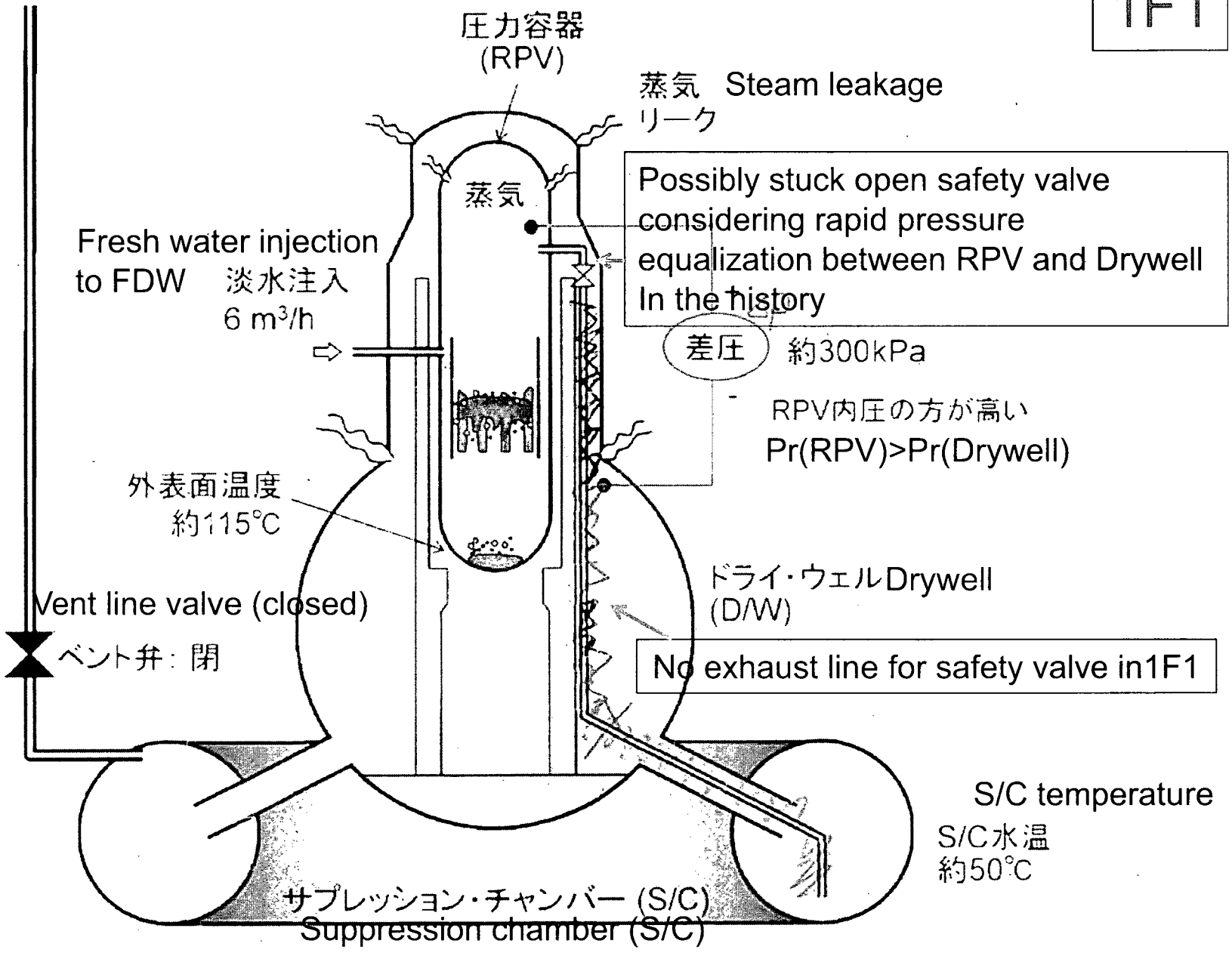
③ Hydrogen

④ Inventory control

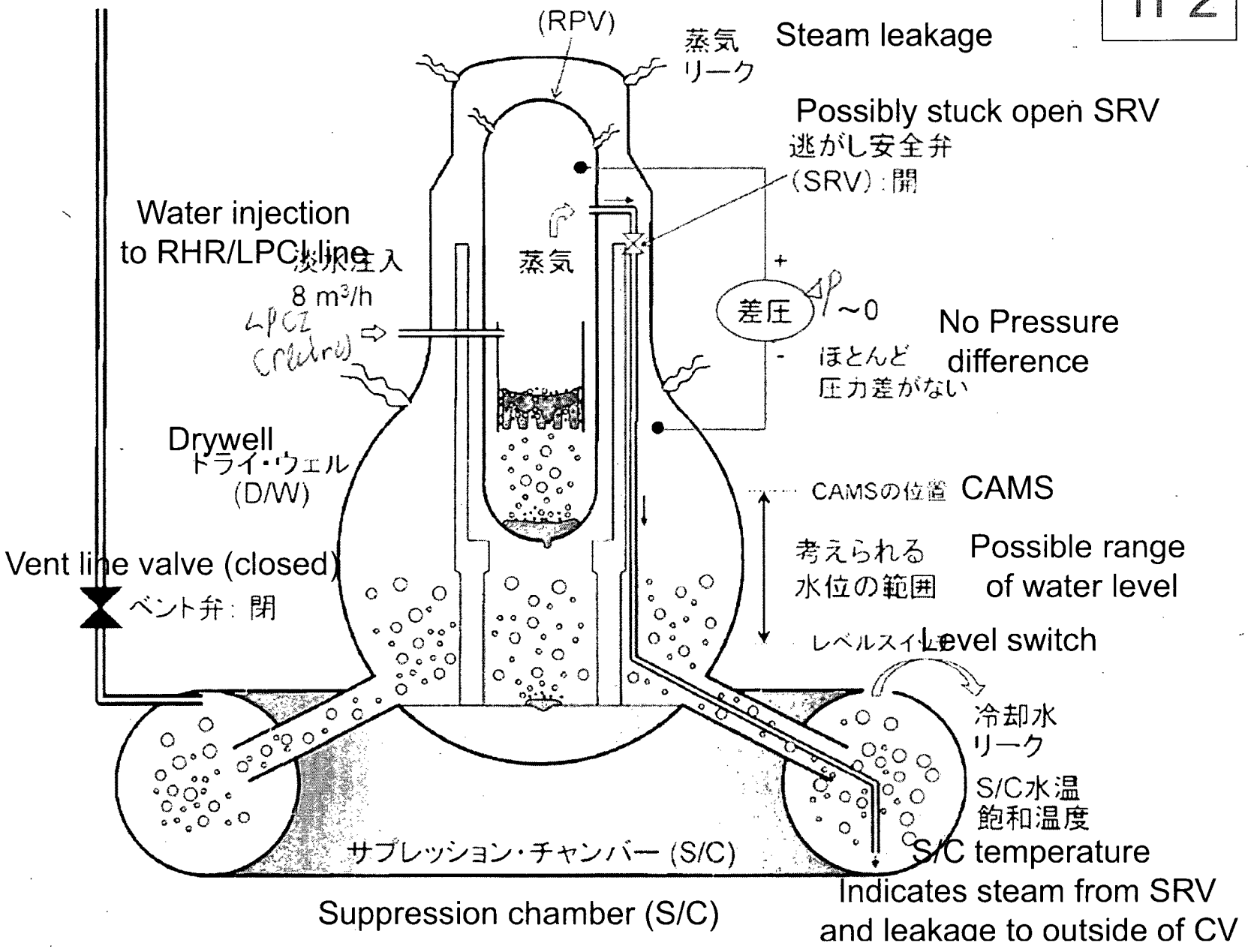
⑤ Shielding



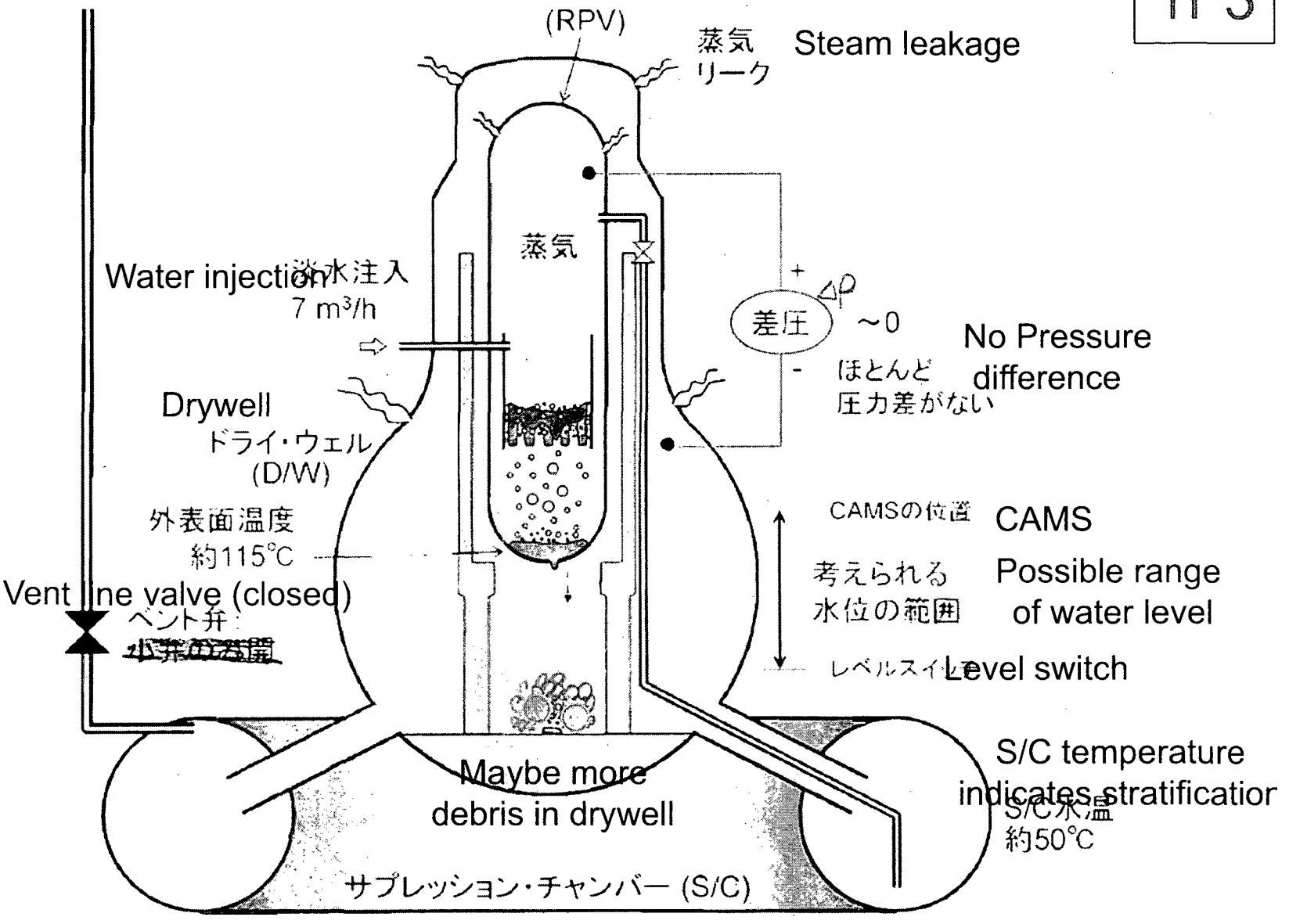
1F1


圧力容器
(RPV)
蒸気 Steam leakage
リーク
蒸気
Possibly stuck open safety valve
considering rapid pressure
equalization between RPV and Drywell
In the history
差圧
約300kPa
RPV内圧の方が高い
Pr(RPV)>Pr(Drywell)
Fresh water injection
to FDW 淡水注入
6 m³/h
外表面温度
約115℃
ドライ・ウェルDrywell
(D/W)
Vent line valve (closed)
ベント弁：閉
No exhaust line for safety valve in1F1
S/C temperature
S/C水温
約50℃
サプレッション・チャンバー (S/C)
Suppression chamber (S/C)

1F2


(RPV)
蒸気
リーク
Steam leakage
Possibly stuck open SRV
逃がし安全弁
(SRV) : 開
Water injection
to RHR/LPCI line
淡水注入
8 m³/h
蒸気
差圧
~0
No Pressure
difference
ほとんど
圧力差がない
Drywell
ドライ・ウェル
(D/W)
CAMSの位置
CAMS
考えられる
水位の範囲
Possible range
of water level
Vent line valve (closed)
ベント弁 : 閉
レベルスイッチ
Level switch
冷却水
リーク
S/C水温
飽和温度
S/C temperature
サプレッション・チャンバー (S/C)
Suppression chamber (S/C)
Indicates steam from SRV
and leakage to outside of CV

1F3


(RPV)
蒸気
リーク
Steam leakage
蒸気
Water injection
淡水注入
7 m³/h
差圧
Δp
+
-
～0
No Pressure difference
ほとんど
圧力差がない
Drywell
ドライ・ウェル
(D/W)
外表面温度
約115℃
CAMSの位置
CAMS
考えられる
水位の範囲
Possible range of water level
Level switch
Vent line valve (closed)
ベント弁
Maybe more debris in drywell
S/C temperature indicates stratificatior
S/C水温
約50℃
サプレッション・チャンバー (S/C)
Suppression chamber (S/C)