

**From:** Sheron, Brian  
**To:** Dacus, Eugene  
**Subject:** RE: House E&C request  
**Date:** Thursday, March 24, 2011 5:47:00 PM

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Can we do it from my office? I have to take the daily congressional briefing call tomorrow at 3pm. I'm in 6A1 at CSB. Can you conference it so you can just call in from WF?

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**From:** Dacus, Eugene  
**Sent:** Thursday, March 24, 2011 5:40 PM  
**To:** Sheron, Brian  
**Cc:** Powell, Amy; Schmidt, Rebecca  
**Subject:** RE: House E&C request

Brian,

The call is set for 2:00 pm. Just let me know the location you want

---

**From:** Sheron, Brian  
**Sent:** Thursday, March 24, 2011 5:01 PM  
**To:** Dacus, Eugene  
**Cc:** Powell, Amy; Schmidt, Rebecca  
**Subject:** RE: House E&C request

I should be available between 1pm and 3 pm.

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**From:** Dacus, Eugene  
**Sent:** Thursday, March 24, 2011 4:25 PM  
**To:** Sheron, Brian  
**Cc:** Powell, Amy; Schmidt, Rebecca  
**Subject:** FW: House E&C request

Brian,

See trail below. Can you accommodate a call tomorrow? If so, what times work best for you?

Gene

---

**From:** Baran, Jeff [mailto:Jeff.Baran@mail.house.gov]  
**Sent:** Thursday, March 24, 2011 4:05 PM  
**To:** Dacus, Eugene  
**Subject:** Re: House E&C request

Thanks, Gene. I think a brief call with Brian about SOARCA would be helpful. It would be good to get a sense of whether this is something we'd want to get a detailed briefing on down the road. Right now, I'm available anytime tomorrow if that would work for Brian.

Jeff

CH/308

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**From:** Dacus, Eugene [mailto:Eugene.Dacus@nrc.gov]  
**Sent:** Thursday, March 24, 2011 02:50 PM  
**To:** Baran, Jeff; Dotson, Greg; Cassady, Alison  
**Cc:** Powell, Amy <Amy.Powell@nrc.gov>  
**Subject:** FW: House E&C request

Jeff,

I thought I would be able to get you the document (SOARCA) that Brian referred to in his briefing, but unfortunately, the SOARCA is still in very rough draft and the staff feels that releasing it in its current form would be too problematic. Currently, the staff doesn't have an estimate of when the SOARCA analysis will be released. Background the SOARCA process and the three plant studied is located in NUREG 1925, Rev 1, Chapter 3: Severe Accident Research and Consequence Analysis. If you have specific questions about the SOARCA and you think a call from Brian would help, let me know and I'll set it up.

[http://www.internal.nrc.gov/RES/RES%20NUREG-1925\\_Rev\\_1.pdf](http://www.internal.nrc.gov/RES/RES%20NUREG-1925_Rev_1.pdf)

Gene



**From:** Sheron, Brian  
**To:** Gibson, Kathy; Santiago, Patricia  
**Cc:** Uhle, Jennifer  
**Subject:** FW: House E&C request  
**Date:** Thursday, March 24, 2011 5:49:00 PM

---

See below. Can someone who is fluent in SOARCA (especially the Peach Bottom part of the analysis) come to my office at 2 pm tomorrow and participate in this call with House staffers?

---

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CH/309

Jeff

---

**From:** Dacus, Eugene [mailto:Eugene.Dacus@nrc.gov]  
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**To:** Baran, Jeff; Dotson, Greg; Cassidy, Alison  
**Cc:** Powell, Amy <Amy.Powell@nrc.gov>  
**Subject:** FW: House E&C request

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[http://www.internal.nrc.gov/RES/RES%20NUREG-1925\\_Rev\\_1.pdf](http://www.internal.nrc.gov/RES/RES%20NUREG-1925_Rev_1.pdf)

Gene

**From:** Parks, Jazel  
**To:** Coyne, Kevin  
**Cc:** Coe, Doug; Kardaras, Tom; Sheron, Brian; Uhle, Jennifer; Valentin, Andrea  
**Subject:** RE: MSNBC FOIA Request  
**Date:** Thursday, March 24, 2011 5:47:38 PM

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Hi Kevin,

Thanks for contacting me so quickly. As you can probably guess, as RES FOIA coordinator, I am currently being pulled in a lot of different directions with the many requests beginning to arrive for the Japan event.

As you may already know, there was a meeting today concerning the previous Japan FOIA requests received from Associated Press as well as the latest requests received from MSNBC.

So in going forward with this specific FOIA, as I receive direction and/or guidance from the FOIA office, I will relay that information to the appropriate TAs and my supervisor. The TAs should relay this information to the staff including the Division Directors, Deputy Directors and Branch Chiefs .

These two FOIAs that arrived today are not on the expedited track, so the FOIA that we received last week regarding the March 11<sup>th</sup> Earthquake in Japan (2011-0119) is still the number one priority in terms of response and supersedes the latest two FOIAs from MSNBC and the FOIA received in February regarding SOARCA. Most of our time and resources are focused on the AP one we received because our response is due on 3/31.

During the meeting today, the FOIA office asked staff what ways they can help us get this information together and there were some good suggestions. The FOIA office will have to talk to their IT counterparts and find out if these suggestions that were given such as being able to assist in gathering document are possible. At the conclusion of the meeting, they said that they will be sending out guidance to every FOIA coordinator based on what was discussed. I am expecting that email either late tonight or sometime tomorrow.

The FOIA office understands that we have other tasks that we are responsible for doing and that these FOIA request are extra, demanding work. The clock will not stop on responding to these requests. Henceforth, we are on a "glide" track, which means that we will respond, but it will take longer to do so. The requestor(s) have been informed of this and they understand that.

The two requests that came in today are due to FOIA on 4/8 and whatever information I have available at that time will be sent to the FOIA office. I am already assuming that we will not have a complete response to this request so I will send them a partial and we will just keep going and being productive until we answer all the FOIA requests. I am aware that you will be out of the office but in the meantime, I will attempt to keep everything going and then when you return you should contact me.

The office timeliness metric has greatly been impacted already, and this is true for other offices too. But we are doing the best we can with the resources that we have. Hopefully you can breathe a sigh of relief (at least a little) ☺

CH/310

If you have any more questions, please feel free to contact me.

Thanks again,

Jazel Parks  
Research Information Specialist  
RES/PMDA/ITIB  
(P) 301-251-7690  
(F) 301-251-7426  
(M/S) C6D20M

**From:** Coyne, Kevin  
**Sent:** Thursday, March 24, 2011 4:33 PM  
**To:** Parks, Jazel  
**Cc:** Coe, Doug; Kardaras, Tom; Sheron, Brian; Uhle, Jennifer; Valentin, Andrea  
**Subject:** MSNBC FOIA Request  
**Importance:** High

Jazel –

I just received an MSNBC FOIA request for all incoming and outgoing email correspondence from March 11-18, 2011. I wanted to provide you a quick estimate of the time it will take to process the request.

I receive approximately 100 or more emails every day, many of them include one or more attachments. Similarly, I send 50 or more emails in a typical day. Since the FOIA covers 6 working days, this is approximately 900 emails and associated attachments that need to be reviewed prior to release (and I am sure that others listed on the FOIA have more than this to review...). Since many of the emails I receive and send deal with information that would not be subject to release under a FOIA (e.g., emails involving personnel health issues for the employees I supervise) or involve sensitive contracting information, the review must be comprehensive to ensure that I don't improperly release either sensitive information or PII. Conservatively assuming 1 minute to review each email against the FOIA exception criteria, it would take 15 hours of dedicated effort to review these 900 emails.

I am on foreign travel to support a WGRisk meeting next week and am acting for Doug Coe tomorrow; therefore I will not be able to address this request until I return from foreign travel on April 4. Even then, it is unlikely that I will be able to apply every working minute to processing this request. Consequently, I will be unable to meet the ten working day time limit. Please advise.

Kevin

*Kevin Coyne, P.E., Ph.D.  
Chief, Probabilistic Risk Assessment Branch*

*Division of Risk Analysis, Office of Nuclear Regulatory Research*

*U.S. Nuclear Regulatory Commission*

*Washington, DC 20555-0001*

*(301) 251-7586 (work)*

*(b)(6)*

*(cell)*

**From:** Sheron, Brian  
**To:** Parks, Jazel  
**Cc:** Valentin, Andrea; Kardaras, Tom  
**Subject:** FW: MSNBC FOIA Request  
**Date:** Thursday, March 24, 2011 5:53:00 PM

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See below. I am asking OGC to tell us we don't have to drop everything to answer this. They did it on a previous, similar FOIA.

**From:** Rothschild, Trip  
**Sent:** Thursday, March 24, 2011 5:28 PM  
**To:** Sheron, Brian  
**Subject:** RE: MSNBC FOIA Request

I forwarded your message to Pat Hirsch in OGC and we will get back to you. I understand your concerns.

**From:** Sheron, Brian  
**Sent:** Thursday, March 24, 2011 5:26 PM  
**To:** Rothschild, Trip  
**Subject:** FW: MSNBC FOIA Request

Trip, can we get some help from OGC on this one too? I have no problem giving the person the information, but going through 600+ emails to determine what's OUO, etc., is a very time-consuming job, and I'm up to my ears in Japanese response activities.

**From:** Parks, Jazel  
**Sent:** Thursday, March 24, 2011 5:18 PM  
**To:** Sheron, Brian  
**Subject:** RE: MSNBC FOIA Request

⊗

I'll get back to you on how I want them. I am suppose to be having a brain storming session with Tom and John.

The requestor said he wanted the documents on a CD but there still needs to be a line by line review and exemptions if we are withholding documents and/or sections of documents

I think Brett and some other senior staff in PMDA could go thru your emails (I don't want to) but I have to see who has availability because people are going to be working in the OPS center.

**From:** Sheron, Brian  
**Sent:** Thursday, March 24, 2011 5:14 PM  
**To:** Parks, Jazel  
**Subject:** FW: MSNBC FOIA Request  
**Importance:** High

Jazel, I need some guidance.

CH/311

1.) I have probably about 600 e-mails that are in my in box or sent box between the dates requested.

2.) Many of them may need to be withheld because they are OOU or for other reasons. Who is going to go through them and make that determination?

3.) How do you want them? I hope you don't expect me to print them all out. Many have extensive attachments, and if I printed everything out we are talking probably thousands of pages.

---

**From:** Coyne, Kevin

**Sent:** Thursday, March 24, 2011 4:33 PM

**To:** Parks, Jazel

**Cc:** Coe, Doug; Kardaras, Tom; Sheron, Brian; Uhle, Jennifer; Valentin, Andrea

**Subject:** MSNBC FOIA Request

**Importance:** High

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Kevin

*Kevin Coyne, P.E., Ph.D.*

*Chief, Probabilistic Risk Assessment Branch*

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(b)(6)

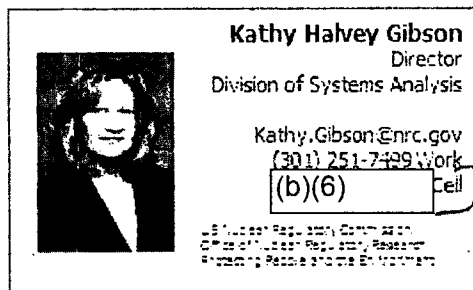
cell



**From:** Gibson, Kathy  
**To:** Sheron, Brian; Santiago, Patricia  
**Cc:** Uhle, Jennifer  
**Subject:** RE: House E&C request  
**Date:** Thursday, March 24, 2011 5:53:43 PM  
**Attachments:** Kathy Halvey Gibson.vcf

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I know Charlie is out tomorrow. Will check on Jason.



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**From:** Sheron, Brian  
**Sent:** Thursday, March 24, 2011 5:50 PM  
**To:** Gibson, Kathy; Santiago, Patricia  
**Cc:** Uhle, Jennifer  
**Subject:** FW: House E&C request

See below. Can someone who is fluent in SOARCA (especially the Peach Bottom part of the analysis) come to my office at 2 pm tomorrow and participate in this call with House staffers?

---

**From:** Dacus, Eugene  
**Sent:** Thursday, March 24, 2011 5:40 PM  
**To:** Sheron, Brian  
**Cc:** Powell, Amy; Schmidt, Rebecca  
**Subject:** RE: House E&C request

Brian,

The call is set for 2:00 pm. Just let me know the location you want

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**From:** Sheron, Brian  
**Sent:** Thursday, March 24, 2011 5:01 PM  
**To:** Dacus, Eugene  
**Cc:** Powell, Amy; Schmidt, Rebecca  
**Subject:** RE: House E&C request

I should be available between 1pm and 3 pm.

---

**From:** Dacus, Eugene  
**Sent:** Thursday, March 24, 2011 4:25 PM  
**To:** Sheron, Brian  
**Cc:** Powell, Amy; Schmidt, Rebecca

CH/312

**Subject:** FW: House E&C request

Brian,

See trail below. Can you accommodate a call tomorrow? If so, what times work best for you?

Gene

---

**From:** Baran, Jeff [mailto:Jeff.Baran@mail.house.gov]

**Sent:** Thursday, March 24, 2011 4:05 PM

**To:** Dacus, Eugene

**Subject:** Re: House E&C request

Thanks, Gene. I think a brief call with Brian about SOARCA would be helpful. It would be good to get a sense of whether this is something we'd want to get a detailed briefing on down the road. Right now, I'm available anytime tomorrow if that would work for Brian.

Jeff

---

**From:** Dacus, Eugene [mailto:Eugene.Dacus@nrc.gov]

**Sent:** Thursday, March 24, 2011 02:50 PM

**To:** Baran, Jeff; Dotson, Greg; Cassady, Alison

**Cc:** Powell, Amy <Amy.Powell@nrc.gov>

**Subject:** FW: House E&C request

Jeff,

I thought I would be able to get you the document (SOARCA) that Brian referred to in his briefing, but unfortunately, the SOARCA is still in very rough draft and the staff feels that releasing it in its current form would be too problematic. Currently, the staff doesn't have an estimate of when the SOARCA analysis will be released. Background the SOARCA process and the three plant studied is located in NUREG 1925, Rev 1, Chapter 3: Severe Accident Research and Consequence Analysis. If you have specific questions about the SOARCA and you think a call from Brian would help, let me know and I'll set it up.

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Gene

**From:** Lee, Richard  
**To:** Sheron, Brian  
**Subject:** RE: Call today  
**Date:** Thursday, March 24, 2011 5:56:57 PM

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Brian, Randy came here for other reasons. His time is not charged to us because he is doing teaching the reactor safety course. He is fully paid for today. He went back to his hotel and will just call in to see if there any info. that he can use for the analysis that Charlie and Jason had him doing for Spent Fuel Pool Unit 4.

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**From:** Sheron, Brian  
**Sent:** Thursday, March 24, 2011 5:17 PM  
**To:** Lee, Richard  
**Subject:** Call today

Richard, Kathy was questioning why Randy was going to come here to be on the 6 pm conference call. Here main concern was that we should be paying him to be on the call. I am still here and can call in at 6pm today.

CH/313

**From:** LIA07 HOC  
**Subject:** 1800 EDT (March 24, 2011) USNRC Earthquake/Tsunami Status Update  
**Date:** Thursday, March 24, 2011 6:00:09 PM  
**Attachments:** [USNRC\\_Earthquake-Tsunami\\_Update.032411.1800EDT.pdf](#)

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Attached, please find an 1800 EDT (March 24, 2011) status update from the US Nuclear Regulatory Commission's Emergency Operations Center regarding the impacts of the earthquake/tsunami.

Please note that this information is "Official Use Only" and is only being shared within the federal family.

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

-Sara

Sara K. Mroz  
Communications and Outreach  
Office of Nuclear Security and Incident Response  
US Nuclear Regulatory Commission  
[Sara.Mroz@nrc.gov](mailto:Sara.Mroz@nrc.gov)  
[LIA07.HOC@nrc.gov](mailto:LIA07.HOC@nrc.gov) (Operations Center)

CH/314

**From:** Kardaras, Tom  
**To:** Sheron, Brian  
**Cc:** Valentin, Andrea  
**Subject:** FYI: Follow-up about pending workstation acquisition in DSA  
**Date:** Thursday, March 24, 2011 6:01:01 PM

---

Brian,

(b)(5)

Hope this information helps and I will return the package for your signature.

Regards,  
Tom Kardaras, Deputy Director (Acting)  
Program Management, Policy Development and Analysis Staff  
Office of Nuclear Regulatory Research  
(o) 301-251-7667

CH/315

**From:** Sheron, Brian  
**To:** Kardaras, Tom  
**Cc:** Valentin, Andrea  
**Subject:** RE: FYI: Follow-up about pending workstation acquisition in DSA  
**Date:** Thursday, March 24, 2011 6:03:00 PM

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Yes, thanks.

**From:** Kardaras, Tom  
**Sent:** Thursday, March 24, 2011 6:01 PM  
**To:** Sheron, Brian  
**Cc:** Valentin, Andrea  
**Subject:** FYI: Follow-up about pending workstation acquisition in DSA

Brian,

(b)(5)



Hope this information helps and I will return the package for your signature.

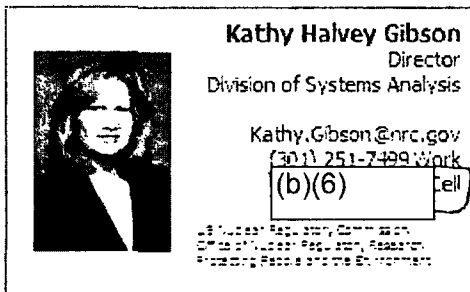
Regards,  
Tom Kardaras, Deputy Director (Acting)  
Program Management, Policy Development and Analysis Staff  
Office of Nuclear Regulatory Research  
(o) 301-251-7667

CH/316

**From:** Gibson, Kathy  
**To:** Sheron, Brian  
**Cc:** Uhle, Jennifer; Santiago, Patricia; Schaperow, Jason  
**Subject:** RE: House E&C request  
**Date:** Thursday, March 24, 2011 6:19:58 PM  
**Attachments:** Kathy Halvey Gibson.vcf

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I just talked to Jason, he is in tomorrow and will be at your office at 2pm.



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**To:** Gibson, Kathy; Santiago, Patricia  
**Cc:** Uhle, Jennifer  
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4/3/17

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**Cc:** Powell, Amy <Amy.Powell@nrc.gov>

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[http://www.internal.nrc.gov/RES/RES%20NUREG-1925\\_Rev\\_1.pdf](http://www.internal.nrc.gov/RES/RES%20NUREG-1925_Rev_1.pdf)

Gene



**From:** Sheron, Brian  
**To:** Lee, Richard  
**Subject:** RE: do you have the VGs?  
**Date:** Thursday, March 24, 2011 6:42:00 PM

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Just sent it to you.

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**From:** Lee, Richard  
**Sent:** Thursday, March 24, 2011 6:28 PM  
**To:** Sheron, Brian  
**Subject:** do you have the VGs?

Brian:

Did you receive the VGs? I did not get them.

Richard

CH/318

**From:** Adams, Ian  
**To:** Adams, Ian; Aoki, Steven; Binkley, Steve; Budnitz, Bob; Sheron, Brian; Garwin, Dick (EOP); Garwin, Dick (IBM); Finck, Phillip; Grossenbacher, John (INL); Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Peterson, Per; Rolando Szilard; Steve Fetter; Lee, Richard; Lee, Richard  
**Cc:** Narendra, Blake; Fitzgerald, Paige; kpitzer@ostp.eop.gov; Claxton, Dionne (CONTR); Chambers, Megan (S4); Smith, Haley  
**Subject:** Nuclear science group conference call - Friday, Saturday, and Sunday, 5:00pm EDT  
**Date:** Thursday, March 24, 2011 7:25:28 PM

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Good evening,

Tomorrow's call will take place at 5:00pm EDT. I am proposing that this call also take place at 5:00pm EDT on Saturday and Sunday.

On Monday, we'll move the call back to 6:00pm EDT.

Please let me know if these times work for you.

Thanks

Ian

**Nuclear science group conference call schedule:**

**Friday 3/25: 5:00pm-6:00pm EDT**

**Saturday 3/26: 5:00pm-6:00pm EDT**

**Sunday 3/27: 5:00pm-6:00pm EDT**

**Monday 3/28: 6:00pm-7:00pm EDT**

**Conference call information:**

**Please dial into (202) 586-2535**

**No PIN is needed.**

---

**From:** Adams, Ian  
**Sent:** Thursday, March 24, 2011 5:11 PM  
**To:** Adams, Ian; Aoki, Steven; Binkley, Steve; Budnitz, Bob; Sheron, Brian; Garwin, Dick (EOP); Garwin, Dick (IBM); Finck, Phillip; Grossenbacher, John (INL); Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Peterson, Per; Rolando Szilard; Steve Fetter; Lee, Richard  
**Cc:** Narendra, Blake; Fitzgerald, Paige; (b)(6) Claxton, Dionne (CONTR); Chambers, Megan (S4); Smith, Haley  
**Subject:** RE: Nuclear science group conference call - Thursday 6:00pm EDT

Good afternoon,

CH/319

Just a reminder, this call will take place tonight at 6:00pm EDT.

Tomorrow's call will take place at 5:00pm EDT.

**Nuclear science group conference call schedule:**

**Thursday 3/24: 6:00pm-7:00pm EDT**

**Friday 3/25: 5:00pm-6:00pm EDT**

**Conference call information:**

**Please dial into (202) 586-2535**

**No PIN is needed.**

---

**From:** Adams, Ian

**Sent:** Thursday, March 24, 2011 9:22 AM

**To:** Adams, Ian; Aoki, Steven; Binkley, Steve; Budnitz, Bob; Sheron, Brian; Garwin, Dick (EOP); Garwin, Dick (IBM); Finck, Phillip; Grossenbacher, John (INL); Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Peterson, Per; Rolando Szilard; Steve Fetter; Lee, Richard

**Cc:** Narendra, Blake; Fitzgerald, Paige; (b)(6) Claxton, Dionne (CONTR); Chambers, Megan (S4); Smith, Haley

**Subject:** Nuclear science group conference call - Thursday 6:00pm EDT

Good morning,

Today's conference call will be at 6:00pm EDT tonight. For tomorrow (Friday), please let me know if 5:00pm-6:00pm EDT works for you.

**Nuclear science group conference call proposed schedule:**

**Thursday 3/24: 6:00pm-7:00pm EDT**

**Friday 3/25: 5:00pm-6:00pm EDT**

**Conference call information:**

**Please dial into (202) 586-2535**

**No PIN is needed.**

Additionally, I have attached this morning's Japan sit rep. This information should not be shared or further distributed.

Thanks

Ian

<< File: Japan\_Earthquake\_Response\_03242011\_0600b.pdf >> << File: SITREP\_MAR24  
0600.docx >>

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**From:** Adams, Ian

**Sent:** Wednesday, March 23, 2011 10:48 AM

**To:** Adams, Ian; Aoki, Steven; Binkley, Steve; Bob Budnitz; Brian Sheron; Dick Garwin; Dick Garwin; Finck, Phillip; Grossenbacher, John (INL); Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Per Peterson; Rolando Szilard; Steve Fetter; Lee, Richard

**Cc:** Narendra, Blake; Fitzgerald, Paige; (b)(6) Claxton, Dionne (CONTR); Chambers, Megan (S4); Smith, Haley

**Subject:** RE: Nuclear science group conference call - Wednesday 6:00pm EDT

Good morning,

The daily nuclear science group conference call is confirmed for 6:00pm-7:00pm today.

Due to scheduling conflicts, Thursday's call will need to move. It will now take place 6:00pm-7:00pm, same as today's call time.

Thanks,

Ian

**Nuclear science group conference call schedule:**

**Wednesday 3/23: 6:00pm-7:00pm EDT**

**Thursday 3/24: 6:00pm-7:00pm EDT**

**Conference call information:**

**Please dial into (202) 586-2535**

**No PIN is needed.**

---

**From:** Adams, Ian

**Sent:** Tuesday, March 22, 2011 7:04 PM

**To:** Adams, Ian; Aoki, Steven; Binkley, Steve; Bob Budnitz; Brian Sheron; Dick Garwin; Dick Garwin; Finck, Phillip; Grossenbacher, John (INL); Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Per Peterson; Rolando Szilard; Steve Fetter

**Cc:** Narendra, Blake; Fitzgerald, Paige; (b)(6) Claxton, Dionne (CONTR); Chambers, Megan (S4); Smith, Haley

**Subject:** Nuclear science group conference call - Wednesday

Good evening,

We need to change the time of tomorrow's call to later in the day. Please let me know if 6:00pm EDT Wednesday and 5:00pm EDT Thursday would work for you.

Thanks,

Ian

**Nuclear science group conference call - proposed schedule:**

**Wednesday: 6:00pm-7:00pm EDT**

**Thursday: 5:00pm-6:00pm EDT**

**Conference call information:**

**Please dial into (202) 586-2535**

**No PIN is needed.**

**From:** Lee, Richard  
**To:** Adams, Ian  
**Cc:** Sheron, Brian  
**Subject:** RE: Nuclear science group conference call - Friday, Saturday, and Sunday, 5:00pm EDT  
**Date:** Thursday, March 24, 2011 7:26:31 PM

---

Ian: O.K. with me. Good night.  
Richard

---

**From:** Adams, Ian [mailto:Ian.Adams@Hq.Doe.Gov]  
**Sent:** Thursday, March 24, 2011 7:25 PM  
**To:** Adams, Ian; Aoki, Steven; Binkley, Steve; Budnitz, Bob; Sheron, Brian; Garwin, Dick (EOP); Garwin, Dick (IBM); Finck, Phillip; Grossenbacher, John (INL); Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Peterson, Per; Rolando Szilard; Steve Fetter; Lee, Richard; Lee, Richard  
**Cc:** Narendra, Blake; Fitzgerald, Paige; (b)(6) Claxton, Dionne (CONTR); Chambers, Megan (S4); Smith, Haley  
**Subject:** Nuclear science group conference call - Friday, Saturday, and Sunday, 5:00pm EDT

Good evening,

Tomorrow's call will take place at 5:00pm EDT. I am proposing that this call also take place at 5:00pm EDT on Saturday and Sunday.

On Monday, we'll move the call back to 6:00pm EDT.

Please let me know if these times work for you.

Thanks  
Ian

**Nuclear science group conference call schedule:**

Friday 3/25: 5:00pm-6:00pm EDT  
Saturday 3/26: 5:00pm-6:00pm EDT  
Sunday 3/27: 5:00pm-6:00pm EDT  
Monday 3/28: 6:00pm-7:00pm EDT

Conference call information:  
Please dial into (202) 586-2535  
No PIN is needed.

---

**From:** Adams, Ian  
**Sent:** Thursday, March 24, 2011 5:11 PM  
**To:** Adams, Ian; Aoki, Steven; Binkley, Steve; Budnitz, Bob; Sheron, Brian; Garwin, Dick (EOP); Garwin, Dick (IBM); Finck, Phillip; Grossenbacher, John (INL); Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Peterson, Per; Rolando Szilard; Steve Fetter; Lee, Richard  
**Cc:** Narendra, Blake; Fitzgerald, Paige; (b)(6) Claxton, Dionne (CONTR); Chambers, Megan (S4); Smith, Haley  
**Subject:** RE: Nuclear science group conference call - Thursday 6:00pm EDT

Good afternoon,

CH/320

Just a reminder, this call will take place tonight at 6:00pm EDT.

Tomorrow's call will take place at 5:00pm EDT.

**Nuclear science group conference call schedule:**

Thursday 3/24: 6:00pm-7:00pm EDT

Friday 3/25: 5:00pm-6:00pm EDT

**Conference call information:**

Please dial into (202) 586-2535

No PIN is needed.

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**From:** Adams, Ian

**Sent:** Thursday, March 24, 2011 9:22 AM

**To:** Adams, Ian; Aoki, Steven; Binkley, Steve; Budnitz, Bob; Sheron, Brian; Garwin, Dick (EOP); Garwin, Dick (IBM); Finck, Phillip; Grossenbacher, John (INL); Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Peterson, Per; Rolando Szilard; Steve Fetter; Lee, Richard

**Cc:** Narendra, Blake; Fitzgerald, Paige; (b)(6) Claxton, Dionne (CONTR); Chambers, Megan (S4); Smith, Haley

**Subject:** Nuclear science group conference call - Thursday 6:00pm EDT

Good morning,

Today's conference call will be at 6:00pm EDT tonight. For tomorrow (Friday), please let me know if 5:00pm-6:00pm EDT works for you.

**Nuclear science group conference call proposed schedule:**

Thursday 3/24: 6:00pm-7:00pm EDT

Friday 3/25: 5:00pm-6:00pm EDT

**Conference call information:**

Please dial into (202) 586-2535

No PIN is needed.

Additionally, I have attached this morning's Japan sit rep. This information should not be shared or further distributed.

Thanks

Ian

<< File: Japan\_Earthquake\_Response\_03242011\_0600b.pdf >> << File: SITREP\_MAR24 0600.docx >>

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**From:** Adams, Ian

**Sent:** Wednesday, March 23, 2011 10:48 AM

**To:** Adams, Ian; Aoki, Steven; Binkley, Steve; Bob Budnitz; Brian Sheron; Dick Garwin; Dick Garwin; Finck, Phillip; Grossenbacher, John (INL); Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane,

Harold; Per Peterson; Rolando Szilard; ~~Steve Fetter; Lee Richard~~  
**Cc:** Narendra, Blake; Fitzgerald, Paige; (b)(6) Claxton, Dionne (CONTR); Chambers,  
Megan (S4); Smith, Haley  
**Subject:** RE: Nuclear science group conference call - Wednesday 6:00pm EDT

Good morning,

The daily nuclear science group conference call is confirmed for 6:00pm-7:00pm today.

Due to scheduling conflicts, Thursday's call will need to move. It will now take place 6:00pm-7:00pm, same as today's call time.

Thanks,  
Ian

**Nuclear science group conference call schedule:**

Wednesday 3/23: 6:00pm-7:00pm EDT

Thursday 3/24: 6:00pm-7:00pm EDT

**Conference call information:**

Please dial into (202) 586-2535

No PIN is needed.

---

**From:** Adams, Ian  
**Sent:** Tuesday, March 22, 2011 7:04 PM  
**To:** Adams, Ian; Aoki, Steven; Binkley, Steve; Bob Budnitz; Brian Sheron; Dick Garwin; Dick Garwin; Finck, Phillip; Grossenbacher, John (INL); Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Per Peterson; Rolando Szilard; Steve Fetter  
**Cc:** Narendra, Blake; Fitzgerald, Paige; (b)(6) Claxton, Dionne (CONTR); Chambers, Megan (S4); Smith, Haley  
**Subject:** Nuclear science group conference call - Wednesday

Good evening,

We need to change the time of tomorrow's call to later in the day. Please let me know if 6:00pm EDT Wednesday and 5:00pm EDT Thursday would work for you.

Thanks,  
Ian

**Nuclear science group conference call - proposed schedule:**

Wednesday: 6:00pm-7:00pm EDT

Thursday: 5:00pm-6:00pm EDT

**Conference call information:**



Please dial into (202) 586-2535  
No PIN is needed.

**From:** Bush-Goddard, Stephanie  
**To:** Sheron, Brian; Bonaccorso, Amy; Gibson, Kathy; Uhle, Jennifer  
**Cc:** Donaldson, Leslie; Shaffer, Vered  
**Subject:** RES Seminar: Chernobyl  
**Date:** Thursday, March 24, 2011 7:33:56 PM

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Brian,

John Boice can present at the RES Seminar: Chernobyl 25<sup>th</sup> Anniversary.

Amy : please call me so that we can finalized the agenda with Brian, Frank and Dr. Boice as presenters.

It will be a good and balanced seminar.

-Stephanie

**From:** Sheron, Brian  
**Sent:** Thursday, March 24, 2011 3:06 PM  
**To:** Bush-Goddard, Stephanie; Bonaccorso, Amy; Gibson, Kathy; Uhle, Jennifer  
**Cc:** Donaldson, Leslie  
**Subject:** RE: John Boice- CNN: Japan Reactor Accident - Radiation Risks in Perspective

(b)(5)

**From:** Bush-Goddard, Stephanie  
**Sent:** Thursday, March 24, 2011 2:57 PM  
**To:** Bush-Goddard, Stephanie; Sheron, Brian; Bonaccorso, Amy; Gibson, Kathy; Uhle, Jennifer  
**Cc:** Donaldson, Leslie  
**Subject:** RE: John Boice- CNN: Japan Reactor Accident - Radiation Risks in Perspective

(b)(5)

-Stephanie

**From:** Bush-Goddard, Stephanie  
**Sent:** Thursday, March 24, 2011 2:50 PM  
**To:** Sheron, Brian; Bonaccorso, Amy; Gibson, Kathy; Uhle, Jennifer  
**Cc:** Donaldson, Leslie  
**Subject:** RE: John Boice- CNN: Japan Reactor Accident - Radiation Risks in Perspective

I'm on the phone now.

**From:** Sheron, Brian  
**Sent:** Thursday, March 24, 2011 2:50 PM  
**To:** Bonaccorso, Amy; Gibson, Kathy; Uhle, Jennifer  
**Cc:** Bush-Goddard, Stephanie; Donaldson, Leslie  
**Subject:** RE: John Boice- CNN: Japan Reactor Accident - Radiation Risks in Perspective

CH/321

(b)(5)

**From:** Bonaccorso, Amy  
**Sent:** Thursday, March 24, 2011 2:45 PM  
**To:** Sheron, Brian; Gibson, Kathy; Uhle, Jennifer  
**Cc:** Bush-Goddard, Stephanie; Donaldson, Leslie  
**Subject:** RE: John Boice- CNN: Japan Reactor Accident - Radiation Risks in Perspective

Folks:

(b)(5)

Thanks,

Amy

**From:** Sheron, Brian  
**Sent:** Thursday, March 24, 2011 2:37 PM  
**To:** Gibson, Kathy; Uhle, Jennifer  
**Cc:** Bonaccorso, Amy  
**Subject:** RE: John Boice- CNN: Japan Reactor Accident - Radiation Risks in Perspective

(b)(5)

**From:** Gibson, Kathy

**Sent:** Thursday, March 24, 2011 2:24 PM

**To:** Sheron, Brian; Uhle, Jennifer

**Subject:** Re: John Boice- CNN: Japan Reactor Accident - Radiation Risks in Perspective

(b)(5)

**From:** Sheron, Brian

**To:** Gibson, Kathy; Uhle, Jennifer

**Sent:** Thu Mar 24 14:04:20 2011

**Subject:** RE: John Boice- CNN: Japan Reactor Accident - Radiation Risks in Perspective

I thought we were getting him for the Chernobyl seminar since he supposedly did a health effects study on the Chernobyl survivors. What happened?

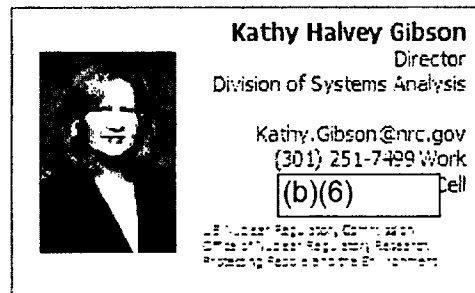
**From:** Gibson, Kathy

**Sent:** Thursday, March 24, 2011 1:47 PM

**To:** Sheron, Brian; Uhle, Jennifer

**Subject:** FW: John Boice- CNN: Japan Reactor Accident - Radiation Risks in Perspective

(b)(5)



**From:** Brock, Terry

**Sent:** Thursday, March 24, 2011 1:37 PM

**To:** Gibson, Kathy

**Subject:** John Boice- CNN: Japan Reactor Accident - Radiation Risks in Perspective

Excellent John Boice interview below on Japanese current events. Hat-tip to Vered on finding this.

Terry

CNN Video Link:

<http://www.cnn.com/video/data/2.0/video/world/2011/03/23/sotu.boice.0320.cnn.cnn.html>

**From:** Valentin, Andrea  
**To:** Parks, Jazel; Coyne, Kevin  
**Cc:** Coe, Doug; Kardaras, Tom; Sheron, Brian; Uhle, Jennifer  
**Subject:** Re: MSNBC FOIA Request  
**Date:** Thursday, March 24, 2011 7:56:30 PM

---

Thanks Jazel. At the meeting today I and others made the point that we cannot just drop everything (nor does it make sense) to pull people off of the respond to search emails. OIS agreed and said we just have to show progress. They also said we can send things to them piecemeal.

Since this is not stated in any of the guidance from the FOIA office, I asked them to send these caveats out in writing to all FOIA coordinators as opposed to asking us to deliver the messages back to our offices. I wanted (in writing) something we could refer back to since these requests will keep coming in.

Sent from my NRC Blackberry  
Andrea Valentin

(b)(6)

---

**From:** Parks, Jazel  
**To:** Coyne, Kevin  
**Cc:** Coe, Doug; Kardaras, Tom; Sheron, Brian; Uhle, Jennifer; Valentin, Andrea  
**Sent:** Thu Mar 24 17:47:36 2011  
**Subject:** RE: MSNBC FOIA Request

Hi Kevin,

Thanks for contacting me so quickly. As you can probably guess, as RES FOIA coordinator, I am currently being pulled in a lot of different directions with the many requests beginning to arrive for the Japan event.

As you may already know, there was a meeting today concerning the previous Japan FOIA requests received from Associated Press as well as the latest requests received from MSNBC.

So in going forward with this specific FOIA, as I receive direction and/or guidance from the FOIA office, I will relay that information to the appropriate TAs and my supervisor. The TAs should relay this information to the staff including the Division Directors, Deputy Directors and Branch Chiefs .

These two FOIAs that arrived today are not on the expedited track, so the FOIA that we received last week regarding the March 11<sup>th</sup> Earthquake in Japan (2011-0119) is still the number one priority in terms of response and supersedes the latest two FOIAs from MSNBC and the FOIA received in February regarding SOARCA. Most of our time and resources are focused on the AP one we received because our response is due on 3/31.

During the meeting today, the FOIA office asked staff what ways they can help us get this information together and there were some good suggestions. The FOIA office will have to talk to their IT counterparts and find out if these suggestions that were given such as being

CH/322

able to assist in gathering document are possible. At the conclusion of the meeting, they said that they will be sending out guidance to every FOIA coordinator based on what was discussed. I am expecting that email either late tonight or sometime tomorrow.

The FOIA office understands that we have other tasks that we are responsible for doing and that these FOIA request are extra, demanding work. The clock will not stop on responding to these requests. Henceforth, we are on a "glide" track, which means that we will respond, but it will take longer to do so. The requestor(s) have been informed of this and they understand that.

The two requests that came in today are due to FOIA on 4/8 and whatever information I have available at that time will be sent to the FOIA office. I am already assuming that we will not have a complete response to this request so I will send them a partial and we will just keep going and being productive until we answer all the FOIA requests. I am aware that you will be out of the office but in the meantime, I will attempt to keep everything going and then when you return you should contact me.

The office timeliness metric has greatly been impacted already, and this is true for other offices too. But we are doing the best we can with the resources that we have. Hopefully you can breathe a sigh of relief (at least a little) ☺

If you have any more questions, please feel free to contact me.

Thanks again,

Jazel Parks

Research Information Specialist

RES/PMDA/ITIB

(P) 301-251-7690

(F) 301-251-7426

(M/S) C6D20M

**From:** Coyne, Kevin

**Sent:** Thursday, March 24, 2011 4:33 PM

**To:** Parks, Jazel

**Cc:** Coe, Doug; Kardaras, Tom; Sheron, Brian; Uhle, Jennifer; Valentin, Andrea

**Subject:** MSNBC FOIA Request

**Importance:** High

Jazel –

I just received an MSNBC FOIA request for all incoming and outgoing email correspondence from March 11-18, 2011. I wanted to provide you a quick estimate of the time it will take to process the request.

I receive approximately 100 or more emails every day, many of them include one or more attachments. Similarly, I send 50 or more emails in a typical day. Since the FOIA covers

6 working days, this is approximately 900 emails and associated attachments that need to be reviewed prior to release (and I am sure that others listed on the FOIA have more than this to review...). Since many of the emails I receive and send deal with information that would not be subject to release under a FOIA (e.g., emails involving personnel health issues for the employees I supervise) or involve sensitive contracting information, the review must be comprehensive to ensure that I don't improperly release either sensitive information or PII. Conservatively assuming 1 minute to review each email against the FOIA exception criteria, it would take 15 hours of dedicated effort to review these 900 emails.

I am on foreign travel to support a WGRisk meeting next week and am acting for Doug Coe tomorrow; therefore I will not be able to address this request until I return from foreign travel on April 4. Even then, it is unlikely that I will be able to apply every working minute to processing this request. Consequently, I will be unable to meet the ten working day time limit. Please advise.

Kevin

*Kevin Coyne, P.E., Ph.D.*

*Chief, Probabilistic Risk Assessment Branch*

*Division of Risk Analysis, Office of Nuclear Regulatory Research*

*U.S. Nuclear Regulatory Commission*

*Washington, DC 20555-0001*

*(301) 251-7586 (work)*

*(b)(6) cell)*

**From:** NITOPS  
**To:** Aoki, Steven; Aragon, Antonio; Aragon, Antonio; Binkley, Steve; Budnitz, Bob; Casson, William (Bill); Dudder, Gordon B; Garwin, Dick (EOP); Garwin, Dick (IBM); Myers, Steven; NITOPS; NITSolutions; Peterson, Per; Peterson, Steven J; Pitts, William Karl; Poneman, Daniel; Sheron, Brian; Spanard, Richard J.; Swanson, Joel (LLNL); Szilard, Ronalo; Wimer, Nathan; Wimer, Nathan; Woessner, William S.  
**Cc:** NITOPS  
**Subject:** Revised Report: Triage Report -- TE-11-0721-A, Addendum D for 23 March  
**Date:** Thursday, March 24, 2011 8:09:10 PM  
**Attachments:** Triage Report - TE-11-0721-Addendum D --- 23 March 2011 Revision 1.docx

---

Please find attached the Triage report for measurements taken approximately 8km from the NPP.

Nuclear Incident Team (NIT)  
Office of Emergency Response (NA-42)  
National Nuclear Security Administration  
U.S. Department of Energy  
nitops@nnsa.doe.gov  
nit@doe.sgov.gov  
202-586-8100

CH/323



**Triage Event: TE-11-0721-A Addendum D - Revision 1 (Correction to Ratio Filenames)**

Date(s): 23 Mar 2011  
Callout(s): Callout 21 Mar 2011, 9:49 EDT; Bridgeline 10:15 EDT  
Event Type: DOE SEAR Event, Level 1  
Location: Japan  
Submitted by: Field Collections through NITOPS  
Email(s): N/A  
Triage Web: TE-11-0721 Addendum D, Continuing Event  
Contact(s): A. Aragon (Triage FTL); R. Spanard (Triage FTL)  
Responder(s): J. Bounds (LANL), W. Casson (LANL), N. Wimer (LLNL)  
Report Date: 23 Mar 2011, edited by N. Wimer

**List of data files used in the analysis.**

UNK	2011_03_23_16_33_020.spc	Lat/Long 37.35288683, 140.97889316
UNK	2011_03_23_15_00_130.spc	Lat/Long 36.8681086, 140.14207716
CAL	2011_03_22_22_36_200 Cs137.spc	(Per web submission)
BKG	2011_03_23_07_04_370_FIS8_Bkgd.spc	

**Summary:**

These two spectrum files were transmitted to Triage as part of a continuing high-priority analysis of field spectra collected in Japan at highway locations on approaches to the Fukushima Plant. Triage analysts were asked to provide nuclide identification, determine activity ratios for radionuclides evident in the spectra, and append to the Compilation XLS file.

As with the compilation being appended to, these spectrum files indicate coolant release nuclides, present as air activity concentrations and ground deposition in the field of view of an HPGe detector held 1 meter above the ground. They are well-enough developed that a detailed screening for non-volatile species was performed, with none observed. Definitive determination of whether fuel releases have occurred is expected to require HPGe assays from grounds of the plant itself.

**Triage Assessment:**

These spectrum files were collected with an HPGe ORTEC Detective-EX, with data acquisition on 23 March 11. Triage observed the spectrum was more developed compared with other sample spectra analyzed to date, with durations of approximately 20 minutes and deadtimes approaching 80%.

Nuclides observed were consistent with other Japan HPGe spectra taken at a distance, reflecting coolant-release compositions. There are no unidentified nuclides. Given unknown source-detector detail, absolute activities cannot be estimated: rough activity ratios relative to I-131 are shown in Table 1 below.

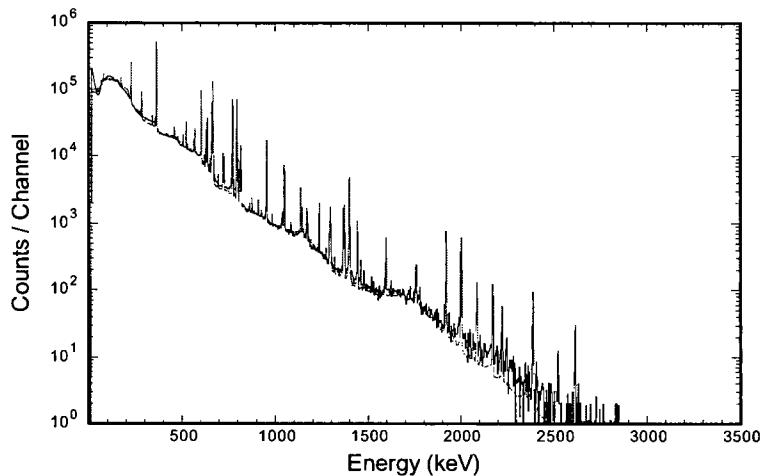
**OFFICIAL USE ONLY-**  
**DISTRIBUTION LIMITED TO NNSA/NA-40**

Radionuclide	Activity relative to I-131 for "2011_03_23_16_33_020.Chn"	Activity relative to I-131 for "2011_03_23_15_00_130.chn"
I-131	1.0 (Defined)	1.0 (Defined)
I-132	0.245	0.290
I-133	0.006	0.003
Te-129	0.185	0.119
Te-129m	0.168	0.077
Te-132	0.262	0.108
Cs-134	0.176	0.043
Cs-136	0.029	0.005
Cs-137	0.155	0.049
La-140	0.002	Not detectable

Table 1. Relative nuclide activity ratios for TE-11-0721-A Addendum D spectrum files (23 Mar 11).

C:\2011\_03\_23\_16\_33\_020.Chn,1 - !

live-time(s) = 534.46  
chi-square = 400



**Figure 1. Gamma spectrum fitting of "2011\_03\_23\_15\_00\_130.chn" field gamma assay.**  
Lines corresponding to I-131, I-132, Te-132, I-133, Cs-134, Cs-136, Cs-137, Te-129, Te-129m, and La-140 are evident; non-volatile nuclide reflecting potential fuel release were searched for in detail and not observed.

**Recommendations for follow on activities:**

These two high-priority field gamma-assay compositions represent coolant-only release, and discerning potential reactor fuel release will almost certainly require HPGe assay on the grounds of the Fukushima plant.

**From:** [LIA07 Hoc](#)  
**Cc:** [LIA07 Hoc](#)  
**Subject:** 0430 EDT (March 25, 2011) USNRC Earthquake/Tsunami Status Update  
**Date:** Friday, March 25, 2011 5:00:21 AM  
**Attachments:** [NRC Status Update 3.25.11--0430.pdf](#)

---

Attached, please find a 0430 EDT (March 25, 2011) status update from the US Nuclear Regulatory Commission's Emergency Operations Center regarding the impacts of the earthquake/tsunami. **Please note that the NRC has moved the publication time of this document from 0600 to 0430 to better serve the needs of its team in Japan.**

Please note that this information is "Official Use Only" and is only being shared within the federal family.

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

-Jim

Jim Anderson  
Office of Nuclear Security and Incident Response  
US Nuclear Regulatory Commission  
[James.anderson@nrc.gov](mailto:James.anderson@nrc.gov)  
[LIA07.HOC@nrc.gov](mailto:LIA07.HOC@nrc.gov) (Operations Center)

CH/324

**From:** NITOPS  
**To:** Aoki, Steven; Adams, Ian; Brinkman, Bill; DAgostino, Thomas; Finck, Phillip; Grossenbacher, John (INL); Hurlbut, Brandon; John Holdren; Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Owens, Missy; Peterson, Per; Poneman, Daniel; "ronaldo.szilard@inl.gov"; (b)(6); Aragon, Antonio; atkinsduffin1@inl.gov; Bounds, John; Carol J. Burns; Casson, William (Bill); Dudder, Gordon B; Myers, Steven; NITOPS; Pitts, William Karl; Spanard, Richard J.; Swanson, Joel (LLNL); Wimer, Nathan; Wimer, Nathan; Woessner, William S.  
**Cc:** Binkley, Steve; Budnitz, Bob; Garwin, Dick (EQP); Garwin, Dick (IBM); Miller, Neile; Mustin, Tracy; NITSolutions; SCHU; Sheron, Brian  
**Subject:** RE: Triage Report  
**Date:** Friday, March 25, 2011 6:21:59 AM  
**Attachments:** Version 5A --- DOE Triage - Japan Spectrum Compilation - As of 23 March 2011 (OUO) (3).xls

---

Attached is the latest version of the compilation report

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

**From:** Aoki, Steven  
**Sent:** Thursday, March 24, 2011 2:10 PM  
**To:** Aoki, Steven; Adams, Ian; Brinkman, Bill; DAgostino, Thomas; Finck, Phillip; Grossenbacher, John (INL); Hurlbut, Brandon; John Holdren; Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Owens, Missy; Peterson, Per; Poneman, Daniel; "ronaldo.szilard@inl.gov"; (b)(6); Aragon, Antonio; atkinsduffin1@inl.gov; Bounds, John; Carol J. Burns; Casson, William (Bill); Dudder, Gordon B; Myers, Steven; NITOPS; Pitts, William Karl; Spanard, Richard J.; Swanson, Joel (LLNL); Wimer, Nathan; Wimer, Nathan; Woessner, William S.  
**Subject:** RE: Triage Report

Please note that due to operator error on my part in a previous message, Per Peterson's name was replaced by a different Peterson from the DOE phonebook. Please use the recipient list for this e-mail in any responses.

My apologies for the error -- although I will continue to blame obscure default settings in MS Outlook.

CH/325

Filename Serial	Time Serial	TRIAGE EVENT	TRIAGE SUBMISSION	TRIAGE REPORT	FOLDERNAME
	1	1 TE-11-0208	3/21/2011	3/22/2011	Japan_Spectra_2
	3	2 TE-11-0208	3/21/2011	3/22/2011	Japan_Spectra_2
	2	3 TE-11-0208	3/21/2011	3/22/2011	Japan_Spectra_2
	33	4 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	34	5 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	35	6 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	6	7 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	9	8 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	10	9 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	11	10 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	12	11 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	13	12 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	14	13 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	15	14 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	16	15 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	17	16 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	18	17 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	19	18 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	20	19 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	21	20 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	22	21 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	23	22 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	24	23 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	25	24 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	26	25 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	27	26 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	28	27 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	29	28 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	36	29 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	37	30 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	0	31 TE-210311	3/21/2011	3/21/2011	None
	39	32 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	58	33 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	59	34 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	60	35 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	50	36 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	55	37 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	54	38 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	53	39 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	61	40 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	56	41 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	62	42 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	63	43 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	57	44 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	64	45 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A

42	46 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18
40	47 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18
41	48 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18
-1	49 TE-11-0720	3/21/2011	3/21/2011	None
108	50 TE-11-0721 Add B	3/22/2011	3/22/2011	None
107	51 TE-11-0721 Add B	3/22/2011	3/22/2011	None
106	52 TE-11-0721 Add B	3/22/2011	3/22/2011	None
105	53 TE-11-0721 Add B	3/22/2011	3/22/2011	None
104	54 TE-11-0721 Add B	3/22/2011	3/22/2011	None
103	55 TE-11-0721 Orig	3/22/2011	3/22/2011	None
300	56 TE-11-0645	3/23/2011	IN PROGRESS	None
301	57 TE-11-0645	3/23/2011	IN PROGRESS	None
203	58 TE-11-0721 Add C	3/22/2011	FILES WAITING	None
205	59 TE-11-0721 Add C	3/22/2011	FILES WAITING	None
204	60 TE-11-0721 Add C	3/22/2011	FILES WAITING	None
100	61 TE-11-0721 Add C	3/22/2011	3/22/2011	None
102	62 TE-11-0721 Add C	3/22/2011	3/22/2011	None
101	63 TE-11-0721 Add C	3/22/2011	3/22/2011	None
202	64 TE-11-0721 Add D	3/23/2011	3/23/2011	None
201	65 TE-11-0721 Add D	3/23/2011	3/23/2011	None

FILE NAME	FILE Type	FILE Notes	Spectrum STARTDATE	Spectrum TIME-24
2011_03_16_00_53_000.spc	AMS	Compilation 21 March	16-Mar	0:33
Iso00004-FIS-9A SN4639.Spc	AMS	Compilation 21 March	16-Mar	2:13
CM Bldg 1503 Background Downlook	AMS Instrument	Compilation 21 March	16-Mar	18:22
Iso00010-FIS-9A SN4639.Spc	AMS	Compilation 21 March	17-Mar	4:00
Iso00011-FIS-9A SN4639.Spc	AMS	Compilation 21 March	17-Mar	4:17
Iso00012-FIS-9A SN4639.Spc	AMS	Compilation 21 March	17-Mar	4:49
2011_03_17_08_44_560.spc	AMS	Compilation 21 March	17-Mar	7:56
2011_03_17_13_02_020.spc	AMS	Compilation 21 March	17-Mar	12:42
2011_03_17_13_22_400.spc	AMS	Compilation 21 March	17-Mar	13:05
2011_03_17_13_42_380.spc	AMS	Compilation 21 March	17-Mar	13:25
2011_03_17_14_20_240.spc	AMS	Compilation 21 March	17-Mar	14:03
2011_03_17_14_40_210.spc	AMS	Compilation 21 March	17-Mar	14:23
2011_03_17_15_26_050.spc	AMS	Compilation 21 March	17-Mar	15:22
2011_03_17_15_31_200.spc	AMS	Compilation 21 March	17-Mar	15:26
2011_03_17_15_40_180.spc	AMS	Compilation 21 March	17-Mar	15:35
2011_03_17_15_47_270.spc	AMS	Compilation 21 March	17-Mar	15:42
2011_03_17_15_55_330.spc	AMS	Compilation 21 March	17-Mar	15:50
2011_03_17_16_14_370.spc	AMS	Compilation 21 March	17-Mar	15:57
2011_03_17_16_33_270.spc	AMS	Compilation 21 March	17-Mar	16:16
2011_03_17_16_44_040.spc	AMS	Compilation 21 March	17-Mar	16:39
2011_03_17_16_50_300.spc	AMS	Compilation 21 March	17-Mar	16:45
2011_03_17_16_57_300.spc	AMS	Compilation 21 March	17-Mar	16:52
2011_03_17_17_03_570.spc	AMS	Compilation 21 March	17-Mar	16:58
2011_03_17_17_10_160.spc	AMS	Compilation 21 March	17-Mar	17:05
2011_03_17_17_37_410.spc	AMS	Compilation 21 March	17-Mar	17:20
2011_03_17_17_59_380.spc	AMS	Compilation 21 March	17-Mar	17:42
2011_03_17_18_25_260.spc	AMS	Compilation 21 March	17-Mar	18:08
2011_03_17_18_45_370.spc	AMS	Compilation 21 March	17-Mar	18:28
Iso00013-FIS-9A SN4639.Spc	AMS	Compilation 21 March	17-Mar	21:28
Iso00016-FIS-9A SN4639.Spc	AMS	Compilation 21 March	17-Mar	22:41
2011_03_18SCF-08985 Buf00048-FIS	AMS	High-priority filter	17-Mar	23:09
Iso00019-FIS-9A SN4639.Spc	AMS	Compilation 21 March	17-Mar	23:39
Iso00020-FIS-9A SN4639.Spc	AMS	Compilation 21 March	17-Mar	23:59:35
Iso00027-FIS-9A SN4639.Spc	AMS	Compilation 21 March	18-Mar	1:29:42
Iso00030-FIS-9A SN4639.Spc	AMS	Compilation 21 March	18-Mar	2:02:19
2011_03_18_SCF-08987.Spc	AMS Instrument	Compilation 21 March	18-Mar	2:31:49
2011_03_18SCF-08990.Spc	AMS Instrument	Compilation 21 March	18-Mar	2:44:54
2011_03_18SCF08990.Spc	AMS Air Filter	Compilation 21 March	18-Mar	2:58:07
2011_03_18SCF-08989.Spc	AMS Air Filter	Compilation 21 March	18-Mar	3:11:44
Iso00037-FIS-9A SN4639.Spc	AMS	Compilation 21 March	18-Mar	3:24:33
2011_03_19#8.Spc	AMS	Compilation 21 March	18-Mar	17:50:09
Iso00039-FIS-9A SN4639.Spc	AMS	Compilation 21 March	18-Mar	19:50:16
Iso00040-FIS-9A SN4639.Spc	AMS	Compilation 21 March	18-Mar	20:11:59
2011_03_19_SCF00570.Spc	AMS	Compilation 21 March	18-Mar	20:54:02
Iso00041-FIS-9A SN4639.Spc	AMS	Compilation 21 March	18-Mar	22:30:30

2011_03_19#9.Spc	AMS	Compilation 21 March	18-Mar	22:50
2011_03_19#10.Spc	AMS	Compilation 21 March	18-Mar	23:02
2011_03_19#11.Spc	AMS	Compilation 21 March	18-Mar	23:11
2011_03_20_alpha.chn	AMS	13 miles SW of Plant	20-Mar	17:17
2011_03_21_12_49_350.spc	AMS Instrument	Highways	21-Mar	12:31
2011_03_21_13_25_360.spc	AMS Instrument	Highways	21-Mar	13:08
2011_03_21_13_58_490.spc	AMS Instrument	Highways	21-Mar	13:41
2011_03_21_14_29_090.spc	AMS Instrument	Highways	21-Mar	14:11
2011_03_21_15_01_510.spc	AMS Instrument	Highways	21-Mar	14:44
2011_03_21_15_35_350.spc	AMS Instrument	Highways	21-Mar	15:18
2011_03_22_07_44_160.spc	DetectiveEx	Air Vents	22-Mar	7:41
2011_03_22_07_51_320.spc	DetectiveEx	Exhaust Air Vents	22-Mar	7:48
2011_03_22_15_00_200.spc	AMS Instrument	Highways	22-Mar	14:41
2011_03_22_16_11_250.spc	AMS Instrument	Highways	22-Mar	15:16
2011_03_22_15_36_050.spc	AMS Instrument	Highways	22-Mar	15:54
2011_03_22_18_14_120.spc	AMS Instrument	Highways	22-Mar	15:57
2011_03_22_16_43_510.spc	AMS Instrument	Highways	22-Mar	16:26
2011_03_22_17_35_500.spc	AMS Instrument	Highways	22-Mar	17:18
2011_03_23_15_00_130.spc	AMS Instrument	Highways	23-Mar	14:24
2011_03_23_16_33_020.spc	AMS Instrument	Highways	23-Mar	15:42



Spectrum DUR-Secs	DATA/ NONDATA	Analyst 1	Analyst 2	Method	Not Avail=1.0	RELATIVE NUCLIDE ACT	
					I-131	I-132	I-133
1148	DATA	Casson	Wimer	GADRAS	1.90E+01	2.41E+00	1.00E+00
1101	DATA	Casson	Wimer	GADRAS	1.23E+01	1.91E+00	9.40E-01
1065	DATA	Casson	Wimer	GADRAS	2.47E+01	2.63E+00	1.34E+00
300	DATA	Casson	Wimer	GADRAS	1.68E+01	2.10E+00	
300	DATA	Casson	Wimer	GADRAS	7.10E+00	3.60E+00	
300	DATA	Casson	Wimer	GADRAS	7.80E+00	3.10E+00	
1000	DATA	Casson	Wimer	GADRAS	1.75E+01	3.08E+00	1.40E+00
1000	DATA	Casson	Wimer	GADRAS	1.72E+01	2.69E+00	1.00E+00
1000	DATA	Casson	Wimer	GADRAS	1.53E+01	2.58E+00	
1000	DATA	Casson	Wimer	GADRAS	1.41E+01	2.45E+00	
1000	DATA	Casson	Wimer	GADRAS	1.31E+01	2.35E+00	6.00E-01
1000	DATA	Casson	Wimer	GADRAS	1.72E+01	2.74E+00	6.00E-01
223	DATA	Casson	Wimer	GADRAS	5.64E+01	7.53E+01	3.50E+00
275	DATA	Casson	Wimer	GADRAS	8.86E+01	1.17E+02	5.20E+00
302	DATA	Casson	Wimer	GADRAS	1.31E+01	1.22E+01	6.00E-01
306	DATA	Casson	Wimer	GADRAS	8.30E+00	5.10E+00	2.60E-01
333	DATA	Casson	Wimer	GADRAS	7.40E+00	3.50E+00	2.70E-01
1002	DATA	Casson	Wimer	GADRAS	1.64E+01	2.61E+00	7.00E-01
1002	DATA	Casson	Wimer	GADRAS	1.61E+01	2.69E+00	8.00E-01
304	DATA	Casson	Wimer	GADRAS	1.55E+01	2.70E+00	1.10E+00
304	DATA	Casson	Wimer	GADRAS	1.73E+01	2.40E+00	6.00E-01
303	DATA	Casson	Wimer	GADRAS	1.61E+01	1.90E+00	
303	DATA	Casson	Wimer	GADRAS	1.71E+01	2.30E+00	1.30E+00
303	DATA	Casson	Wimer	GADRAS	1.56E+01	2.20E+00	
1006	DATA	Casson	Wimer	GADRAS	1.68E+01	3.10E+00	
1002	DATA	Casson	Wimer	GADRAS	1.67E+01	2.80E+00	3.00E-01
1002	DATA	Casson	Wimer	GADRAS	1.77E+01	3.10E+00	6.00E-01
1034	DATA	Casson	Wimer	GADRAS	1.75E+01	2.80E+00	5.00E-01
300	DATA	Casson	Wimer	GADRAS	1.89E+01	1.90E+00	
300	DATA	Casson	Wimer	GADRAS	1.32E+01	2.00E+00	
300	DATA	Wimer	Bounds	GADRAS	1.00E+00	1.00E-01	0.00E+00
300	DATA	Casson	Wimer	GADRAS	1.68E+01	2.40E+00	
300	DATA	Swanson	Bounds/Myei GamDes	2.98E+00	1.84E+00		
300	DATA	Swanson	Bounds/Myei GamDes	7.30E-01	7.54E-01		
300	DATA	Swanson	Bounds/Myei GamDes	4.08E+01	0.00E+00		
300	DATA	Swanson	Bounds/Myei GamDes	7.90E+01			
300	DATA	Swanson	Bounds/Myei GamDes	4.49E+01	6.41E+00		
300	DATA	Swanson	Bounds/Myei GamDes	4.60E+01			
300	DATA	Swanson	Bounds/Myei GamDes	5.05E+01			
300	DATA	Swanson	Bounds/Myei GamDes	3.19E+01	5.80E+00		
300	DATA	Swanson	Bounds/Myei GamDes	4.91E+01			
300	DATA	Swanson	Bounds/Myei GamDes	9.57E+01	1.43E+01		
300	DATA	Swanson	Bounds/Myei GamDes	7.27E+01	1.26E+01		
300	DATA	Swanson	Bounds/Myei GamDes	5.43E+01			
300	DATA	Swanson	Bounds/Myei GamDes	6.06E+01	1.40E+01		

300	DATA	Casson	Wimer	GADRAS	8.10E+00	4.90E+00	2.00E-01
300	DATA	Casson	Wimer	GADRAS	7.00E+00	3.60E+00	
300	DATA	Casson	Wimer	GADRAS	6.70E+00	2.40E+00	
807	DATA	Swanson	Wimer	GADRAS	2.04E+01	1.04E+00	0.00E+00
286	DATA	Bounds	Wimer	GADRAS	1.08E+00	2.77E-01	1.94E-03
730	DATA	Bounds	Wimer	GADRAS	3.45E+00	9.24E-01	4.62E-03
802	DATA	Bounds	Wimer	GADRAS	1.75E+00	1.01E+00	1.52E-02
580	DATA	Bounds	Wimer	GADRAS	3.19E+00	2.43E+00	3.16E-02
759	DATA	Bounds	Wimer	GADRAS	1.63E+00	1.20E+00	1.57E-02
891	DATA	Bounds	Wimer	GADRAS	1.43E+01	6.33E+00	5.07E-02
138	DATA	Bounds	Wimer				
165	DATA	Bounds	Wimer				
1041	DATA	FILES WAITING					
927	DATA	FILES WAITING					
813	DATA	FILES WAITING					
992	DATA	Bounds	Wimer	GADRAS	7.03E+01	1.89E+01	2.11E-01
756	DATA	Bounds	Wimer	GADRAS	6.20E+02	2.40E+02	
968	DATA	Bounds	Wimer	GADRAS	1.25E+02	3.74E+01	2.50E-01
530	DATA	Wimer	Bounds	GADRAS	2.64E+01	7.64E+00	7.91E-02
534	DATA	Wimer	Bounds	GADRAS	5.67E+01	1.39E+01	3.40E-01

ACTIVITY AT ASSAY (ARBITRARY UNITS)---NO DECAY CORRECTIONS PERFORMED

Te-129	Te-129m	Te-132	Cs-134	Cs-136	Cs-137	La-140	Mo-99	Tc-99m
		2.30E+00	5.20E-01					
		2.10E+00	5.60E-01					
		2.30E+00	5.20E-01					
		2.50E+00	9.00E-01					
		4.80E+00	1.33E+00					
		3.50E+00	7.00E-01					
		2.70E+00	9.60E-01					
		2.50E+00	8.50E-01					
		1.80E+00	7.90E-01					
		2.30E+00	6.70E-01					
		2.00E+00	8.50E-01					
		2.60E+00	7.30E-01					
		6.95E+01	2.73E+01					
		9.46E+01	4.52E+01					
		1.34E+01	3.50E+00					
		6.00E+00	1.38E+00					
		4.30E+00	8.30E-01					
		2.60E+00	7.50E-01					
		1.60E+00	7.80E-01					
		3.60E+00	9.00E-01					
		1.90E+00	6.00E-01					
		1.90E+00	8.00E-01					
		3.10E+00	8.00E-01					
		2.70E+00	4.00E-01					
		2.70E+00	9.00E-01					
		2.50E+00	6.00E-01					
		2.90E+00	7.00E-01					
		2.50E+00	9.00E-01					
		1.90E+00	8.00E-01					
		2.10E+00	6.00E-01					
0.00E+00	0.00E+00	1.40E-01	5.00E-02	0.00E+00	5.00E-02	0.00E+00		
		2.20E+00	5.00E-01					
		2.34E+00	4.97E-01		2.14E+00	0.00E+00		
		1.18E+00	2.47E-01	4.83E-02	2.05E-01	0.00E+00		
		6.81E+00			4.54E+00	0.00E+00		
						0.00E+00		
		8.55E+00			8.55E+00	0.00E+00		
						0.00E+00		
						0.00E+00		
		5.80E+00	1.45E+00		1.45E+00	0.00E+00		
						0.00E+00		
		9.57E+00			4.78E+00	0.00E+00		
		6.32E+00				0.00E+00		
						0.00E+00		
		9.32E+00				0.00E+00		

		5.80E+00	1.90E+00			
		4.70E+00	1.40E+00			
		3.70E+00	1.10E+00			
6.11E-01	7.13E-01	1.32E+00	4.89E-01	8.14E-02	4.48E-01	2.04E-02
3.10E-04	3.10E-05	2.85E-06	5.13E-08	2.57E-10	5.13E-12	5.13E-15
6.01E-04	6.07E-05	1.18E-05	2.71E-07	8.12E-10	1.79E-11	1.79E-14
5.20E-03	1.10E-03	2.41E-04	4.83E-06	1.93E-08	4.63E-10	4.63E-13
1.33E-02	3.20E-03	1.84E-03	5.14E-05	2.06E-07	6.99E-09	6.99E-12
7.42E-03	2.38E-03	1.70E-03	6.96E-05	4.18E-07	1.84E-08	1.84E-11
1.25E-02	1.73E-03	4.90E-04	1.67E-05	1.00E-07	3.40E-09	0.00E+00

		1.91E+01	1.02E+01	1.76E+00	9.42E+00	4.92E-01
		3.20E+02	1.87E+02	2.67E+01	1.49E+02	6.20E+00
		3.75E+01	2.51E+01	3.75E+00	2.21E+01	1.00E+00
3.14E+00	2.03E+00	2.85E+00	1.13E+00	1.32E-01	1.29E+00	
1.05E+01	9.53E+00	1.49E+01	9.98E+00	1.64E+00	8.79E+00	1.13E-01

## NON-VOLATILE SPECIES

## DEFN=1.0 NUCLIDE ACTIVITY RATIO VERSUS I-131 AT AS

Zr-95	Nb-95	Ce-143	Nd-147	I-131	I-132	I-133	Te-129	Te-129m
				1.00E+00	1.27E-01	5.26E-02	0.00E+00	0.00E+00
				1.00E+00	1.55E-01	7.64E-02	0.00E+00	0.00E+00
				1.00E+00	1.06E-01	5.43E-02	0.00E+00	0.00E+00
				1.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	5.07E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	3.97E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.76E-01	8.00E-02	0.00E+00	0.00E+00
				1.00E+00	1.56E-01	5.81E-02	0.00E+00	0.00E+00
				1.00E+00	1.69E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.74E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.79E-01	4.58E-02	0.00E+00	0.00E+00
				1.00E+00	1.59E-01	3.49E-02	0.00E+00	0.00E+00
				1.00E+00	1.34E+00	6.21E-02	0.00E+00	0.00E+00
				1.00E+00	1.32E+00	5.87E-02	0.00E+00	0.00E+00
				1.00E+00	9.31E-01	4.58E-02	0.00E+00	0.00E+00
				1.00E+00	6.14E-01	3.13E-02	0.00E+00	0.00E+00
				1.00E+00	4.73E-01	3.65E-02	0.00E+00	0.00E+00
				1.00E+00	1.59E-01	4.27E-02	0.00E+00	0.00E+00
				1.00E+00	1.67E-01	4.97E-02	0.00E+00	0.00E+00
				1.00E+00	1.74E-01	7.10E-02	0.00E+00	0.00E+00
				1.00E+00	1.39E-01	3.47E-02	0.00E+00	0.00E+00
				1.00E+00	1.18E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.35E-01	7.60E-02	0.00E+00	0.00E+00
				1.00E+00	1.41E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.85E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.68E-01	1.80E-02	0.00E+00	0.00E+00
				1.00E+00	1.75E-01	3.39E-02	0.00E+00	0.00E+00
				1.00E+00	1.60E-01	2.86E-02	0.00E+00	0.00E+00
				1.00E+00	1.01E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.52E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.00E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.43E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	6.17E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.03E+00	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.43E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.82E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.50E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.74E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	2.31E-01	0.00E+00	0.00E+00	0.00E+00

1.00E+00	6.05E-01	2.47E-02	0.00E+00	0.00E+00
1.00E+00	5.14E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	3.58E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	5.10E-02	0.00E+00	3.00E-02	3.50E-02
1.00E+00	2.57E-01	1.80E-03	2.88E-04	2.88E-05
1.00E+00	2.68E-01	1.34E-03	1.74E-04	1.76E-05
1.00E+00	5.77E-01	8.66E-03	2.97E-03	6.26E-04
1.00E+00	7.62E-01	9.91E-03	4.16E-03	1.00E-03
1.00E+00	7.41E-01	9.63E-03	4.57E-03	1.46E-03
1.00E+00	4.42E-01	3.54E-03	8.70E-04	1.21E-04
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1.00E+00	2.69E-01	3.00E-03	0.00E+00	0.00E+00
1.00E+00	3.87E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	2.99E-01	2.00E-03	0.00E+00	0.00E+00
1.00E+00	2.90E-01	3.00E-03	1.19E-01	7.70E-02
1.00E+00	2.45E-01	6.00E-03	1.85E-01	1.68E-01
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#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

**NON-VOLATILE SPECIE:**

Te-132	Cs-134	Cs-136	Cs-137	La-140	Mo-99	Tc-99m	Zr-95	Nb-95
1.21E-01	2.74E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.71E-01	4.55E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.31E-02	2.11E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.49E-01	5.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.76E-01	1.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.49E-01	8.97E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.54E-01	5.49E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.45E-01	4.94E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.18E-01	5.16E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.63E-01	4.75E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.53E-01	6.49E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.51E-01	4.24E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.23E+00	4.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.07E+00	5.10E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.02E+00	2.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.23E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.81E-01	1.12E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.59E-01	4.57E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.94E-02	4.84E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E-01	5.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E-01	3.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.18E-01	4.97E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.81E-01	4.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.73E-01	2.56E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.61E-01	5.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.50E-01	3.59E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.64E-01	3.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.43E-01	5.14E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.01E-01	4.23E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.59E-01	4.55E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E-01	5.00E-02	0.00E+00	5.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.31E-01	2.98E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.83E-01	1.67E-01	0.00E+00	7.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.61E+00	3.39E-01	6.61E-02	2.81E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.67E-01	0.00E+00	0.00E+00	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E-01	0.00E+00	0.00E+00	1.90E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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1.82E-01	4.55E-02	0.00E+00	4.55E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E-01	0.00E+00	0.00E+00	5.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.54E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

[illegible]



[illegible]

**Nd-147**

[illegible]

0.00E+00	0.00E+00
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#DIV/0!	#DIV/0!

**From:** Sheron, Brian  
**To:** Adams, Ian; Aoki, Steven; Binkley, Steve; Budnitz, Bob; Garwin, Dick (EOP); Garwin, Dick (IBM); Finck, Phillip; Grossenbacher, John (INL); Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Peterson, Per; Rolando Szilard; Steve Fetter; Lee, Richard; Lee, Richard  
**Cc:** Narendra, Blake; Fitzgerald, Paige; (b)(6) Claxton, Dionne (CONTR); Chambers, Megan (S4); Smith, Haley  
**Subject:** RE: Nuclear science group conference call - Friday, Saturday, and Sunday, 5:00pm EDT  
**Date:** Friday, March 25, 2011 7:13:00 AM

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Work for me.

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**From:** Adams, Ian [<mailto:Ian.Adams@Hq.Doe.Gov>]  
**Sent:** Thursday, March 24, 2011 7:25 PM  
**To:** Adams, Ian; Aoki, Steven; Binkley, Steve; Budnitz, Bob; Sheron, Brian; Garwin, Dick (EOP); Garwin, Dick (IBM); Finck, Phillip; Grossenbacher, John (INL); Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Peterson, Per; Rolando Szilard; Steve Fetter; Lee, Richard; Lee, Richard  
**Cc:** Narendra, Blake; Fitzgerald, Paige; (b)(6) Claxton, Dionne (CONTR); Chambers, Megan (S4); Smith, Haley  
**Subject:** Nuclear science group conference call - Friday, Saturday, and Sunday, 5:00pm EDT

Good evening,

Tomorrow's call will take place at 5:00pm EDT. I am proposing that this call also take place at 5:00pm EDT on Saturday and Sunday.

On Monday, we'll move the call back to 6:00pm EDT.

Please let me know if these times work for you.

Thanks

Ian

**Nuclear science group conference call schedule:**

**Friday 3/25: 5:00pm-6:00pm EDT**

**Saturday 3/26: 5:00pm-6:00pm EDT**

**Sunday 3/27: 5:00pm-6:00pm EDT**

**Monday 3/28: 6:00pm-7:00pm EDT**

**Conference call information:**

**Please dial into (202) 586-2535**

**No PIN is needed.**

CH/326

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**From:** Adams, Ian

**Sent:** Thursday, March 24, 2011 5:11 PM

**To:** Adams, Ian; Aoki, Steven; Binkley, Steve; Budnitz, Bob; Sheron, Brian; Garwin, Dick (EOP); Garwin, Dick (IBM); Finck, Phillip; Grossenbacher, John (INL); Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Peterson, Per; Rolando Szilard; Steve Fetter; Lee, Richard

**Cc:** Narendra, Blake; Fitzgerald, Paige; (b)(6) Claxton, Dionne (CONTR); Chambers, Megan (S4); Smith, Haley

**Subject:** RE: Nuclear science group conference call - Thursday 6:00pm EDT

Good afternoon,

Just a reminder, this call will take place tonight at 6:00pm EDT.

Tomorrow's call will take place at 5:00pm EDT.

**Nuclear science group conference call schedule:**

**Thursday 3/24: 6:00pm-7:00pm EDT**

**Friday 3/25: 5:00pm-6:00pm EDT**

**Conference call information:**

**Please dial into (202) 586-2535**

**No PIN is needed.**

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**From:** Adams, Ian

**Sent:** Thursday, March 24, 2011 9:22 AM

**To:** Adams, Ian; Aoki, Steven; Binkley, Steve; Budnitz, Bob; Sheron, Brian; Garwin, Dick (EOP); Garwin, Dick (IBM); Finck, Phillip; Grossenbacher, John (INL); Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Peterson, Per; Rolando Szilard; Steve Fetter; Lee, Richard

**Cc:** Narendra, Blake; Fitzgerald, Paige; (b)(6) Claxton, Dionne (CONTR); Chambers, Megan (S4); Smith, Haley

**Subject:** Nuclear science group conference call - Thursday 6:00pm EDT

Good morning,

Today's conference call will be at 6:00pm EDT tonight. For tomorrow (Friday), please let me know if 5:00pm-6:00pm EDT works for you.

**Nuclear science group conference call proposed schedule:**

**Thursday 3/24: 6:00pm-7:00pm EDT**

**Friday 3/25: 5:00pm-6:00pm EDT**

**Conference call information:**

Please dial into (202) 586-2535

No PIN is needed.

Additionally, I have attached this morning's Japan sit rep. This information should not be shared or further distributed.

Thanks

Ian

<< File: Japan\_Earthquake\_Response\_03242011\_0600b.pdf >> << File: SITREP\_MAR24  
0600.docx >>

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**From:** Adams, Ian

**Sent:** Wednesday, March 23, 2011 10:48 AM

**To:** Adams, Ian; Aoki, Steven; Binkley, Steve; Bob Budnitz; Brian Sheron; Dick Garwin; Dick Garwin; Finck, Phillip; Grossenbacher, John (INL); Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Per Peterson; Rolando Szilard; Steve Fetter; Lee, Richard

**Cc:** Narendra, Blake; Fitzgerald, Paige; (b)(6) Claxton, Dionne (CONTR); Chambers, Megan (S4); Smith, Haley

**Subject:** RE: Nuclear science group conference call - Wednesday 6:00pm EDT

Good morning,

The daily nuclear science group conference call is confirmed for 6:00pm-7:00pm today.

Due to scheduling conflicts, Thursday's call will need to move. It will now take place 6:00pm-7:00pm, same as today's call time.

Thanks,

Ian

**Nuclear science group conference call schedule:**

**Wednesday 3/23: 6:00pm-7:00pm EDT**

**Thursday 3/24: 6:00pm-7:00pm EDT**

**Conference call information:**

Please dial into (202) 586-2535

No PIN is needed.

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**From:** Adams, Ian

**Sent:** Tuesday, March 22, 2011 7:04 PM

**To:** Adams, Ian; Aoki, Steven; Binkley, Steve; Bob Budnitz; Brian Sheron; Dick Garwin; Dick Garwin; Finck, Phillip; Grossenbacher, John (INL); Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Per Peterson; Rolando Szilard; Steve Fetter

**Cc:** Narendra, Blake; Fitzgerald, Paige; (b)(6) Claxton, Dionne (CONTR); Chambers, Megan (S4); Smith, Haley

**Subject:** Nuclear science group conference call - Wednesday

Good evening,

We need to change the time of tomorrow's call to later in the day. Please let me know if 6:00pm EDT Wednesday and 5:00pm EDT Thursday would work for you.

Thanks,

Ian

**Nuclear science group conference call - proposed schedule:**

**Wednesday: 6:00pm-7:00pm EDT**

**Thursday: 5:00pm-6:00pm EDT**

**Conference call information:**

**Please dial into (202) 586-2535**

**No PIN is needed.**

**From:** Sheron, Brian  
**To:** HOO Hoc  
**Cc:** Weber, Michael; Virgilio, Martin  
**Subject:** FW: Revised Report: Triage Report -- TE-11-0721-A, Addendum D for 23 March  
**Date:** Friday, March 25, 2011 7:15:00 AM  
**Attachments:** Triage Report - TE-11-0721-Addendum D --- 23 March 2011 Revision 1.docx

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Please forward to PMT Director. Thx.

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

From: NITOPS [<mailto:NITOPS@nnsa.doe.gov>]

Sent: Thursday, March 24, 2011 8:09 PM

To: Aoki, Steven; Aragon, Antonio; Aragon, Antonio; Binkley, Steve; Budnitz, Bob; Casson, William (Bill); Dudder, Gordon B; Garwin, Dick (EOP); Garwin, Dick (IBM); Myers, Steven; NITOPS; NITSolutions; Peterson, Per; Peterson, Steven J; Pitts, William Karl; Poneman, Daniel; Sheron, Brian; Spanard, Richard J.; Swanson, Joel (LLNL); Szilard, Ronalo; Wimer, Nathan; Wimer, Nathan; Woessner, William S.

Cc: NITOPS

Subject: Revised Report: Triage Report -- TE-11-0721-A, Addendum D for 23 March

Please find attached the Triage report for measurements taken approximately 8km from the NPP.

Nuclear Incident Team (NIT)

Office of Emergency Response (NA-42)

National Nuclear Security Administration U.S. Department of Energy [nitops@nnsa.doe.gov](mailto:nitops@nnsa.doe.gov)

[nit@doe.gov](mailto:nit@doe.gov) 202-586-8100

CH/327

~~OFFICIAL USE ONLY~~  
DISTRIBUTION LIMITED TO NNSA/NA-40

**Triage Event: TE-11-0721-A Addendum D - Revision 1 (Correction to Ratio Filenames)**

Date(s): 23 Mar 2011  
Callout(s): Callout 21 Mar 2011, 9:49 EDT; Bridgeline 10:15 EDT  
Event Type: DOE SEAR Event, Level 1  
Location: Japan  
Submitted by: Field Collections through NITOPS  
Email(s): N/A  
Triage Web: TE-11-0721 Addendum D, Continuing Event  
Contact(s): A. Aragon (Triage FTL); R. Spanard (Triage FTL)  
Responder(s): J. Bounds (LANL), W. Casson (LANL), N. Wimer (LLNL)  
Report Date: 23 Mar 2011, edited by N. Wimer

**List of data files used in the analysis.**

UNK	2011_03_23_16_33_020.spc	Lat/Long 37.35288683, 140.97889316
UNK	2011_03_23_15_00_130.spc	Lat/Long 36.8681086, 140.14207716
CAL	2011_03_22_22_36_200 Cs137.spc	(Per web submission)
BKG	2011_03_23_07_04_370 FIS8_Bkgd.spc	

**Summary:**

These two spectrum files were transmitted to Triage as part of a continuing high-priority analysis of field spectra collected in Japan at highway locations on approaches to the Fukushima Plant. Triage analysts were asked to provide nuclide identification, determine activity ratios for radionuclides evident in the spectra, and append to the Compilation XLS file.

As with the compilation being appended to, these spectrum files indicate coolant release nuclides, present as air activity concentrations and ground deposition in the field of view of an HPGe detector held 1 meter above the ground. They are well-enough developed that a detailed screening for non-volatile species was performed, with none observed. Definitive determination of whether fuel releases have occurred is expected to require HPGe assays from grounds of the plant itself.

**Triage Assessment:**

These spectrum files were collected with an HPGe ORTEC Detective-EX, with data acquisition on 23 March 11. Triage observed the spectrum was more developed compared with other sample spectra analyzed to date, with durations of approximately 20 minutes and deadtimes approaching 80%.

Nuclides observed were consistent with other Japan HPGe spectra taken at a distance, reflecting coolant-release compositions. There are no unidentified nuclides. Given unknown source-detector detail, absolute activities cannot be estimated: rough activity ratios relative to I-131 are shown in Table 1 below.



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Radionuclide	Activity relative to I-131 for "2011_03_23_16_33_020.Chn"	Activity relative to I-131 for "2011_03_23_15_00_130.chn"
I-131	1.0 (Defined)	1.0 (Defined)
I-132	0.245	0.290
I-133	0.006	0.003
Te-129	0.185	0.119
Te-129m	0.168	0.077
Te-132	0.262	0.108
Cs-134	0.176	0.043
Cs-136	0.029	0.005
Cs-137	0.155	0.049
La-140	0.002	Not detectable

Table 1. Relative nuclide activity ratios for TE-11-0721-A Addendum D spectrum files (23 Mar 11).

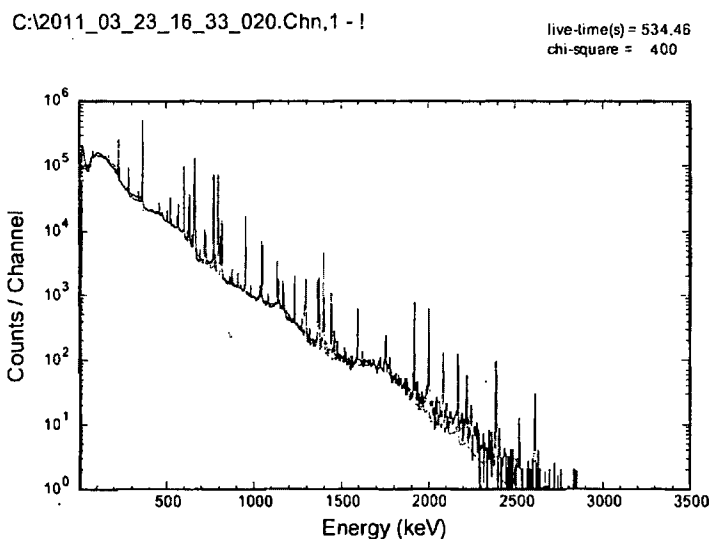


Figure 1. Gamma spectrum fitting of "2011\_03\_23\_15\_00\_130.chn" field gamma assay. Lines corresponding to I-131, I-132, Te-132, I-133, Cs-134, Cs-136, Cs-137, Te-129, Te-129m, and La-140 are evident; non-volatile nuclide reflecting potential fuel release were searched for in detail and not observed.

**Recommendations for follow on activities:**

These two high-priority field gamma-assay compositions represent coolant-only release, and discerning potential reactor fuel release will almost certainly require HPGe assay on the grounds of the Fukushima plant.

**From:** Sheron, Brian  
**To:** Sangimino, Donna-Marie  
**Subject:** FW: CSNI Summary Record - Appendix 3 added  
**Date:** Friday, March 25, 2011 7:21:00 AM  
**Attachments:** NEA-SEN-SIN-2011-1 SR-AR-48-CSNI.pdf

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**From:** Elisabeth.MAUNY@oecd.org [mailto:Elisabeth.MAUNY@oecd.org]  
**Sent:** Friday, March 25, 2011 6:20 AM  
**Subject:** CSNI Summary Record - Appendix 3 added

**Message sent on behalf of Greg Lamarre**

Dear CSNI members,

Please find attached a new version of the Summary Record of the last CSNI meeting. The Appendix 3 has been added (List of CSNI meetings from January to December 2011).

Yours sincerely,  
Elisabeth Mauny  
Assistant, Nuclear Safety Division

CH/328

**From:** Sheron, Brian  
**To:** HOO Hoc  
**Subject:** FW: Triage Report  
**Date:** Friday, March 25, 2011 7:21:00 AM  
**Attachments:** Version 5A --- DOE Triage - Japan Spectrum Compilation - As of 23 March 2011 (OUO) (3).xls

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Please forward to PMT director. Thx.

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

From: NITOPS [mailto:NITOPS@nnsa.doe.gov]  
Sent: Friday, March 25, 2011 6:22 AM  
To: Aoki, Steven; Adams, Ian; Brinkman, Bill; DAgostino, Thomas; Finck, Phillip; Grossenbacher, John (INL); Hurlbut, Brandon; John Holdren; Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Owens, Missy; Peterson, Per; Poneman, Daniel; 'ronaldo.szilard@inl.gov';  
(b)(6) Aragon, Antonio; atkinsduffin1@inl.gov; Bounds, John; Carol J. Burns; Casson, William (Bill); Dudder, Gordon B; Myers, Steven; NITOPS; Pitts, William Karl; Spanard, Richard J.; Swanson, Joel (LLNL); Wimer, Nathan; Wimer, Nathan; Woessner, William S.  
Cc: Binkley, Steve; Budnitz, Bob; Garwin, Dick (EOP); Garwin, Dick (IBM); Miller, Neile; Mustin, Tracy; NITSolutions; SCHU; Sheron, Brian  
Subject: RE: Triage Report

Attached is the latest version of the compilation report

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

From: Aoki, Steven  
Sent: Thursday, March 24, 2011 2:10 PM  
To: Aoki, Steven; Adams, Ian; Brinkman, Bill; DAgostino, Thomas; Finck, Phillip; Grossenbacher, John (INL); Hurlbut, Brandon; John Holdren; Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Owens, Missy; Peterson, Per; Poneman, Daniel; 'ronaldo.szilard@inl.gov';  
(b)(6) Aragon, Antonio; atkinsduffin1@inl.gov; Bounds, John; Carol J. Burns; Casson, William (Bill); Dudder, Gordon B; Myers, Steven; NITOPS; Pitts, William Karl; Spanard, Richard J.; Swanson, Joel (LLNL); Wimer, Nathan; Wimer, Nathan; Woessner, William S.  
Subject: RE: Triage Report

Please note that due to operator error on my part in a previous message, Per Peterson's name was replaced by a different Peterson from the DOE phonebook. Please use the recipient list for this e-mail in any responses.

My apologies for the error -- although I will continue to blame obscure default settings in MS Outlook.

CH/329

Filename Serial	Time Serial	TRIAGE EVENT	TRIAGE SUBMISSION	TRIAGE REPORT	FOLDERNAME
	1	1 TE-11-0208	3/21/2011	3/22/2011	Japan_Spectra_2
	3	2 TE-11-0208	3/21/2011	3/22/2011	Japan_Spectra_2
	2	3 TE-11-0208	3/21/2011	3/22/2011	Japan_Spectra_2
	33	4 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	34	5 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	35	6 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	6	7 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	9	8 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	10	9 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	11	10 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	12	11 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	13	12 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	14	13 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	15	14 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	16	15 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	17	16 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	18	17 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	19	18 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	20	19 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	21	20 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	22	21 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	23	22 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	24	23 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	25	24 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	26	25 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	27	26 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	28	27 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	29	28 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	36	29 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	37	30 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	0	31 TE-210311	3/21/2011	3/21/2011	None
	39	32 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	58	33 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	59	34 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	60	35 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	50	36 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	55	37 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	54	38 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	53	39 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	61	40 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	56	41 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	62	42 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	63	43 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	57	44 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A
	64	45 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18A

42	46 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18
40	47 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18
41	48 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_18
-1	49 TE-11-0720	3/21/2011	3/21/2011	None
108	50 TE-11-0721 Add B	3/22/2011	3/22/2011	None
107	51 TE-11-0721 Add B	3/22/2011	3/22/2011	None
106	52 TE-11-0721 Add B	3/22/2011	3/22/2011	None
105	53 TE-11-0721 Add B	3/22/2011	3/22/2011	None
104	54 TE-11-0721 Add B	3/22/2011	3/22/2011	None
103	55 TE-11-0721 Orig	3/22/2011	3/22/2011	None
300	56 TE-11-0645	3/23/2011	IN PROGRESS	None
301	57 TE-11-0645	3/23/2011	IN PROGRESS	None
203	58 TE-11-0721 Add C	3/22/2011	FILES WAITING	None
205	59 TE-11-0721 Add C	3/22/2011	FILES WAITING	None
204	60 TE-11-0721 Add C	3/22/2011	FILES WAITING	None
100	61 TE-11-0721 Add C	3/22/2011	3/22/2011	None
102	62 TE-11-0721 Add C	3/22/2011	3/22/2011	None
101	63 TE-11-0721 Add C	3/22/2011	3/22/2011	None
202	64 TE-11-0721 Add D	3/23/2011	3/23/2011	None
201	65 TE-11-0721 Add D	3/23/2011	3/23/2011	None

FILE NAME	FILE Type	FILE Notes	Spectrum STARTDATE	Spectrum TIME-24
2011_03_16_00_53_000.spc	AMS	Compilation 21 March	16-Mar	0:33
Iso00004-FIS-9A SN4639.Spc	AMS	Compilation 21 March	16-Mar	2:13
CM Bldg 1503 Background Downlook	AMS Instrument	Compilation 21 March	16-Mar	18:22
Iso00010-FIS-9A SN4639.Spc	AMS	Compilation 21 March	17-Mar	4:00
Iso00011-FIS-9A SN4639.Spc	AMS	Compilation 21 March	17-Mar	4:17
Iso00012-FIS-9A SN4639.Spc	AMS	Compilation 21 March	17-Mar	4:49
2011_03_17_08_44_560.spc	AMS	Compilation 21 March	17-Mar	7:56
2011_03_17_13_02_020.spc	AMS	Compilation 21 March	17-Mar	12:42
2011_03_17_13_22_400.spc	AMS	Compilation 21 March	17-Mar	13:05
2011_03_17_13_42_380.spc	AMS	Compilation 21 March	17-Mar	13:25
2011_03_17_14_20_240.spc	AMS	Compilation 21 March	17-Mar	14:03
2011_03_17_14_40_210.spc	AMS	Compilation 21 March	17-Mar	14:23
2011_03_17_15_26_050.spc	AMS	Compilation 21 March	17-Mar	15:22
2011_03_17_15_31_200.spc	AMS	Compilation 21 March	17-Mar	15:26
2011_03_17_15_40_180.spc	AMS	Compilation 21 March	17-Mar	15:35
2011_03_17_15_47_270.spc	AMS	Compilation 21 March	17-Mar	15:42
2011_03_17_15_55_330.spc	AMS	Compilation 21 March	17-Mar	15:50
2011_03_17_16_14_370.spc	AMS	Compilation 21 March	17-Mar	15:57
2011_03_17_16_33_270.spc	AMS	Compilation 21 March	17-Mar	16:16
2011_03_17_16_44_040.spc	AMS	Compilation 21 March	17-Mar	16:39
2011_03_17_16_50_300.spc	AMS	Compilation 21 March	17-Mar	16:45
2011_03_17_16_57_300.spc	AMS	Compilation 21 March	17-Mar	16:52
2011_03_17_17_03_570.spc	AMS	Compilation 21 March	17-Mar	16:58
2011_03_17_17_10_160.spc	AMS	Compilation 21 March	17-Mar	17:05
2011_03_17_17_37_410.spc	AMS	Compilation 21 March	17-Mar	17:20
2011_03_17_17_59_380.spc	AMS	Compilation 21 March	17-Mar	17:42
2011_03_17_18_25_260.spc	AMS	Compilation 21 March	17-Mar	18:08
2011_03_17_18_45_370.spc	AMS	Compilation 21 March	17-Mar	18:28
Iso00013-FIS-9A SN4639.Spc	AMS	Compilation 21 March	17-Mar	21:28
Iso00016-FIS-9A SN4639.Spc	AMS	Compilation 21 March	17-Mar	22:41
2011_03_18SCF-08985 Buf00048-FIS	AMS	High-priority filter	17-Mar	23:09
Iso00019-FIS-9A SN4639.Spc	AMS	Compilation 21 March	17-Mar	23:39
Iso00020-FIS-9A SN4639.Spc	AMS	Compilation 21 March	17-Mar	23:59:35
Iso00027-FIS-9A SN4639.Spc	AMS	Compilation 21 March	18-Mar	1:29:42
Iso00030-FIS-9A SN4639.Spc	AMS	Compilation 21 March	18-Mar	2:02:19
2011_03_18_SCF-08987.Spc	AMS Instrument	Compilation 21 March	18-Mar	2:31:49
2011_03_18SCF-08990.Spc	AMS Instrument	Compilation 21 March	18-Mar	2:44:54
2011_03_18SCF08990.Spc	AMS Air Filter	Compilation 21 March	18-Mar	2:58:07
2011_03_18SCF-08989.Spc	AMS Air Filter	Compilation 21 March	18-Mar	3:11:44
Iso00037-FIS-9A SN4639.Spc	AMS	Compilation 21 March	18-Mar	3:24:33
2011_03_19#8.Spc	AMS	Compilation 21 March	18-Mar	17:50:09
Iso00039-FIS-9A SN4639.Spc	AMS	Compilation 21 March	18-Mar	19:50:16
Iso00040-FIS-9A SN4639.Spc	AMS	Compilation 21 March	18-Mar	20:11:59
2011_03_19_SCF00570.Spc	AMS	Compilation 21 March	18-Mar	20:54:02
Iso00041-FIS-9A SN4639.Spc	AMS	Compilation 21 March	18-Mar	22:30:30

2011_03_19#9.Spc	AMS	Compilation 21 March	18-Mar	22:50
2011_03_19#10.Spc	AMS	Compilation 21 March	18-Mar	23:02
2011_03_19#11.Spc	AMS	Compilation 21 March	18-Mar	23:11
2011_03_20_alpha.chn	AMS	13 miles SW of Plant	20-Mar	17:17
2011_03_21_12_49_350.spc	AMS Instrument	Highways	21-Mar	12:31
2011_03_21_13_25_360.spc	AMS Instrument	Highways	21-Mar	13:08
2011_03_21_13_58_490.spc	AMS Instrument	Highways	21-Mar	13:41
2011_03_21_14_29_090.spc	AMS Instrument	Highways	21-Mar	14:11
2011_03_21_15_01_510.spc	AMS Instrument	Highways	21-Mar	14:44
2011_03_21_15_35_350.spc	AMS Instrument	Highways	21-Mar	15:18
2011_03_22_07_44_160.spc	DetectiveEx	Air Vents	22-Mar	7:41
2011_03_22_07_51_320.spc	DetectiveEx	Exhaust Air Vents	22-Mar	7:48
2011_03_22_15_00_200.spc	AMS Instrument	Highways	22-Mar	14:41
2011_03_22_16_11_250.spc	AMS Instrument	Highways	22-Mar	15:16
2011_03_22_15_36_050.spc	AMS Instrument	Highways	22-Mar	15:54
2011_03_22_18_14_120.spc	AMS Instrument	Highways	22-Mar	15:57
2011_03_22_16_43_510.spc	AMS Instrument	Highways	22-Mar	16:26
2011_03_22_17_35_500.spc	AMS Instrument	Highways	22-Mar	17:18
2011_03_23_15_00_130.spc	AMS Instrument	Highways	23-Mar	14:24
2011_03_23_16_33_020.spc	AMS Instrument	Highways	23-Mar	15:42

Spectrum DUR-Secs	DATA/ NONDATA	Analyst 1	Analyst 2	Method	Not Avail=1.0	RELATIVE NUCLIDE ACT	
					I-131	I-132	I-133
1148	DATA	Casson	Wimer	GADRAS	1.90E+01	2.41E+00	1.00E+00
1101	DATA	Casson	Wimer	GADRAS	1.23E+01	1.91E+00	9.40E-01
1065	DATA	Casson	Wimer	GADRAS	2.47E+01	2.63E+00	1.34E+00
300	DATA	Casson	Wimer	GADRAS	1.68E+01	2.10E+00	
300	DATA	Casson	Wimer	GADRAS	7.10E+00	3.60E+00	
300	DATA	Casson	Wimer	GADRAS	7.80E+00	3.10E+00	
1000	DATA	Casson	Wimer	GADRAS	1.75E+01	3.08E+00	1.40E+00
1000	DATA	Casson	Wimer	GADRAS	1.72E+01	2.69E+00	1.00E+00
1000	DATA	Casson	Wimer	GADRAS	1.53E+01	2.58E+00	
1000	DATA	Casson	Wimer	GADRAS	1.41E+01	2.45E+00	
1000	DATA	Casson	Wimer	GADRAS	1.31E+01	2.35E+00	6.00E-01
1000	DATA	Casson	Wimer	GADRAS	1.72E+01	2.74E+00	6.00E-01
223	DATA	Casson	Wimer	GADRAS	5.64E+01	7.53E+01	3.50E+00
275	DATA	Casson	Wimer	GADRAS	8.86E+01	1.17E+02	5.20E+00
302	DATA	Casson	Wimer	GADRAS	1.31E+01	1.22E+01	6.00E-01
306	DATA	Casson	Wimer	GADRAS	8.30E+00	5.10E+00	2.60E-01
333	DATA	Casson	Wimer	GADRAS	7.40E+00	3.50E+00	2.70E-01
1002	DATA	Casson	Wimer	GADRAS	1.64E+01	2.61E+00	7.00E-01
1002	DATA	Casson	Wimer	GADRAS	1.61E+01	2.69E+00	8.00E-01
304	DATA	Casson	Wimer	GADRAS	1.55E+01	2.70E+00	1.10E+00
304	DATA	Casson	Wimer	GADRAS	1.73E+01	2.40E+00	6.00E-01
303	DATA	Casson	Wimer	GADRAS	1.61E+01	1.90E+00	
303	DATA	Casson	Wimer	GADRAS	1.71E+01	2.30E+00	1.30E+00
303	DATA	Casson	Wimer	GADRAS	1.56E+01	2.20E+00	
1006	DATA	Casson	Wimer	GADRAS	1.68E+01	3.10E+00	
1002	DATA	Casson	Wimer	GADRAS	1.67E+01	2.80E+00	3.00E-01
1002	DATA	Casson	Wimer	GADRAS	1.77E+01	3.10E+00	6.00E-01
1034	DATA	Casson	Wimer	GADRAS	1.75E+01	2.80E+00	5.00E-01
300	DATA	Casson	Wimer	GADRAS	1.89E+01	1.90E+00	
300	DATA	Casson	Wimer	GADRAS	1.32E+01	2.00E+00	
300	DATA	Wimer	Bounds	GADRAS	1.00E+00	1.00E-01	0.00E+00
300	DATA	Casson	Wimer	GADRAS	1.68E+01	2.40E+00	
300	DATA	Swanson	Bounds/Myer	GamDes	2.98E+00	1.84E+00	
300	DATA	Swanson	Bounds/Myer	GamDes	7.30E-01	7.54E-01	
300	DATA	Swanson	Bounds/Myer	GamDes	4.08E+01	0.00E+00	
300	DATA	Swanson	Bounds/Myer	GamDes	7.90E+01		
300	DATA	Swanson	Bounds/Myer	GamDes	4.49E+01	6.41E+00	
300	DATA	Swanson	Bounds/Myer	GamDes	4.60E+01		
300	DATA	Swanson	Bounds/Myer	GamDes	5.05E+01		
300	DATA	Swanson	Bounds/Myer	GamDes	3.19E+01	5.80E+00	
300	DATA	Swanson	Bounds/Myer	GamDes	4.91E+01		
300	DATA	Swanson	Bounds/Myer	GamDes	9.57E+01	1.43E+01	
300	DATA	Swanson	Bounds/Myer	GamDes	7.27E+01	1.26E+01	
300	DATA	Swanson	Bounds/Myer	GamDes	5.43E+01		
300	DATA	Swanson	Bounds/Myer	GamDes	6.06E+01	1.40E+01	



300	DATA	Casson	Wimer	GADRAS	8.10E+00	4.90E+00	2.00E-01
300	DATA	Casson	Wimer	GADRAS	7.00E+00	3.60E+00	
300	DATA	Casson	Wimer	GADRAS	6.70E+00	2.40E+00	
807	DATA	Swanson	Wimer	GADRAS	2.04E+01	1.04E+00	0.00E+00
286	DATA	Bounds	Wimer	GADRAS	1.08E+00	2.77E-01	1.94E-03
730	DATA	Bounds	Wimer	GADRAS	3.45E+00	9.24E-01	4.62E-03
802	DATA	Bounds	Wimer	GADRAS	1.75E+00	1.01E+00	1.52E-02
580	DATA	Bounds	Wimer	GADRAS	3.19E+00	2.43E+00	3.16E-02
759	DATA	Bounds	Wimer	GADRAS	1.63E+00	1.20E+00	1.57E-02
891	DATA	Bounds	Wimer	GADRAS	1.43E+01	6.33E+00	5.07E-02
138	DATA	Bounds	Wimer				
165	DATA	Bounds	Wimer				
1041	DATA	FILES WAITING					
927	DATA	FILES WAITING					
813	DATA	FILES WAITING					
992	DATA	Bounds	Wimer	GADRAS	7.03E+01	1.89E+01	2.11E-01
756	DATA	Bounds	Wimer	GADRAS	6.20E+02	2.40E+02	
968	DATA	Bounds	Wimer	GADRAS	1.25E+02	3.74E+01	2.50E-01
530	DATA	Wimer	Bounds	GADRAS	2.64E+01	7.64E+00	7.91E-02
534	DATA	Wimer	Bounds	GADRAS	5.67E+01	1.39E+01	3.40E-01

ACTIVITY AT ASSAY (ARBITRARY UNITS)---NO DECAY CORRECTIONS PERFORMED

Te-129	Te-129m	Te-132	Cs-134	Cs-136	Cs-137	La-140	Mo-99	Tc-99m
		2.30E+00	5.20E-01					
		2.10E+00	5.60E-01					
		2.30E+00	5.20E-01					
		2.50E+00	9.00E-01					
		4.80E+00	1.33E+00					
		3.50E+00	7.00E-01					
		2.70E+00	9.60E-01					
		2.50E+00	8.50E-01					
		1.80E+00	7.90E-01					
		2.30E+00	6.70E-01					
		2.00E+00	8.50E-01					
		2.60E+00	7.30E-01					
		6.95E+01	2.73E+01					
		9.46E+01	4.52E+01					
		1.34E+01	3.50E+00					
		6.00E+00	1.38E+00					
		4.30E+00	8.30E-01					
		2.60E+00	7.50E-01					
		1.60E+00	7.80E-01					
		3.60E+00	9.00E-01					
		1.90E+00	6.00E-01					
		1.90E+00	8.00E-01					
		3.10E+00	8.00E-01					
		2.70E+00	4.00E-01					
		2.70E+00	9.00E-01					
		2.50E+00	6.00E-01					
		2.90E+00	7.00E-01					
		2.50E+00	9.00E-01					
		1.90E+00	8.00E-01					
		2.10E+00	6.00E-01					
0.00E+00	0.00E+00	1.40E-01	5.00E-02	0.00E+00	5.00E-02	0.00E+00		
		2.20E+00	5.00E-01					
		2.34E+00	4.97E-01		2.14E+00	0.00E+00		
		1.18E+00	2.47E-01	4.83E-02	2.05E-01	0.00E+00		
		6.81E+00			4.54E+00	0.00E+00		
						0.00E+00		
		8.55E+00			8.55E+00	0.00E+00		
						0.00E+00		
						0.00E+00		
		5.80E+00	1.45E+00		1.45E+00	0.00E+00		
						0.00E+00		
		9.57E+00			4.78E+00	0.00E+00		
		6.32E+00				0.00E+00		
						0.00E+00		
		9.32E+00				0.00E+00		

		5.80E+00	1.90E+00			
		4.70E+00	1.40E+00			
		3.70E+00	1.10E+00			
6.11E-01	7.13E-01	1.32E+00	4.89E-01	8.14E-02	4.48E-01	2.04E-02
3.10E-04	3.10E-05	2.85E-06	5.13E-08	2.57E-10	5.13E-12	5.13E-15
6.01E-04	6.07E-05	1.18E-05	2.71E-07	8.12E-10	1.79E-11	1.79E-14
5.20E-03	1.10E-03	2.41E-04	4.83E-06	1.93E-08	4.63E-10	4.63E-13
1.33E-02	3.20E-03	1.84E-03	5.14E-05	2.06E-07	6.99E-09	6.99E-12
7.42E-03	2.38E-03	1.70E-03	6.96E-05	4.18E-07	1.84E-08	1.84E-11
1.25E-02	1.73E-03	4.90E-04	1.67E-05	1.00E-07	3.40E-09	0.00E+00

		1.91E+01	1.02E+01	1.76E+00	9.42E+00	4.92E-01
		3.20E+02	1.87E+02	2.67E+01	1.49E+02	6.20E+00
		3.75E+01	2.51E+01	3.75E+00	2.21E+01	1.00E+00
3.14E+00	2.03E+00	2.85E+00	1.13E+00	1.32E-01	1.29E+00	
1.05E+01	9.53E+00	1.49E+01	9.98E+00	1.64E+00	8.79E+00	1.13E-01

## NON-VOLATILE SPECIES

DEFN=1.0 NUCLEIDE ACTIVITY RATIO VERSUS I-131 AT AS

Zr-95	Nb-95	Ce-143	Nd-147	I-131	I-132	I-133	Te-129	Te-129m
				1.00E+00	1.27E-01	5.26E-02	0.00E+00	0.00E+00
				1.00E+00	1.55E-01	7.64E-02	0.00E+00	0.00E+00
				1.00E+00	1.06E-01	5.43E-02	0.00E+00	0.00E+00
				1.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	5.07E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	3.97E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.76E-01	8.00E-02	0.00E+00	0.00E+00
				1.00E+00	1.56E-01	5.81E-02	0.00E+00	0.00E+00
				1.00E+00	1.69E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.74E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.79E-01	4.58E-02	0.00E+00	0.00E+00
				1.00E+00	1.59E-01	3.49E-02	0.00E+00	0.00E+00
				1.00E+00	1.34E+00	6.21E-02	0.00E+00	0.00E+00
				1.00E+00	1.32E+00	5.87E-02	0.00E+00	0.00E+00
				1.00E+00	9.31E-01	4.58E-02	0.00E+00	0.00E+00
				1.00E+00	6.14E-01	3.13E-02	0.00E+00	0.00E+00
				1.00E+00	4.73E-01	3.65E-02	0.00E+00	0.00E+00
				1.00E+00	1.59E-01	4.27E-02	0.00E+00	0.00E+00
				1.00E+00	1.67E-01	4.97E-02	0.00E+00	0.00E+00
				1.00E+00	1.74E-01	7.10E-02	0.00E+00	0.00E+00
				1.00E+00	1.39E-01	3.47E-02	0.00E+00	0.00E+00
				1.00E+00	1.18E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.35E-01	7.60E-02	0.00E+00	0.00E+00
				1.00E+00	1.41E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.85E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.68E-01	1.80E-02	0.00E+00	0.00E+00
				1.00E+00	1.75E-01	3.39E-02	0.00E+00	0.00E+00
				1.00E+00	1.60E-01	2.86E-02	0.00E+00	0.00E+00
				1.00E+00	1.01E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.52E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.00E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.43E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	6.17E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.03E+00	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.43E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.82E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.50E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	1.74E-01	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
				1.00E+00	2.31E-01	0.00E+00	0.00E+00	0.00E+00

1.00E+00	6.05E-01	2.47E-02	0.00E+00	0.00E+00
1.00E+00	5.14E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	3.58E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	5.10E-02	0.00E+00	3.00E-02	3.50E-02
1.00E+00	2.57E-01	1.80E-03	2.88E-04	2.88E-05
1.00E+00	2.68E-01	1.34E-03	1.74E-04	1.76E-05
1.00E+00	5.77E-01	8.66E-03	2.97E-03	6.26E-04
1.00E+00	7.62E-01	9.91E-03	4.16E-03	1.00E-03
1.00E+00	7.41E-01	9.63E-03	4.57E-03	1.46E-03
1.00E+00	4.42E-01	3.54E-03	8.70E-04	1.21E-04
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
1.00E+00	2.69E-01	3.00E-03	0.00E+00	0.00E+00
1.00E+00	3.87E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	2.99E-01	2.00E-03	0.00E+00	0.00E+00
1.00E+00	2.90E-01	3.00E-03	1.19E-01	7.70E-02
1.00E+00	2.45E-01	6.00E-03	1.85E-01	1.68E-01
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

### NON-VOLATILE SPECIES

Te-132	Cs-134	Cs-136	Cs-137	La-140	Mo-99	Tc-99m	Zr-95	Nb-95
1.21E-01	2.74E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.71E-01	4.55E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.31E-02	2.11E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.49E-01	5.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.76E-01	1.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.49E-01	8.97E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.54E-01	5.49E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.45E-01	4.94E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.18E-01	5.16E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.63E-01	4.75E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.53E-01	6.49E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.51E-01	4.24E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.23E+00	4.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.07E+00	5.10E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.02E+00	2.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.23E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.81E-01	1.12E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.59E-01	4.57E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.94E-02	4.84E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E-01	5.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E-01	3.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.18E-01	4.97E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.81E-01	4.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.73E-01	2.56E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.61E-01	5.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.50E-01	3.59E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.64E-01	3.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.43E-01	5.14E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.01E-01	4.23E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.59E-01	4.55E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E-01	5.00E-02	0.00E+00	5.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.31E-01	2.98E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.83E-01	1.67E-01	0.00E+00	7.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.61E+00	3.39E-01	6.61E-02	2.81E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.67E-01	0.00E+00	0.00E+00	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E-01	0.00E+00	0.00E+00	1.90E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.82E-01	4.55E-02	0.00E+00	4.55E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E-01	0.00E+00	0.00E+00	5.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.54E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

[illegible]

[illegible]



0.00E+00	0.00E+00
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#DIV/0!	#DIV/0!
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**From:** Sheron, Brian  
**To:** Anthony Buhl  
**Subject:** RE: Hello  
**Date:** Friday, March 25, 2011 7:39:00 AM

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Great to hear from you. I was wondering where you were. The last time I saw or heard from you, you were still out at Rocky Flats.

Pete Lyons wanted someone from NRC on Steve Chu's Science Council, and the Agency asked me to participate.

I've been the Director of the NRC's Office of Nuclear Regulatory Research since 2006. (b)(6)  
(b)(6) In 2009, my Office sponsored a fairly big seminar commemorating the 30<sup>th</sup> anniversary of the accident at TMI, and we invited Harold and Dick Thornberg to speak, so I saw him then. (b)(6)

(b)(6)  
(b)(6)  
(b)(5)

**From:** Anthony Buhl (b)(6)  
**Sent:** Thursday, March 24, 2011 8:41 PM  
**To:** Sheron, Brian  
**Subject:** Hello

Long time-no see. Remember the IDCOR Program that I ran for the 63 utilities and 7 other countries. We did some analyses of Mark ones. (b)(6)

(b)(6)

I spent 10 years helping take down Rocky Flats before returning to TN-actually 15 years in CO.

I hear you are on the Nuclear science group.

**See our web site:**

**www.EnergXLLC.com**

CH/330

Tony

President & CEO

EnergX LLC

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**From:** Sheron, Brian  
**To:** Weber, Michael  
**Cc:** Dyer, Jim; LIA06 Hoc; LIA08 Hoc  
**Subject:** RE: Response - Japanese Earthquake 24 March 2011 1800 EDT Situation Report  
**Date:** Friday, March 25, 2011 8:09:00 AM

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Mike, the DOE Science Council that I participate on is not the group that puts out the DOE Situation Report. On the last page of the DOE Sitrep, it says it is put out by their Nuclear Incident team in the DOE's Emergency Operations Center. The e-mail is NITOPS@NNSA.DOE.GOV and the phone is 202-586, 8100. I would suggest that the NRC's IRC contact the DOE IRC and come up with a way to put out a combined Sitrep.

Do you want to direct the appropriate folks in the IRC to initiate a contact with the DOE IRC for the purpose of coordinating the Sitreps, or I can call Jim W. or Michele E. and ask.

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

From: Weber, Michael  
Sent: Friday, March 25, 2011 8:00 AM  
To: Sheron, Brian  
Cc: Dyer, Jim; LIA06 Hoc; LIA08 Hoc  
Subject: Response - Japanese Earthquake 24 March 2011 1800 EDT Situation Report

Thanks, Brian. On the next call, can you suggest that we and DOE collaborate on issuing a combined situation report with consistent information? I see that their distribution is broader and includes local government contacts (e.g., Montgomery County, Maryland).

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

From: Sheron, Brian  
To: HOO Hoc  
Cc: Weber, Michael; Virgilio, Martin  
Sent: Fri Mar 25 07:12:29 2011  
Subject: FW: UPDATED: Japanese Earthquake 24 March 2011 1800 EDT Situation Report

Please forward to ET, RST, & PMT Directors. Thx.

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

From: Adams, Ian [<mailto:Ian.Adams@Hq.Doe.Gov>]  
Sent: Thursday, March 24, 2011 7:23 PM  
To: Adams, Ian; Aoki, Steven; Binkley, Steve; Brinkman, Bill; Budnitz, Bob; Finck, Phillip; Garwin, Dick (EOP); Garwin, Dick (IBM); Grossenbacher, John (INL); Hurlbut, Brandon; John Holdren; Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Miller, Neile; Mustin, Tracy; Owens, Missy; Peterson, Per; Sheron, Brian; Steve Fetter; Szilard, Ronalo  
Subject: FW: UPDATED: Japanese Earthquake 24 March 2011 1800 EDT Situation Report

Good evening,

Attached is the latest Japan Sit Rep.

This information should not be shared or further distributed.

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

From: NITOPS  
Sent: Thursday, March 24, 2011 7:17 PM

To: (b)(6)

(b)(6)

CH/331

(b)(6)



Subject: UPDATED: Japanese Earthquake 24 March 2011 1800 EDT Situation Report

Attached is an updated 24 March 1800 SITREP file. The original 1800 SITREP incorrectly reported that the radiation level at the main gate at Fukushima Dai-ichi (approximately 3281 feet from the Unit 2 building) was 204.5 mSv/hr vice the correct level of 204.5 micro Sv/hr.

Nuclear Incident Team (NIT)  
Office of Emergency Response (NA-42)  
National Nuclear Security Administration U.S. Department of Energy nitops@nnsa.doe.gov  
nit@doe.gov 202-586-8100

**From:** Wiggins, Jim  
**To:** Sheron, Brian; Evans, Michele  
**Cc:** Weber, Michael; Virgilio, Martin; McDermott, Brian  
**Subject:** RE: Response - Japanese Earthquake 24 March 2011 1800 EDT Situation Report  
**Date:** Friday, March 25, 2011 8:22:46 AM

---

I'm concerned that joining the 2 SITREPS would be overly onerous and provide a substantial challenge to our ability to issue them on any specified schedule as the 2 orgs debate points in it. Our report has a substantial internal audience - the 4 Commission Offices and those of us off-shift. I'd hate to see us stumble in issuing the SITREPS and further complicate our lives during TA calls, etc.

Maybe we could think of embedding a responder in the DOE EOC to keep us better aligned.

Thoughts?

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

From: Sheron, Brian  
Sent: Friday, March 25, 2011 8:16 AM  
To: Wiggins, Jim; Evans, Michele  
Subject: FW: Response - Japanese Earthquake 24 March 2011 1800 EDT Situation Report

See below. If you agree, do you want to initiate a contact with the DOE IRC for the purpose of coordinating Sitreps so the info coming out of the NRC and DOE is consistent and not conflicting?

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

From: Sheron, Brian  
Sent: Friday, March 25, 2011 8:09 AM  
To: Weber, Michael  
Cc: Dyer, Jim; LIA06 Hoc; LIA08 Hoc  
Subject: RE: Response - Japanese Earthquake 24 March 2011 1800 EDT Situation Report

Mike, the DOE Science Council that I participate on is not the group that puts out the DOE Situation Report. On the last page of the DOE Sitrep, it says it is put out by their Nuclear Incident team in the DOE's Emergency Operations Center. The e-mail is NITOPS@NNSA.DOE.GOV and the phone is 202-586, 8100. I would suggest that the NRC's IRC contact the DOE IRC and come up with a way to put out a combined Sitrep.

Do you want to direct the appropriate folks in the IRC to initiate a contact with the DOE IRC for the purpose of coordinating the Sitreps, or I can call Jim W. or Michele E. and ask.

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

From: Weber, Michael  
Sent: Friday, March 25, 2011 8:00 AM  
To: Sheron, Brian  
Cc: Dyer, Jim; LIA06 Hoc; LIA08 Hoc  
Subject: Response - Japanese Earthquake 24 March 2011 1800 EDT Situation Report

Thanks, Brian. On the next call, can you suggest that we and DOE collaborate on issuing a combined situation report with consistent information? I see that their distribution is broader and includes local government contacts (e.g., Montgomery County, Maryland).

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

From: Sheron, Brian  
To: HOO Hoc  
Cc: Weber, Michael; Virgilio, Martin  
Sent: Fri Mar 25 07:12:29 2011  
Subject: FW: UPDATED: Japanese Earthquake 24 March 2011 1800 EDT Situation Report

CH/332

Please forward to ET, RST, & PMT Directors. Thx.

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

From: Adams, Ian [<mailto:Ian.Adams@Hq.Doe.Gov>]

Sent: Thursday, March 24, 2011 7:23 PM

To: Adams, Ian; Aoki, Steven; Binkley, Steve; Brinkman, Bill; Budnitz, Bob; Finck, Phillip; Garwin, Dick (EOP); Garwin, Dick (IBM); Grossenbacher, John (INL); Hurlbut, Brandon; John Holdren; Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Miller, Neile; Mustin, Tracy; Owens, Missy; Peterson, Per; Sheron, Brian; Steve Fetter; Szilard, Ronalo

Subject: FW: UPDATED: Japanese Earthquake 24 March 2011 1800 EDT Situation Report

Good evening,

Attached is the latest Japan Sit Rep.

This information should not be shared or further distributed.

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

From: NITOPS

Sent: Thursday, March 24, 2011 7:17 PM

To: (b)(6)

(b)(6)

Subject: UPDATED: Japanese Earthquake 24 March 2011 1800 EDT Situation Report

Attached is an updated 24 March 1800 SITREP file. The original 1800 SITREP incorrectly reported that

the radiation level at the main gate at Fukushima Dai-ichi (approximately 3281 feet from the Unit 2 building) was 204.5 mSv/hr vice the correct level of 204.5 micro Sv/hr.

Nuclear Incident Team (NIT)

Office of Emergency Response (NA-42)

National Nuclear Security Administration U.S. Department of Energy nitops@nnsa.doe.gov

nit@doe.gov 202-586-8100



From:

(b)(6)

To:

(b)(6)

Cc:

(b)(6)

Sheron, Brian;

(b)(6)

Subject:

Date:

Friday, March 25, 2011 8:51:56 AM

**Anybody got an extra laser pointer or 3 for clinicians; or even a length of wooden dowel for a pointer??**

***Marriage is a wonderful invention. But, then again, so is the bicycle repair kit.***



CH/333

**From:** Coyne, Kevin  
**To:** Gibson, Kathy; Case, Michael; Richards, Stuart  
**Cc:** Coe, Doug; Sheron, Brian; Uhle, Jennifer; Rini, Brett; Dion, Jeanne  
**Subject:** FW: Operations Center Reactor Safety Team Watchbill  
**Date:** Friday, March 25, 2011 9:05:50 AM  
**Attachments:** RES\_input\_IRCvolunteers.xlsx.msg  
**Importance:** High

---

Kathy, Mike, Stu –

Just got calls from both Jerry Dozier and Mike Cheek from the Ops Center. They are starting to burn out their reactor safety team support and are looking for volunteers with expertise in severe accidents and PRA. They are currently looking at staffing through April 3, but have a few critical needs this weekend. DRA can coordinate getting a list back to Jerry, but could you provide any other volunteers from DE and DSA? I have the list that went up on March 17 (see attached) and can obviously provide this back to Jerry, but I wasn't sure if you had any changes or updates.

Obviously a quick turnaround – if we could get any additional feedback from you by noon, that would give the IRC time to coordinate coverage.

Thanks!

Kevin

---

**From:** Cheek, Michael  
**Sent:** Friday, March 25, 2011 8:45 AM  
**To:** Wong, See-Meng; Mitman, Jeffrey; Zoulis, Antonios; Harrison, Donnie; Dozier, Jerry; Howe, Andrew  
**Cc:** Laur, Steven; Circle, Jeff; Rodriguez, Veronica; Lee, Samson; Coyne, Kevin; Demoss, Gary; Lombard, Mark; Coe, Doug  
**Subject:** Operations Center Reactor Safety Team Watchbill

To those on the "To" list: I have added your names as PRA/systems analysts to be used in the Reactor Safety Team (RST) watchbill. Jerry Dozier will be contacting you to coordinate times and dates when you will be available. The RST has several slots to fill this weekend. To those I already had a chance to talk to, thanks for volunteering. To the others who I have not talked to yet, you can still decline if you would like. The RST will be staffed (at the least) for the next several weeks.

Steve Laur and Jeff Circle – please inform Jerry if you are able/willing to continue.

Gary Demoss and Kevin Coyne – thanks for helping to look for RES volunteers. Please let me and Jerry Dozier know when you come up with a list.

Mark Lombard – would NRO have available PRA/systems type analysts who would be able to help staff the RST? The more staff we have on the list, the more we would spread out the work load.

Thanks

CH/334

Mike

Attachment RES\_input\_IRCvolunteers.xlsx.msg (2560 Bytes) cannot be converted to PDF format.

**From:** Adams, Ian  
**To:** Adams, Ian; Binkley, Steve; Brinkman, Bill; Budnitz, Bob; Finck, Phillip; Garwin, Dick (EOP); Garwin, Dick (IBM); Grossenbacher, John (INL); Hurlbut, Brandon; John Holdren; Kelly, John F. (NE); Koonin, Steven; Lee, Richard; Lyons, Peter; McFarlane, Harold; Owens, Missy; Peterson, Per; Sheron, Brian; Steve Fetter; Szilard, Ronalo  
**Subject:** FW: Japanese Earthquake 25 March 2011 0600 EDT Situation Report  
**Date:** Friday, March 25, 2011 9:16:51 AM  
**Attachments:** Japan Earthquake Response 03252011 0600a.ppt  
SITREP MAR25 0600 final.docx  
Version 5A --- DOE Triage - Japan Spectrum Compilation - As of 23 March 2011 (QUO) (3).xls

---

Good morning,

Attached is this morning's Japan sit rep.

This information should not be shared or further distributed.

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

From: NITOPS

Sent: Friday, March 25, 2011 6:20 AM

To: (b)(6)

(b)(6)

Subject: Japanese Earthquake 25 March 2011 0600 EDT Situation Report

Please find attached the latest DOE SITREP regarding the ongoing earthquake and tsunami response in Japan.

CH/335

This information is provided for your internal use and should be shared only with those who have a need to know.

The SITREP will be updated every 12 hours.

Nuclear Incident Team (NIT)

Office of Emergency Response (NA-42)

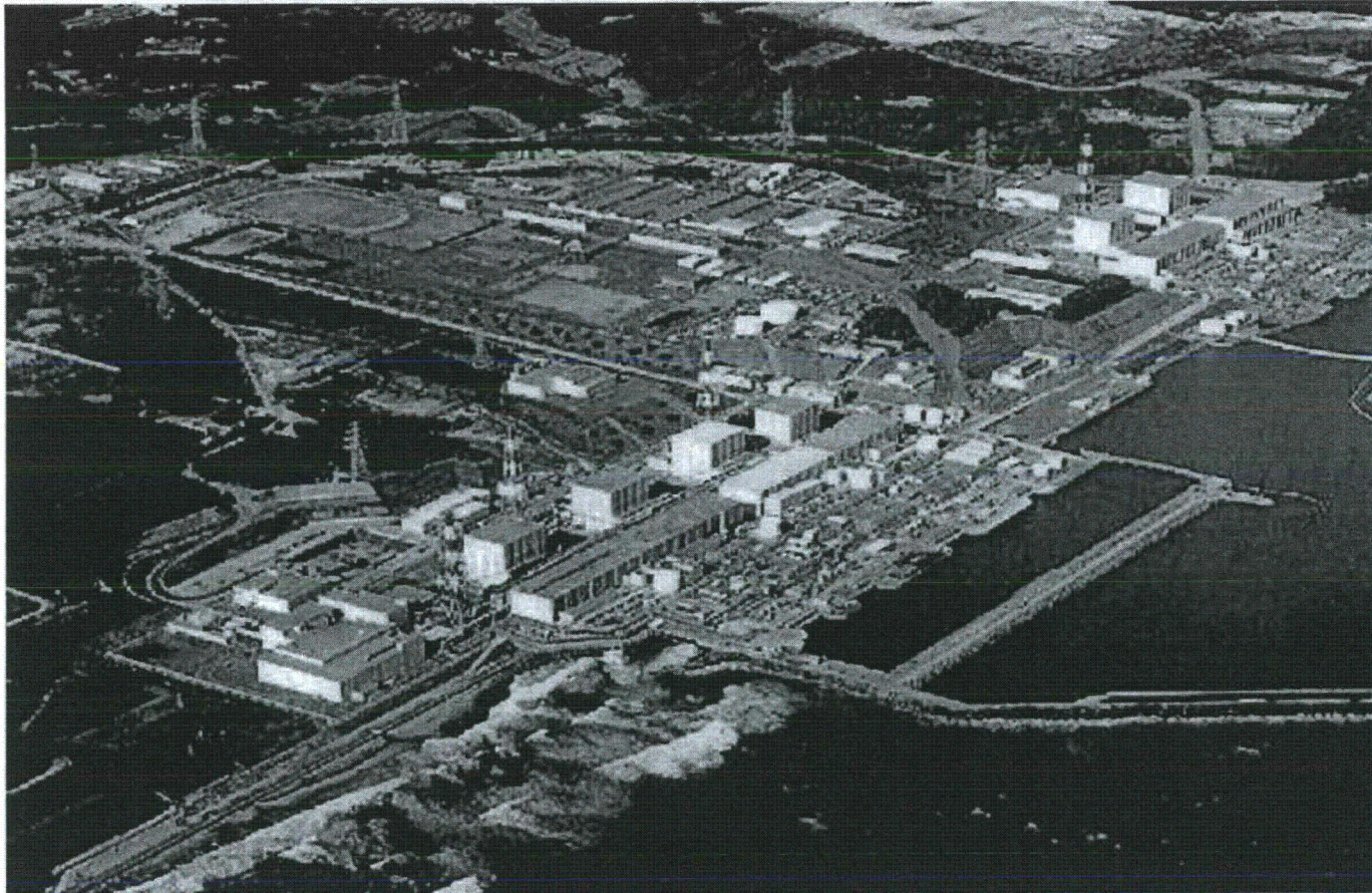
National Nuclear Security Administration U.S. Department of Energy nitops@nnsa.doe.gov

nit@doe.gov 202-586-8100



Official Use Only

# Japan Earthquake Response March 25, 2011 // 0600 EDT



Official Use Only



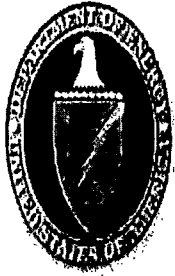
~~Official Use Only~~

**This information is for limited  
distribution to those with a  
NEED TO KNOW  
and should not be forwarded outside  
your agency or organization without  
prior clearance from U.S. DOE**

**Contact: DOE/NNSA Nuclear Incident  
Team: NITOPS@nnsa.doe.gov**

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# Current Status

## **No major changes in radiation levels at the Fukushima Daiichi Nuclear Power Plant**

- Unit 1: Reactor water level stable, core damage est. 70%. Seawater injection is being converted to freshwater. Electrical power line connected (through Unit 2). At 1130 on March 24, lighting to unit 1 control room.
- Unit 2: Reactor water level stable, core damage est. 33%. Spent fuel pool has been filled. Power restored and electric water pump systems being tested.
- Unit 3: Seawater injection is being converted to freshwater in reactor; trucks pumping water into spent fuel pools. Water level stable and pressure stabilized. Power restored.
- Unit 4: Spraying continues periodically for the spent fuel pond. Power restored. Trucks pumping water into spent fuel pools.
- Units 5 & 6: Diesel generators supplying power to cooling system. Reactors appear stable. RHR seawater tripped at 1720 on March 23. Plans in place to start a standby pump on March 24.
- ♦ Japanese media reports levels of radioiodine reported in tap water in Tokyo decreased to levels considered safe for consumption by infants.
- ♦ Voluntary evacuation zone is being extended to 30km from Fukushima Daiichi.

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# DOE/NNSA Response

## ♦ **Command, Control, Coordination:**

- **Nuclear Incident Team (NIT):** Coordinating overall emergency response
- **Policy Working Group (PWG):** Coordinating overall policy
- **Senior Energy Official:** Primary Manager of deployed field teams
- **Liaisons:** DART, USPACOM, USAID, NRC

## ♦ **Modeling**

- **National Atmospheric Release Advisory Center (NARAC):** conducting predictive radioactive atmospheric dispersion modeling

## ♦ **Monitoring and Sampling**

- **Consequence Management Response Team (CMRT):** Conducting ground monitoring, air sampling and initial results analysis
- **Aerial Monitoring System (AMS):** Conducts aerial detection for mapping radiological ground material deposits

## ♦ **Assessment**

- **Consequence Management Home Team (CMHT):** Scientific assessment of data updated daily from ground measurements and AMS flights

## ♦ **Medical Consultation**

- **Radiation Emergency Assistance Center/Training Site (REAC/TS):** Providing medical advice about radiological exposure

### **Deployed (45)**

#### **Yokota AB**

- (1) FTL
- (28) CMRT
- (7) AMS

#### **US Embassy Tokyo**

- (1) SEO
- (1) SEO Staff
- (2) Foreign Service Nationals
- (2) Permanent Staff
- (1) DART LNO
- (1) Nuclear Energy Representative

#### **USPACOM HQ**

- (1) LNO

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# Significant Events: Past 24 Hrs.

## ♦ International Engagement:

- Received formal request from MOD Japan Joint Staff including FRMAC support for airborne radiation monitoring
- Met with various GOJ ministries; arranged for exchange of information and experts to better coordinate current response activities

## ♦ Nuclear Incident Team

- Submitted input to NSS Contingency Working Group

## Operations

## ♦ Modeling

- NARAC: Developing predictive plume models based on a revised release scenario and weather data from 14 -26 March.

## ♦ Field Monitoring and Assessment

- AMS: Helicopter flight to Sendai postponed due to weather; C-12 flight abbreviated after instruments readings indicated possible contamination.
- CMRT: Ground teams sampled around Fukushima Daiichi to corroborate aerial measurements; continued monitoring at the US Embassy (Tokyo).

## ♦ Medical Consult

- REAC/TS provided information regarding population monitoring considerations and screening strategies to share with GOJ if requested.



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# External Data Providers

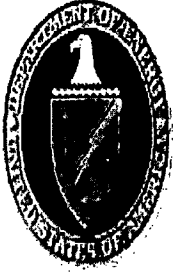
## ♦ Japan

- Ministry of Foreign Affairs (MOFA)
- Ministry of Education, Culture, Sports, Science, and Technology (MEXT)
- Tokyo Electric Power Company (TEPCO)
- Nuclear Safety Technology Center (NUSTEC)

## ♦ United States

- Japan Emergency Command Center, US Embassy, Tokyo
- USAF, BSC Commander
- USAF, WC-135 Constant Phoenix
- Futenma Marine Corps Air Station
- Nuclear Regulatory Commission
- Naval Reactors

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# Guide to Interpretation

## Derived Response Levels (DRL)

### ♦ Early Phase DRL

- If a person is in danger of receiving an external radiation dose of 1 Rem over 4 days, the EPA recommends evacuation until radiation levels decrease. This area is indicated in red.

### ♦ First Year DRL

- If a person is in danger of receiving an external radiation dose greater than 2 Rem during the first year, the EPA recommends relocation until radiation levels decrease. This is not an urgent action because the dose is received over a full year. This area is indicated in orange.

### ♦ Fifty Year DRL

If a person is in danger of receiving an external radiation dose greater than 5 Rem over 50 years, the EPA recommends relocation until radiation levels decrease. This is not an urgent action because the dose is received over fifty years. This area falls within the second year DRL.

### ♦ Second Year DRL

If a person is in danger of receiving an external radiation dose of greater than 0.5 Rem in the second year (or any subsequent year), the EPA recommends relocation until radiation levels decrease. This area is indicated in yellow.

These calculations account for multiple variables. For instance, radiation is most intense in the first days following its release therefore dose reduction may be met by evacuating early in the response.

Protective actions are frequently expressed in dose rates. The dose rate is an indicator that residents would accumulate the threshold dose if they stayed in the area the entire time expressed (e.g. 1 year, 2 years, 50 years)

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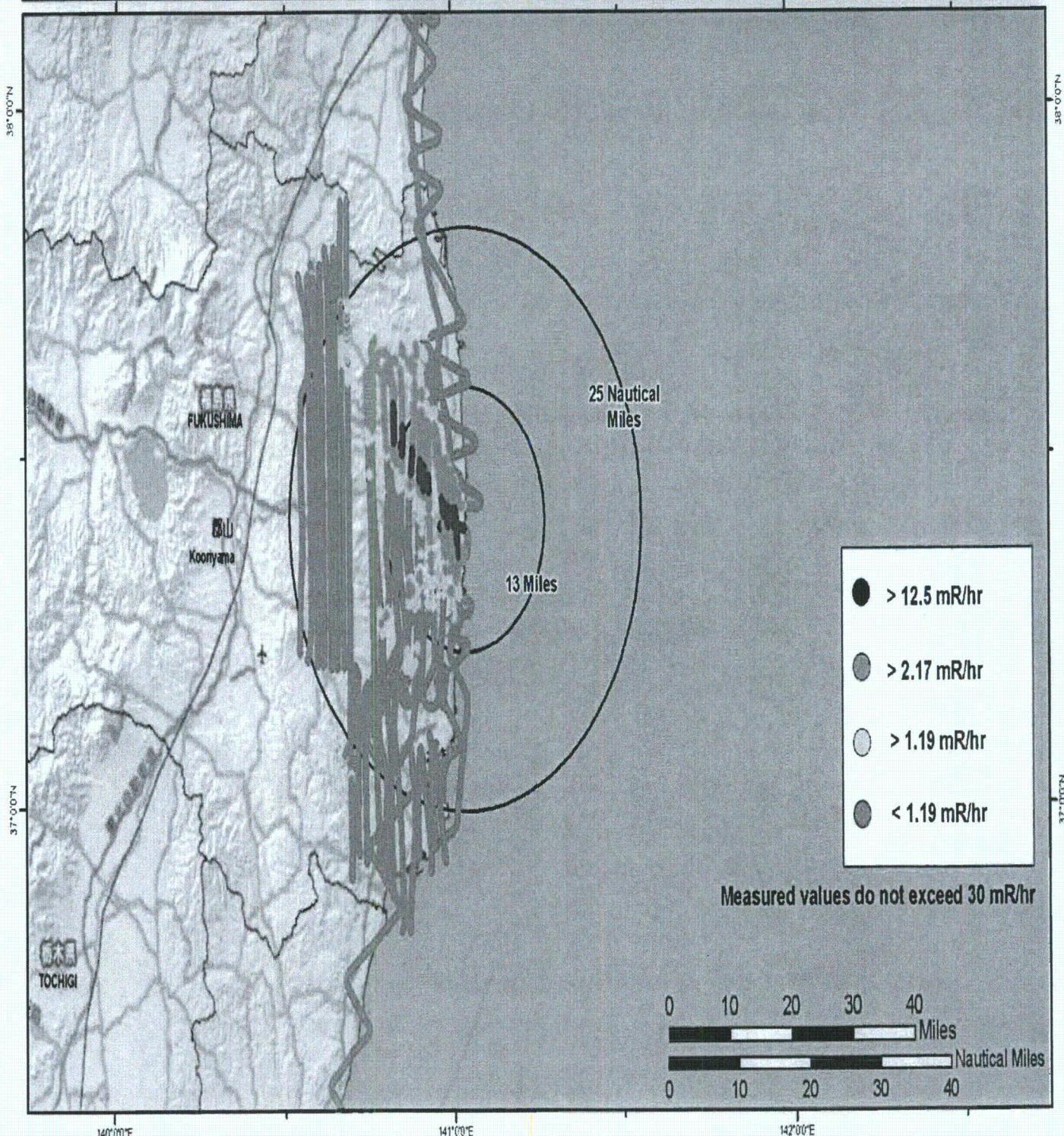




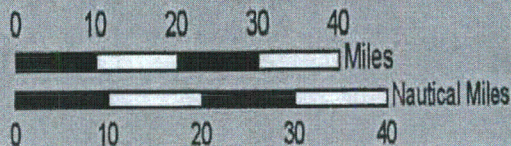
# Aerial Monitoring Results - C-12

Survey Date - 17, 18, 19 March 2011

FUKUSHIMA DAIICHI  
JAPAN



Measured values do not exceed 30 mR/hr



Map created on 03232011 0210 JST

Name: NIT\_C-12 23Mar2011 v4

Nuclear Incident Team DOE NIT  
Contact (202) 586 - 8100

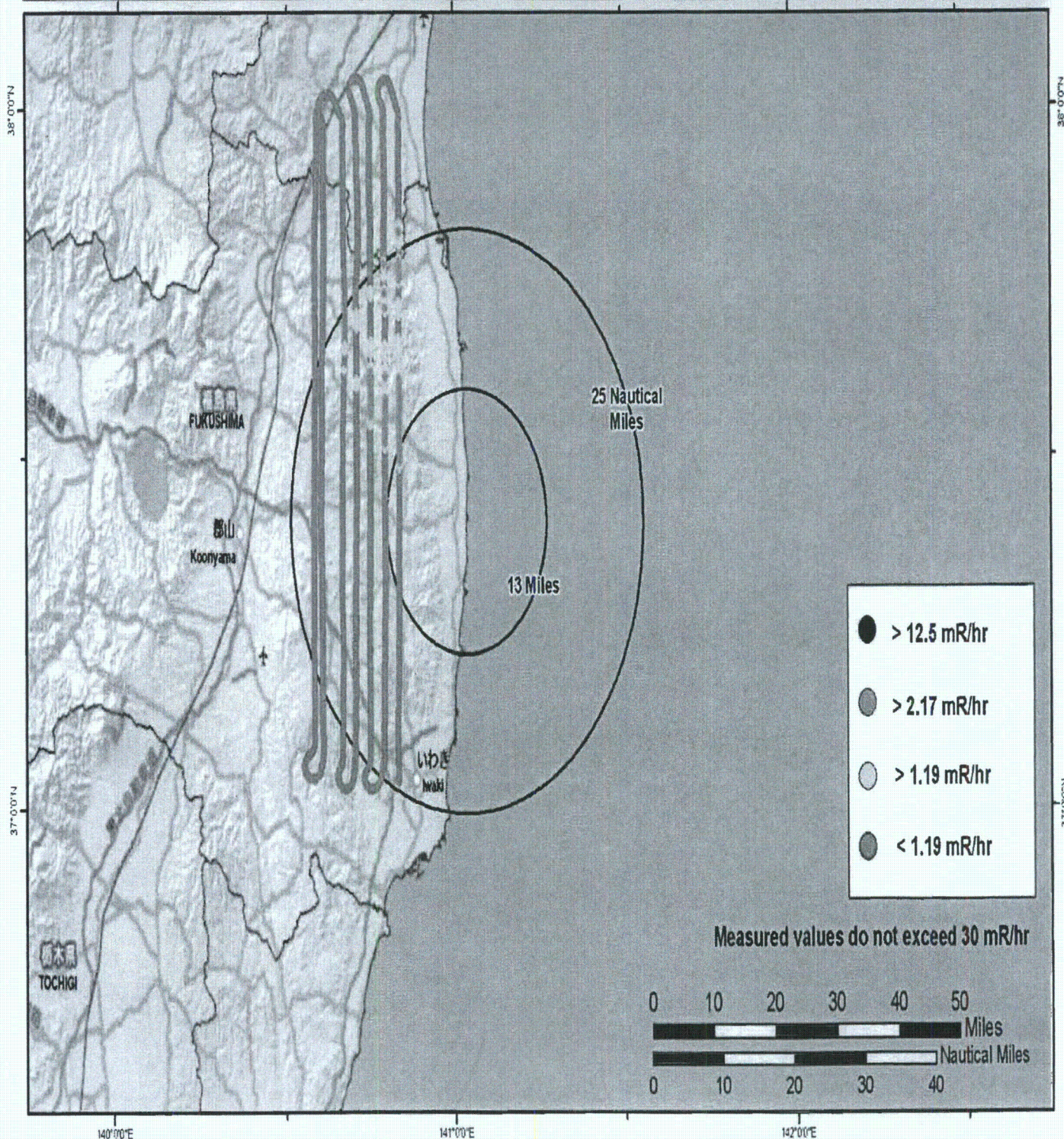




# Aerial Monitoring Results C-12

March 24, 2011

FUKUSHIMA DAIICHI  
JAPAN



Map created on 03252011 0330 JST  
Name: NIT C-12 Results 24Mar2011 v3

UNCLASSIFIED

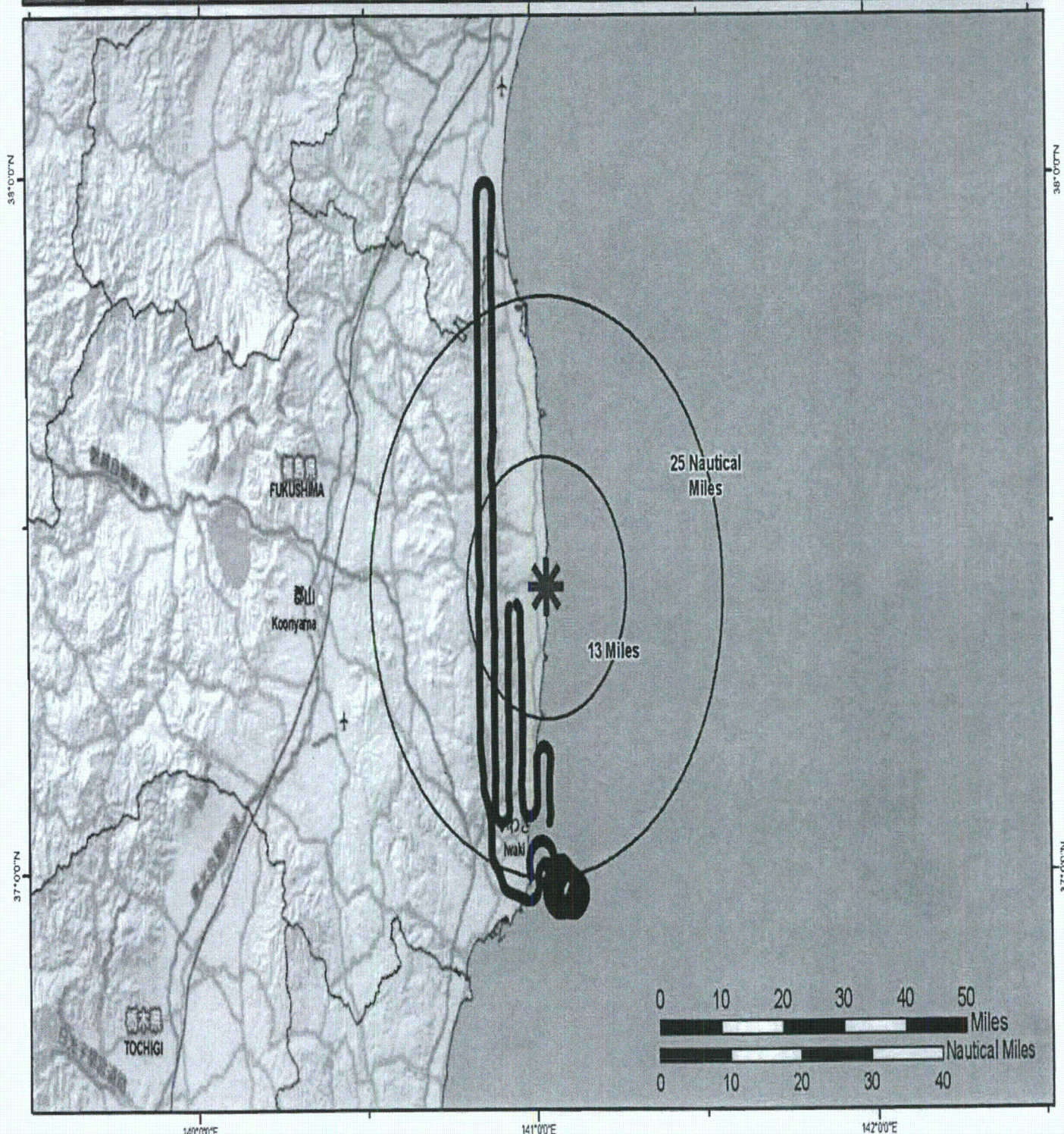
Nuclear Incident Team DOE NIT  
Contact (202) 586 - 8100





# Aerial Monitoring Path C-12 Flight

FUKUSHIMA DAIICHI  
JAPAN



Map created on 03252011 1625 JST  
Name: NIT C-12\_24Mar2011

UNCLASSIFIED

Nuclear Incident Team DOE NIT  
Contact (202) 586 - 8100

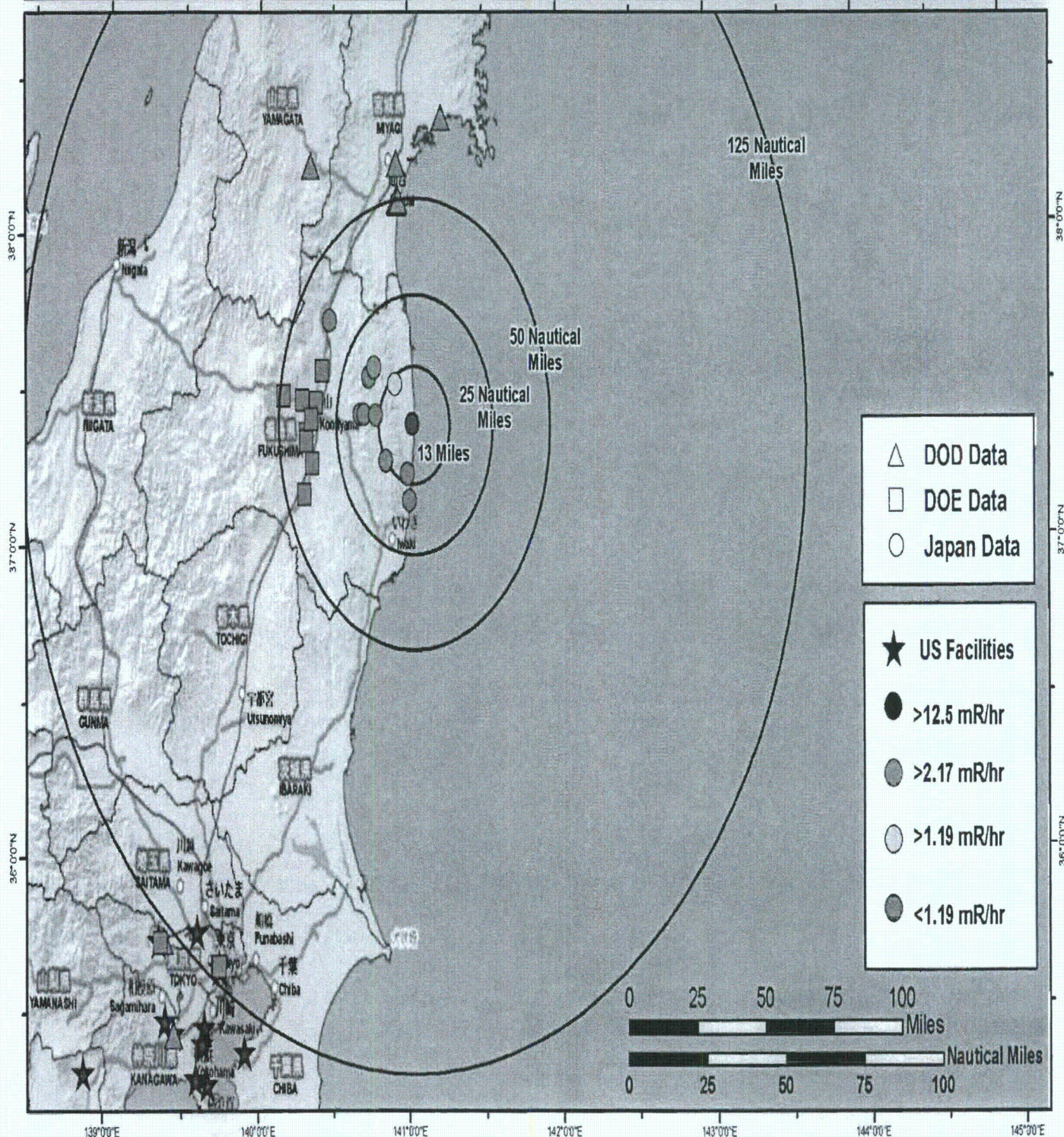




# Field Monitoring Results

March 24 13:00 to March 25 13:00 JST

FUKUSHIMA DAIICHI  
JAPAN



Map created on 03252011 1800 JST

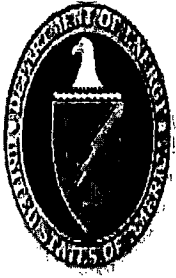
Name: NIT 24hrsMonitoringResults 25Mar2011INS v1

UNCLASSIFIED

Nuclear Incident Team DOE NIT

Contact (202) 586 - 8100





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# Assessment

## Assessment:

- ❖ Comparison of measurements gathered 24 March to previous measurements
  - Peak exposure rates are lower in comparable areas
    - Note: reduction in exposure rate is expected as a result of radioactive decay
  - No new areas of deposition are apparent although winds since March 19<sup>th</sup> have crossed the area measured
- ❖ Precipitation from March 20-22 has both positive and negative impacts:
  - Airborne radiation is forced to the ground improving confidence that measurements are indicative of ground deposition
  - Wet soil can mask radiation emissions resulting in lower readings

## Conclusion:

- ❖ Radiological material has not deposited in significant quantities in the area measured since March 19<sup>th</sup>

## Path Forward:

- ❖ Additional measurements will refine our knowledge of radiological conditions in the area surrounding Fukushima Daiichi.

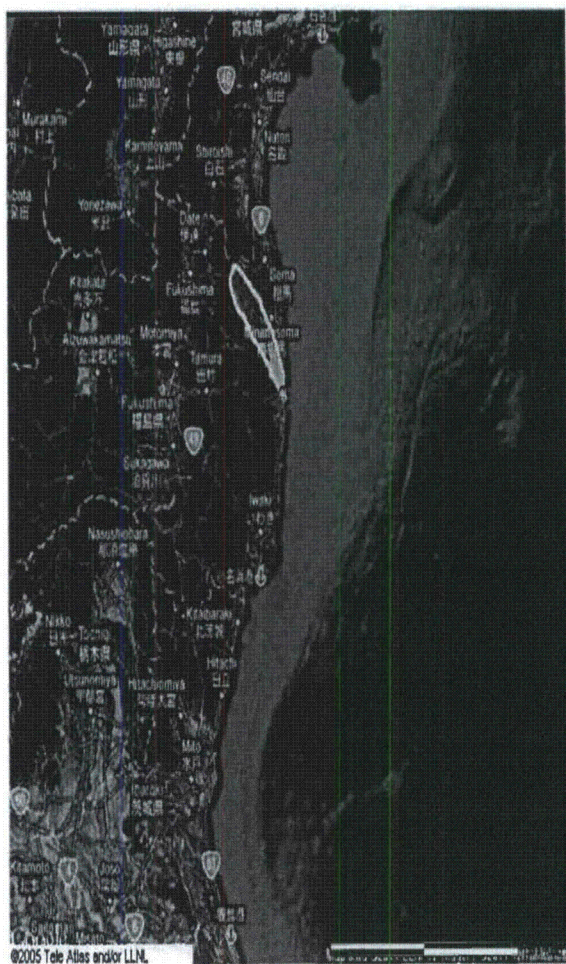
Official Use Only



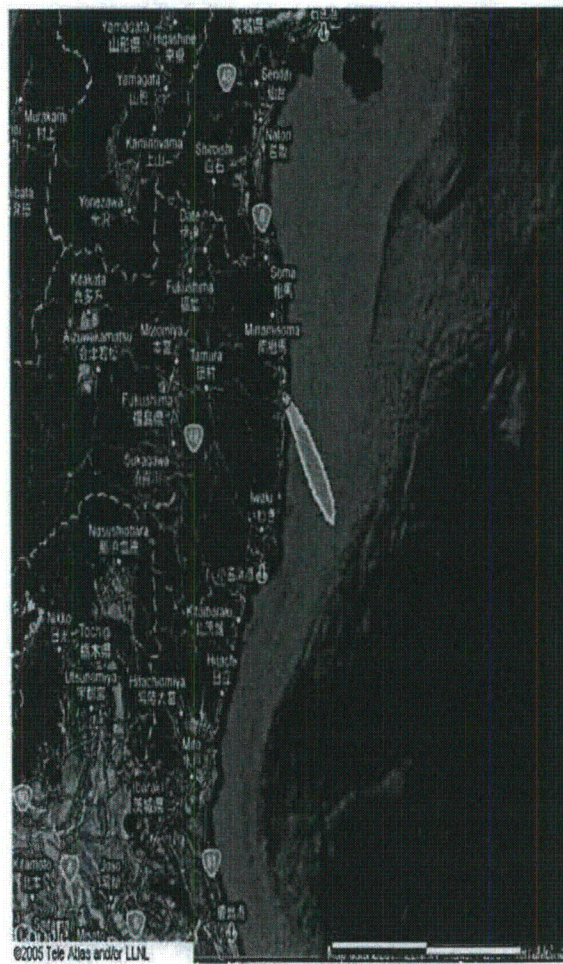
Official Use Only

# Forecasted Weather March 25-26

03/25/2011 19:00 JST



03/26/2011 07:00 JST



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# Planned Operations: Next 24 Hrs

- ◆ Field Monitoring
  - AMS flight activities
    - C-12 will continue flying the area west of Fukushima Daiichi in the Tohoku Expressway Valley that indicated deposition previously
    - UH1 flying over Sendai area where Marines are stationed
  - Ground Monitoring Activities
    - 1 ground team going to the embassy
    - 2 ground teams to focus on area south of Fukushima Daiichi
- ◆ Preparation for 3<sup>rd</sup> aerial capability
  - GPU received
  - Working on receipt of 3rd aircraft
  - Flight crew in country for 3rd aircraft
- ◆ DOE participating in joint Monitoring and Assessment planning with DoD (US AFRAT)

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## **DEPARTMENT OF ENERGY SITUATION REPORT**

### **Earthquake & Tsunami in Japan**

25 March 2011

0600 (EDT) UPDATE

#### **POWER PLANT UPDATE AND OTHER NUCLEAR ISSUES**

Summary of information received as of 0600 (EDT) 25 March from the NRC, Embassy-Tokyo, IAEA Incident and Emergency Center, TEPCO, METI, NISA, Japan Atomic Industrial Forum, Nuclear Energy Institute, and media outlets. (NOTE: JST = EDT + 13 hours; EDT = GMT/UTC - 4 hours).

#### **Updates on Electrical Power Restoration Efforts:**

External power has replaced Emergency Diesel Generator power at Units 5 and 6. All reactors have a source of external power.

#### **Radiation Detection Update:**

Chief Cabinet Secretary Edano said residents located 20-30 kilometers (12-18 miles) from the Fukushima plant should prepare to evacuate voluntarily, an increase from the previous 20 kilometer (12 mile) radius. Edano said 130,000 residents in the area had been encouraged to leave to improve their quality of life, not because their health was at risk.

Per IAEA 1700 UTC March 24, radiation exposure on 3 TEPCO related workers was confirmed. They were working in the basement Unit 3 turbine building where contaminated water was on the floor. The radiation exposures of the 3 workers were 180 mSv, 179 mSv, and 173 mSv. Two of the workers had severely contaminated their feet and were transferred to the Fukushima Prefecture Medical University.

Per FEPC (0630 JST) on March 24, radiation level at the main gate (approximately 3281 feet from the Unit 2 building) was 204.5 micro Sv/hr.

#### **Revision of the Source Term:**

The NRC recommended on 24 March that the source term and the release rate should be revised from those that were previously provided to reflect updated assumptions including:

- Unit 1--assumed 70% core melt as provided by NRC and a 10% release rate/day as provided by the Japanese;
- Unit 2--assumed 33% core melt as before and a 5 in<sup>2</sup> hole in containment based on Japanese report;
- Unit 3--assumed 33% core melt as before and a 100% release rate/day based upon data provided by the Japanese.

The results should be available on March 25, 2011 as directed by the White House.

**Switching from Seawater to Fresh water:**

One train of temporary cooling equipment has been transported to Yokota Air Force Base. Plans are being made for the U.S. Navy to provide two fresh water barges to the Daiichi site. TEPCO expects to swap to freshwater injection (from the Dam source) on Units 1-3 on 3/25.

**Aerial Measurements Update:**

- ♦ Radiological material has not deposited in significant quantities in the area measured since March 19<sup>th</sup>
- ♦ Comparison of data gathered on 24 March with previous data shows that peak exposure rates have fallen (reduction in exposure rate is expected as a result of radioactive decay)
- ♦ No new areas of deposition are apparent
- ♦ Precipitation from March 20-22 has both positive and negative impacts:
  - Airborne radiation is forced to the ground improving confidence that measurements are indicative of ground deposition
  - Wet soil can mask radiation emissions resulting in lower readings
- ♦ Planned operations next 24 hours:
  - Fixed wing (C-12) will continue flying the area that indicated deposition during previous flights
  - Helo (UH-1) will continue flying over Sendai area where Marines are stationed
  - DOE is preparing for a 3<sup>rd</sup> aerial capability

**Updates by Reactor Unit**

**Fukushima Dai-ichi Unit 1 reactor (NRC priority 4):**

TEPCO reported that Unit 1 was receiving power from Unit 2 and that inspections on electrical equipment were being conducted. Increased the amount of water injection (2m<sup>3</sup>/h→18m<sup>3</sup>/h) to the Reactor Core by using water supply system in addition to water extraction system. Seawater is being injected into the reactor pressure vessel.

Per JAIF, 0600 JST 25 Mar, reactor parameters appear stable: pressure - 0.365 MPaG (depressurized); water level - 1.7 meters below the top of the fuel rods; containment vessel - 0.310MPa, spent fuel temperature remains relatively stable at 51° as of 1800 Mar 23. Reactor temperatures for Unit 1 have come down and are 230° C (down from 243° C) at the feedwater nozzle and 229° C at the bottom head.

Per the IAEA, the does rate in the containment vessel (D/W) is 48 Sv/h and in the suppression chamber (S/C) is 29.9 Sv/h.

**Fukushima Dai-ichi Unit 2 reactor (NRC priority 3):**

Per JAIF, 06:10 JST, 25 Mar, reactor parameters appear stable: pressure - 0.020 MPaG (depressurized); water level - 1.1 meters below the top of the fuel rods; containment vessel - 0.107 MPa. Seawater injection to the Reactor Pressure Vessel (RPV) continues. The dose rate of the containment vessel is 50.7 Sv/h and in the suppression chamber is 1.67 Sv/h. Reactor temperature readings were 100° C (down from 102° C) at the feedwater nozzle and 105° C (down from 109° C) at the bottom head. SFP water temperature is 28C.

**Fukushima Dai-ichi Unit 3 reactor (NRC priority 1):**

Lighting was recovered in the Central Operation Room. (22:43 March 22nd); and seawater is being injected into the reactor pressure vessel as of 8:00am March 23rd. Per METI, technicians are working to attach fire hoses to the spent fuel pool's built-in coolant pipes and to fix a separate pump to circulate fresh water inside the reactor core.

Per JAIF, 0610 JST, 25 Mar, reactor pressure 0.038MPaG (A) -0.097 MPaG (B), reactor water level 1.9 m (A) 2.3 m (B) below the top of the fuel rods, containment vessel 0.107MPaabs.

On March 24th, it was confirmed by TEPCO that three workers from non-TEPCO companies who were in charge of cable laying work in the basement and 1st floor of the turbine building were exposed to a radiation dose of more than 170 mSv. Two out of three workers were hospitalized as it was confirmed that their legs (skin) were contaminated.

**Fukushima Dai-ichi Unit 4 reactor (NRC priority 2):**

Situation of Water Injection and Water Spray

TEPCO reported that off-site power recovery work was completed and that inspections on electrical equipment are being conducted. NISA, 1800 JST on March 23, water spray of around 150t of water using Concrete Pump Truck (50t/h) to the Unit 4 was started. Per METI, Technicians are aiming to attach fire hoses to the pool's built-in coolant pipes by Friday, March 25.

**Fukushima Dai-ichi Unit 5 reactor (NRC priority 5):**

Per JAIF (06:00 JST 3/25) spent fuel pool water temp 49.3°C , Reactor Pressure Vessel water temp 65.8°C. Water level in the reactor is 1.846 meters above the top of the fuel. As a result of restarting the Residual Heat Removal (RHR) pump (C), the Spent Fuel Pool is being maintained at 45.1.0°C. The temperature of the reactor vessel is 71.4°C. Power was switched to off-site power.

**Fukushima Dai-ichi Unit 6 reactor (NRC priority 6):**

The NISA as of March 24 at 0500 (JST): The reactor is in cold shutdown with a pressure in the Reactor vessel of 0.109 MPa. Water level in the reactor is 2.397 meters above the top of the fuel. The SFP temperature is currently 23.5.0°C. The RPV temperature is 24.1C. Power was switched from the diesel generator to off-site power.

### **Other Information**

#### **Media Reports**

Media sources report that passengers from Japan set off radiation detectors upon arrival in Beijing and Chicago. The media is also reporting that cesium was found in a vegetable grown in Tokyo for the first time, in amounts exceeding legal limits. (Source NHK)

#### **Maritime Monitoring**

The US Coast Guard has implemented additional protocols for vessels transiting within 50 miles of the Fukushima Daiichi reactors in Japan. For vessels only, USCG will perform additional screening prior to entry into a US port in accordance with current protocols and captain of the Port authority. USCG will follow longstanding resolution protocols for any radiation detection readings.

#### **Requests for US Assistance**

NRC is coordinating with the State Department to provide the US Ambassador the plume analysis to share with the Japanese government.

METI was especially interested in the radiation hardened camera, which they said is urgently needed. In general, METI identified remote monitoring and debris removal as priority areas of need. The GOJ will review the report and develop a formal request which will be handled through the Crisis Management Team.

We are looking to OSD to provide a small cell to the DART -- which would have a DOE technical advisor--to help facilitate with any logistics of items that would need to go into Japan or be moved around Japan to deal with the Japanese reactor crisis. Logistical support may be just to facilitate private companies donating/providing items or, in some cases, it may mean USFJ transport assistance or liaison. AID (DART) feels they lack the capacity and technical skills to perform this function and it is clearly not in the comfort zone of NRC.

### **CONTACTS WITH JAPANESE OFFICIALS**

Per JECS 23, MOD reported Prime Minister Hosno expressed strong interest in accepting all offers of robotic technology that could be put to use, as well as protective gear that had been offered. While Japan has iodine stockpiles Hosno noted that more could be needed. He thanked DOE for its report on robotic and remote systems that could be made available and said Japan would provide a list of specific needs. METI noted the



value of the reports timeline and the importance of equipment for remote monitoring, debris removal, and of radiation-hardened camera.

Per JECS 23, the NRC urged Japan not to delay the change from seawater to freshwater at the plant, emphasizing the importance of addressing salt water accumulation in reactor cooling systems. NRC noted the agreement of the NRC, DOE, NR, GE, and INPO that salt water accumulation should be addressed as a priority. In light of TEPCOs report of damage to the power supply to pumps that could bring fresh water from nearby dam to the plant, the US reiterated its offer to procure a barge to deliver fresh water to the Fukushima site and to provide water pumping system (now at Yokota AB).

#### **QUESTIONS BEING WORKED:**

DOE had a meeting with METI and industry representatives on potential DOE robotic and remote systems assistance. The Japanese stated their immediate priority was site mapping and surveillance to characterize the site for remediation. DOE is processing the data request.

#### **CONTACT INFORMATION:**

**Nuclear Incident Team in the Emergency Operations Center**  
**(NITOPS@NNSA.DOE.GOV) - 202-586-8100**

**Office of the Deputy Secretary 202-586-5500**

#### **Watch Schedule:**

Keith LeChien            0400/25 Mar – 0800/25 Mar  
Karyn Durbin  
Sal Golub

Dave Huizenga           1600/25 Mar – 2000/25 Mar  
Heather Looney  
Rebecca Smith-Kevern

**From:** [LIA08 Hoc](#)  
**To:** [Hoc, PMT12](#)  
**Cc:** [Sheron, Brian](#); [McGinty, Tim](#); [Ross-Lee, MaryJane](#); [LIA06 Hoc](#); [LIA02 Hoc](#); [LIA03 Hoc](#)  
**Subject:** RE: Emailing: boardfile.htm  
**Date:** Friday, March 25, 2011 9:38:11 AM  
**Attachments:** [FW TRANSITION REPORT 325 0700.msg](#)  
[image001.png](#)

---

Terry, the excerpt below is from the attached email, which documents turnover of the international liaisons from this morning.

**Congressional inquiry.** Received email at 4:58 am forwarded from LT Director containing 4 questions from Brian Sheron, which he received from Congress. The first two questions were answered. The fourth is outside our purview. Brooke was uncomfortable answering the third question because it was speculative. In any case, she may send further information when more time is available. **Action:** Follow up with LT director to determine if it is necessary to follow through with question 3.

Brooke Smith (In-country Team - International) just indicated to us that the site-team will not know the answer to this and several other questions until tomorrow, when they will be able to ask NISA. Hope this helps.  
Rani

---

**From:** Hoc, PMT12  
**Sent:** Friday, March 25, 2011 9:15 AM  
**To:** LIA08 Hoc  
**Cc:** Sheron, Brian; McGinty, Tim; Ross-Lee, MaryJane  
**Subject:** FW: Emailing: boardfile.htm

Ronnie,

We need to try to get Brian Sheron an answer to question 3 for a congressional call this afternoon. The PMT has no information. Can we possibly try to get it from our people on the ground. For convenience, I've copied the question below.

3.)It was reported that the Iodine levels in the Tokyo drinking water went down below allowable limits. Do we know what this is attributable to? Was it due to a shift in wind direction? Did the releases from the plant go down?"

---

**From:** Ross-Lee, MaryJane  
**Sent:** Friday, March 25, 2011 9:00 AM  
**To:** Hoc, PMT12  
**Subject:** FW: Emailing: boardfile.htm

---

**From:** Nelson, Robert  
**Sent:** Friday, March 25, 2011 8:10 AM

CH/336

**To:** McGinty, Tim; LIA06 Hoc  
**Cc:** LIA08 Hoc; PMT09 Hoc; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; Giitter, Joseph; Westreich, Barry; Kobetz, Timothy; ET05 Hoc; Zimmerman, Jacob  
**Subject:** RE: Emailing: boardfile.htm

If the Ops Center provides the answers to 1 – 3 (my team has no way to interact with the NRC-Japan team), my comm. team can get the answer to Item 4 and prepare a consolidated response for OPA review.

NELSON

---

**From:** McGinty, Tim  
**Sent:** Friday, March 25, 2011 2:18 AM  
**To:** LIA06 Hoc; Nelson, Robert  
**Cc:** LIA08 Hoc; PMT09 Hoc; McGinty, Tim; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; Giitter, Joseph; Westreich, Barry; Kobetz, Timothy; ET05 Hoc; Zimmerman, Jacob  
**Subject:** FW: Emailing: boardfile.htm

Jake – for the call this evening with the in-country team, we discussed that the NRC-Japan team may be the best source of information to address questions 1 and 2 below, and may also have insights on question 3. Please see what insights we can get from the team so we can pass them along to the line organization (Nelson is the focal point for comms).

For Question 4, I think the best response would come from DIRS on day shift, regarding the information that is in the TI being developed.

Nelson – the midnight shift ET wanted to get this tasker out of the Operations Center and into the line organization. The Protective Measures Team has a number of other higher priorities that we want them to be able to focus on. Can you respond to this email accepting the tasking so I can get it out of the Ops Center task tracker? Thanks, Tim

---

**From:** McGinty, Tim  
**Sent:** Friday, March 25, 2011 12:47 AM  
**To:** McGinty, Tim  
**Subject:** Emailing: boardfile.htm

**From:** OST02 HOC  
**Sent:** Thursday, March 24, 2011 7:03 PM  
**To:** ET05 Hoc  
**Subject:** FW: Congressional call Today

---

**From:** HOO Hoc  
**Sent:** Thursday, March 24, 2011 5:46 PM  
**To:** LIA07 Hoc; OST01 HOC; OST02 HOC; OST03 HOC  
**Subject:** FW: Congressional call Today

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

---

**From:** Sheron, Brian  
**Sent:** Thursday, March 24, 2011 3:40 PM  
**To:** HOO Hoc  
**Subject:** Congressional call Today

I received the following questions from congressional staff which I could not readily answer. Can you please ask the ET, RST and/or the PMT if they have any information that can address these questions?

- 1.) Two workers were reported to have been hospitalized due to radiation exposure. Have there been any more workers hospitalized, and do we know how they were exposed?
- 2.) Three workers were reported to have received radiation burns to their feet by spending too much time walking in contaminated water. Do we have any more information on this?
- 3.) It was reported that the Iodine levels in the Tokyo drinking water went down below allowable limits. Do we know what this is attributable to? Was it due to a shift in wind direction? Did the releases from the plant go down”?
- 4.) What action is the NRC taking regarding licensee plans to walk down their plants to confirm systems, procedures, etc., are in place to deal with natural phenomena? Are the resident inspectors going to accompany the licenses during the walkdowns?

Thanks.

Attachment FW TRANSITION REPORT 325 0700.msg (2560 Bytes) cannot be converted to PDF format.

**From:** Borchardt, Bill  
**To:** Sheron, Brian  
**Date:** Friday, March 25, 2011 10:04:20 AM

---

(b)(6)

Bill Borchardt  
Via blackberry

CH/337

**From:** Sheron, Brian  
**To:** Borchardt, Bill  
**Subject:** Re:  
**Date:** Friday, March 25, 2011 10:28:26 AM

---

Thanks.

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

From: Borchardt, Bill  
To: Sheron, Brian  
Sent: Fri Mar 25 10:04:19 2011  
Subject:

(b)(6)

Bill Borchardt  
Via blackberry

CH/338

**From:** Flory, Shirley on behalf of RidsResOd Resource  
**To:** Sheron, Brian; Uhle, Jennifer; RidsResPmdaMail Resource  
**Subject:** FOR TICKETING: FW: Re: Priority Green Ticket G20110199 (attachd)  
**Date:** Friday, March 25, 2011 10:54:18 AM  
**Attachments:** G20110199.pdf  
**Importance:** High

---

This needs ticketing.

Thanks - Shirley

---

**From:** Fleming, Barbara  
**Sent:** Thursday, March 24, 2011 4:51 PM  
**To:** RidsNrrOd Resource; RidsResOd Resource; RidsOipMailCenter Resource; RidsNsirOd Resource; RidsNroOd Resource; RidsNmssOd Resource; RidsOgcMailCenter Resource; RidsRgn1MailCenter Resource; RidsRgn2MailCenter Resource; RidsRgn3MailCenter Resource; RidsRgn4MailCenter Resource  
**Cc:** Abu-Eid, Bobby; Rodriguez, Sandra  
**Subject:** Re: Priority Green Ticket G20110199 (attachd)

Please provide your suggestions, ideas, and thoughts regarding options on how the NRC will meet its obligations to seek comments from its National Stakeholders for IAEA Safety Standards. (See attached EDO ticket.)  
Please provide your response to Bobby Abu-Eid by 05/07/11.

**Barbara F. Fleming**  
FOIA/Records Management Specialist  
U.S. Nuclear Regulatory Commission  
FSME/PBPA/OB  
301-415-7292  
[Barbara.Fleming@nrc.gov](mailto:Barbara.Fleming@nrc.gov)

CH/339



EDO Principal Correspondence Control

FROM: DUE: 05/27/11 EDO CONTROL: G20110199  
DOC DT: 03/23/11  
FINAL REPLY:

Shawn Williams, OEDO

TO:

Jaegers, OEDO

FOR SIGNATURE OF : \*\* PRI \*\* CRC NO:

DESC:

NRC's Obligations to Seek Comments from Its  
National Stakeholders for IAEA Safety Standards  
(See Description on EDATS sheet for more info)  
(EDATS: OEDO-2011-0214)

ROUTING:

Borchardt  
Weber  
Virgilio  
Ash  
Muessle  
OGC/GC  
Doane, OIP  
Williams, OEDO

DATE: 03/23/11

ASSIGNED TO: CONTACT:

FSME

Miller

SPECIAL INSTRUCTIONS OR REMARKS:

Coordinate with other offices and IAEA Safety  
Standards Committees (SSCs), as necessary, to  
develop option(s) to be discussed with the DEDR on  
how NRC will meet its obligations on the new SSC  
Terms of Reference (TOR) item. (See attached email  
fm S. Williams for more info.) The complete SSC TOR  
can be found at:  
<http://www-ns.iaea.org/downloads/standards/ss-committees-tor.pdf>. Provide the information by May 27,  
2011, via email to Shawn Williams, OEDO.

**EDATS Number:** OEDO-2011-0214**Source:** OEDC**General Information****Assigned To:** FSME**OEDO Due Date:** 5/27/2011 11:00 PM**Other Assignees:****SECY Due Date:** NONE**Subject:** NRC's Obligations to Seek Comments from Its National Stakeholders for IAEA Safety Standards**Description:** Develop Option(s) for the NRC to Meet Its Obligations in the Revised IAEA Safety Standard Committee's Terms of Reference to "...seek comments from national stakeholders and to present a national position on each draft safety standard, which should be based on appropriate consultation at the national level and coordination of the input of national stakeholders"**EC Routing:** OIP**DAMS Accession Numbers - Incoming:** NONE**Response/Package:** NONE**Other Information****Cross Reference Number:** G20110199**Staff Initiated:** NO**Related Task:****Recurring Item:** NO**File Routing:** EDATS**Agency Lesson Learned:** NO**OEDO Monthly Report Item:** NO**Process Information****Action Type:** E-mail**Priority:** Medium**Sensitivity:** None**Signature Level:** No Signature Required**Urgency:** NO**Approval Level:** No Approval Required**OEDO Concurrence:** NO**OCM Concurrence:** NO**OCA Concurrence:** NO**Special Instructions:** Coordinate with the other offices and IAEA Safety Standards Committees (SSCs), as necessary, to develop option(s) to be discussed with the DEDR on how NRC will meet its obligations on the new SSC Terms of Reference (TOR) item. (See attached email fm S. Williams for more info.) The complete SSC TOR can be found at: <http://www-ns.iaea.org/downloads/standards/ss-committees-tor.pdf>. Provide the information by May 27, 2011, via email to Shawn Williams, OEDO.**Document Information****Originator Name:** Shawn Williams**Date of Incoming:** 3/23/2011**Originating Organization:** OEDO**Document Received by OEDO Date:** 3/23/2011**Addressee:** Cathy Jaegers, OEDO**Date Response Requested by Originator:** NONE**Incoming Task Received:** E-mail

## Clayton, Kathleen

---

**From:** Williams, Shawn  
**Sent:** Wednesday, March 23, 2011 8:53 AM  
**To:** Clayton, Kathleen  
**Subject:** FW: Please issue the attached Green Ticket to develop an option(s) on how the NRC will meet its obligations to seek comments from their national stakeholders for IAEA Safety Standards  
**Attachments:** EDATS-Green Ticket to develop a proposal for meeting the SSC TOR.docx

I received Cathy's out of office message.

**From:** Williams, Shawn  
**Sent:** Wednesday, March 23, 2011 8:50 AM  
**To:** Jaegers, Cathy  
**Cc:** Abu-Eid, Bobby; Astwood, Heather; Brach, Bill; Camper, Larry; Case, Michael; Cook, John; Cool, Donald; Diec, David; Holahan, Vincent; Lewis, Robert; Quinones, Lauren; Rini, Brett; Sampson, Michele; Schwartzman, Jennifer; Virgilio, Martin; Weaver, Doug; Williams, Shawn  
**Subject:** Please issue the attached Green Ticket to develop an option(s) on how the NRC will meet its obligations to seek comments from their national stakeholders for IAEA Safety Standards

Cathy,  
Please issue the attached Green Ticket assigned to FSME due May 27. It is understood that Larry Camper will take the lead and coordinate with the others.

Coordinate with the other offices and IAEA Safety Standard Committees (SSCs), as necessary, to develop an option (or options) to be discussed further with the Deputy Executive Director for Reactor and Preparedness Programs (DEDR) on how the NRC will meet its obligations to the new SSC Terms of Reference (TOR) item *"To disseminate the draft nuclear/radiation/transport/waste safety standards in their respective States, to seek comments from their national stakeholders and to present a national position on each draft safety standard, which should be based on appropriate consultation at the national level and coordination of the input of national stakeholders."*

Shawn Williams  
Executive Technical Assistant  
Office of the Executive Director for Operations  
301-415-1009

CH/340

**From:** Sheron, Brian  
**To:** RidsResOd Resource; Uhle, Jennifer; RidsResPmdaMail Resource  
**Cc:** Case, Michael; Richards, Stuart  
**Subject:** RE: FOR TICKETING: FW: Re: Priority Green Ticket G20110199 (attachd)  
**Date:** Friday, March 25, 2011 10:56:00 AM

---

Ticket to DE.

---

**From:** Flory, Shirley **On Behalf Of** RidsResOd Resource  
**Sent:** Friday, March 25, 2011 10:54 AM  
**To:** Sheron, Brian; Uhle, Jennifer; RidsResPmdaMail Resource  
**Subject:** FOR TICKETING: FW: Re: Priority Green Ticket G20110199 (attachd)  
**Importance:** High

This needs ticketing.

Thanks - Shirley

---

**From:** Fleming, Barbara  
**Sent:** Thursday, March 24, 2011 4:51 PM  
**To:** RidsNrrOd Resource; RidsResOd Resource; RidsOipMailCenter Resource; RidsNsirOd Resource; RidsNroOd Resource; RidsNmssOd Resource; RidsOgcMailCenter Resource; RidsRgn1MailCenter-Resource; RidsRgn2MailCenter Resource; RidsRgn3MailCenter Resource; RidsRgn4MailCenter Resource  
**Cc:** Abu-Eid, Bobby; Rodriguez, Sandra  
**Subject:** Re: Priority Green Ticket G20110199 (attachd)

Please provide your suggestions, ideas, and thoughts regarding options on how the NRC will meet its obligations to seek comments from its National Stakeholders for IAEA Safety Standards. (See attached EDO ticket.)  
Please provide your response to Bobby Abu-Eid by 05/07/11.

***Barbara F. Fleming***

FOIA/Records Management Specialist  
U.S. Nuclear Regulatory Commission  
FSME/PBPA/OB  
301-415-7292  
[Barbara.Fleming@nrc.gov](mailto:Barbara.Fleming@nrc.gov)

CH/341

**From:** Sheron, Brian  
**To:** Ross-Lee, MaryJane  
**Subject:** RE: Emailing: boardfile.htm  
**Date:** Friday, March 25, 2011 10:57:00 AM  
**Attachments:** image001.png

---

Good deal.

---

**From:** Ross-Lee, MaryJane  
**Sent:** Friday, March 25, 2011 10:57 AM  
**To:** Sheron, Brian  
**Subject:** RE: Emailing: boardfile.htm

I pulled day shift this weekend. ☹

---

**From:** Sheron, Brian  
**Sent:** Friday, March 25, 2011 10:55 AM  
**To:** Ross-Lee, MaryJane  
**Subject:** RE: Emailing: boardfile.htm

BTW, I'm the IRC ET Director from 3pm to 11 pm both Saturday and Sunday. Are you working either of those shifts again?

---

**From:** Ross-Lee, MaryJane  
**Sent:** Friday, March 25, 2011 9:59 AM  
**To:** LIA08 Hoc; McGinty, Tim; Nelson, Robert; LIA06 Hoc; Sheron, Brian  
**Cc:** PMT09 Hoc; ET07 Hoc; RST01 Hoc; ET05 Hoc  
**Subject:** RE: Emailing: boardfile.htm

Ok, will Brian have what he needs for the 3:00 phone call? LT – can you compile results as we have them?

---

**From:** LIA08 Hoc  
**Sent:** Friday, March 25, 2011 9:39 AM  
**To:** McGinty, Tim; Nelson, Robert; LIA06 Hoc  
**Cc:** PMT09 Hoc; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; ET05 Hoc  
**Subject:** RE: Emailing: boardfile.htm

We are working it with our site team... they say they will not know until they can ask NISA (tomorrow).

Rani

---

**From:** McGinty, Tim  
**Sent:** Friday, March 25, 2011 8:44 AM  
**To:** Nelson, Robert; LIA06 Hoc  
**Cc:** LIA08 Hoc; PMT09 Hoc; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; ET05 Hoc  
**Subject:** Re: Emailing: boardfile.htm

Just #3 left. You'll have to ask PMT I guess.

Sent from my NRC blackberry

CH/342

Tim McGinty

(b)(6)

---

**From:** Nelson, Robert  
**To:** McGinty, Tim; LIA06 Hoc  
**Cc:** LIA08 Hoc; PMT09 Hoc; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; Giitter, Joseph; Westreich, Barry; Kobetz, Timothy; ET05 Hoc; Zimmerman, Jacob  
**Sent:** Fri Mar 25 08:10:19 2011  
**Subject:** RE: Emailing: boardfile.htm

If the Ops Center provides the answers to 1 – 3 (my team has no way to interact with the NRC-Japan team), my comm. team can get the answer to Item 4 and prepare a consolidated response for OPA review.

NELSON

---

**From:** McGinty, Tim  
**Sent:** Friday, March 25, 2011 2:18 AM  
**To:** LIA06 Hoc; Nelson, Robert  
**Cc:** LIA08 Hoc; PMT09 Hoc; McGinty, Tim; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; Giitter, Joseph; Westreich, Barry; Kobetz, Timothy; ET05 Hoc; Zimmerman, Jacob  
**Subject:** FW: Emailing: boardfile.htm

Jake – for the call this evening with the in-country team, we discussed that the NRC-Japan team may be the best source of information to address questions 1 and 2 below, and may also have insights on question 3. Please see what insights we can get from the team so we can pass them along to the line organization (Nelson is the focal point for comms).

For Question 4, I think the best response would come from DIRS on day shift, regarding the information that is in the TI being developed.

Nelson – the midnight shift ET wanted to get this tasker out of the Operations Center and into the line organization. The Protective Measures Team has a number of other higher priorities that we want them to be able to focus on. Can you respond to this email accepting the tasking so I can get it out of the Ops Center task tracker? Thanks, Tim

---

**From:** McGinty, Tim  
**Sent:** Friday, March 25, 2011 12:47 AM  
**To:** McGinty, Tim  
**Subject:** Emailing: boardfile.htm

**From:** OST02 HOC  
**Sent:** Thursday, March 24, 2011 7:03 PM  
**To:** ET05 Hoc  
**Subject:** FW: Congressional call Today

---

**From:** HOO Hoc  
**Sent:** Thursday, March 24, 2011 5:46 PM

**To:** LIA07 Hoc; OST01 HOC; OST02 HOC; OST03 HOC  
**Subject:** FW: Congressional call Today

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

---

**From:** Sheron, Brian  
**Sent:** Thursday, March 24, 2011 3:40 PM  
**To:** HOO Hoc  
**Subject:** Congressional call Today

I received the following questions from congressional staff which I could not readily answer. Can you please ask the ET, RST and/or the PMT if they have any information that can address these questions?

- 1.) Two workers were reported to have been hospitalized due to radiation exposure. Have there been any more workers hospitalized, and do we know how they were exposed?
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- 4.) What action is the NRC taking regarding licensee plans to walk down their plants to confirm systems, procedures, etc., are in place to deal with natural phenomena? Are the resident inspectors going to accompany the licenses during the walkdowns?

Thanks.

**From:** Ross-Lee, MaryJane  
**To:** Sheron, Brian; LIA08 Hoc; McGinty, Tim; Nelson, Robert; LIA06 Hoc  
**Cc:** PMT09 Hoc; ET07 Hoc; RST01 Hoc; ET05 Hoc  
**Subject:** RE: Emailing: boardfile.htm  
**Date:** Friday, March 25, 2011 10:58:33 AM  
**Attachments:** image001.png

---

Here is what I have so far:

Questions 1 and 2 copied again below. New answer to Question 3 in red below.

Questions #1 and #2:

- 1.) Two workers were reported to have been hospitalized due to radiation exposure. Have there been any more workers hospitalized, and do we know how they were exposed?
- 2.) Three workers were reported to have received radiation burns to their feet by spending too much time walking in contaminated water. Do we have any more information on this?

The following information taken from the IAEA website and answers these two questions: As per the IAEA, three workers at the Fukushima Daiichi nuclear power plant were exposed on 24 March to elevated levels of radiation. The IAEA has received additional information on the incident from the Japanese authorities.

The three were contracted workers laying cables in the turbine building of the Unit 3 reactor. Two of them were found to have radioactivity on their feet and legs.

These were washed in the attempt to remove radioactivity, but since there was a possibility of Beta-ray burning of the skin, the two were taken to the Fukushima University Hospital for examination and then transferred to Japan's National Institute of Radiological Sciences for further examination. They are expected to be monitored for around four days. It is thought that the workers ignored their dosimeters' alarm believing it to be false and continued working with their feet in contaminated water.

The Nuclear and Industrial Safety Agency (NISA) of Japan instructed TEPCO to review the radiation control system immediately in order to avoid similar incidents in the future.

As of 24 March, 19:30 Japan time, the number of workers at the Fukushima Daiichi nuclear power plant found to have received more than 100 millisieverts of radiation dose totalled 17 including the three contract workers. The remaining fourteen are TEPCO's employees.

3.) It was reported that the Iodine levels in the Tokyo drinking water went down below allowable limits. Do we know what this is attributable to? Was it due to a shift in wind direction? Did the releases from the plant go down? Per the Japanese regulator, through the site team...No quantitative cause analysis exists, but decay of iodine itself or reduction in rainfall with iodine, or their combination can be a plausible reason.

**From:** Sheron, Brian  
**Sent:** Friday, March 25, 2011 10:54 AM  
**To:** Ross-Lee, MaryJane; LIA08 Hoc; McGinty, Tim; Nelson, Robert; LIA06 Hoc  
**Cc:** PMT09 Hoc; ET07 Hoc; RST01 Hoc; ET05 Hoc  
**Subject:** RE: Emailing: boardfile.htm

CH/343



Don't kill yourself getting answers to these questions. If we don't know what the answer is, I'll just tell them we were unable to get any more information.

---

**From:** Ross-Lee, MaryJane  
**Sent:** Friday, March 25, 2011 9:59 AM  
**To:** LIA08 Hoc; McGinty, Tim; Nelson, Robert; LIA06 Hoc; Sheron, Brian  
**Cc:** PMT09 Hoc; ET07 Hoc; RST01 Hoc; ET05 Hoc  
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---

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**To:** Nelson, Robert; LIA06 Hoc  
**Cc:** LIA08 Hoc; PMT09 Hoc; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; ET05 Hoc  
**Subject:** Re: Emailing: boardfile.htm

Just #3 left. You'll have to ask PMT I guess.

Sent from my NRC blackberry  
Tim McGinty

(b)(6)

---

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**To:** McGinty, Tim; LIA06 Hoc  
**Cc:** LIA08 Hoc; PMT09 Hoc; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; Giitter, Joseph; Westreich, Barry; Kobetz, Timothy; ET05 Hoc; Zimmerman, Jacob  
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**Subject:** RE: Emailing: boardfile.htm

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NELSON

---

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**To:** LIA06 Hoc; Nelson, Robert  
**Cc:** LIA08 Hoc; PMT09 Hoc; McGinty, Tim; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; Giitter, Joseph;

Westreich, Barry; Kobetz, Timothy; ET05 Hoc; Zimmerman, Jacob  
**Subject:** FW: Emailing: boardfile.htm

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**From:** McGinty, Tim  
**Sent:** Friday, March 25, 2011 12:47 AM  
**To:** McGinty, Tim  
**Subject:** Emailing: boardfile.htm

**From:** OST02 HOC  
**Sent:** Thursday, March 24, 2011 7:03 PM  
**To:** ET05 Hoc  
**Subject:** FW: Congressional call Today

---

**From:** HOO Hoc  
**Sent:** Thursday, March 24, 2011 5:46 PM  
**To:** LIA07 Hoc; OST01 HOC; OST02 HOC; OST03 HOC  
**Subject:** FW: Congressional call Today

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

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**From:** Sheron, Brian  
**Sent:** Thursday, March 24, 2011 3:40 PM  
**To:** HOO Hoc  
**Subject:** Congressional call Today

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- 4.) Three workers were reported to have received radiation burns to their feet by spending too much time walking in contaminated water. Do we have any more information on this?
- 5.) It was reported that the Iodine levels in the Tokyo drinking water went down below allowable limits. Do we know what this is attributable to? Was it due to a shift in wind direction? Did the releases from the plant go down"?
- 6.) What action is the NRC taking regarding licensee plans to walk down their plants to confirm systems, procedures, etc., are in place to deal with natural phenomena? Are the resident inspectors going to accompany the licenses during the walkdowns?

Thanks.

**From:** Sheron, Brian  
**To:** Droggitis, Spiros; Shane, Raeann  
**Subject:** Responses to Congressional Staff Questions  
**Date:** Friday, March 25, 2011 11:10:00 AM  
**Attachments:** image001.png

---

Below are responses the staff prepared to 3 of the 4 the congressional staff questions asked yesterday. Can you take these, cut and paste them, etc., into a clean format, and forward them to the congressional staff?

**From:** Ross-Lee, MaryJane  
**Sent:** Friday, March 25, 2011 10:59 AM  
**To:** Sheron, Brian; LIA08 Hoc; McGinty, Tim; Nelson, Robert; LIA06 Hoc  
**Cc:** PMT09 Hoc; ET07 Hoc; RST01 Hoc; ET05 Hoc  
**Subject:** RE: Emailing: boardfile.htm

Here is what I have so far:

Questions 1 and 2 copied again below. New answer to Question 3 in red below.

Questions #1 and #2:

- 1.) Two workers were reported to have been hospitalized due to radiation exposure. Have there been any more workers hospitalized, and do we know how they were exposed?
- 2.) Three workers were reported to have received radiation burns to their feet by spending too much time walking in contaminated water. Do we have any more information on this?

The following information taken from the IAEA website and answers these two questions: As per the IAEA, three workers at the Fukushima Daiichi nuclear power plant were exposed on 24 March to elevated levels of radiation. The IAEA has received additional information on the incident from the Japanese authorities.

The three were contracted workers laying cables in the turbine building of the Unit 3 reactor. Two of them were found to have radioactivity on their feet and legs. These were washed in the attempt to remove radioactivity, but since there was a possibility of Beta-ray burning of the skin, the two were taken to the Fukushima University Hospital for examination and then transferred to Japan's National Institute of Radiological Sciences for further examination. They are expected to be monitored for around four days. It is thought that the workers ignored their dosimeters' alarm believing it to be to be false and continued working with their feet in contaminated water.

The Nuclear and Industrial Safety Agency (NISA) of Japan instructed TEPCO to review the radiation control system immediately in order to avoid similar incidents in the future. As of 24 March, 19:30 Japan time, the number of workers at the Fukushima Daiichi nuclear power plant found to have received more than 100 millisieverts of radiation dose totalled 17 including the three contract workers. The remaining fourteen are TEPCO's employees.

3.) It was reported that the Iodine levels in the Tokyo drinking water went down below allowable limits. Do we know what this is attributable to? Was it due to a shift in wind direction? Did the releases from the plant go down"? Per the Japanese regulator, through the site team...No quantitative cause analysis exists, but decay of iodine itself or reduction

CH/344

in rainfall with iodine, or their combination can be a plausible reason.

---

**From:** Sheron, Brian  
**Sent:** Friday, March 25, 2011 10:54 AM  
**To:** Ross-Lee, MaryJane; LIA08 Hoc; McGinty, Tim; Nelson, Robert; LIA06 Hoc  
**Cc:** PMT09 Hoc; ET07 Hoc; RST01 Hoc; ET05 Hoc  
**Subject:** RE: Emailing: boardfile.htm

Don't kill yourself getting answers to these questions. If we don't know what the answer is, I'll just tell them we were unable to get any more information.

---

**From:** Ross-Lee, MaryJane  
**Sent:** Friday, March 25, 2011 9:59 AM  
**To:** LIA08 Hoc; McGinty, Tim; Nelson, Robert; LIA06 Hoc; Sheron, Brian  
**Cc:** PMT09 Hoc; ET07 Hoc; RST01 Hoc; ET05 Hoc  
**Subject:** RE: Emailing: boardfile.htm

Ok, will Brian have what he needs for the 3:00 phone call? LT – can you compile results as we have them?

---

**From:** LIA08 Hoc  
**Sent:** Friday, March 25, 2011 9:39 AM  
**To:** McGinty, Tim; Nelson, Robert; LIA06 Hoc  
**Cc:** PMT09 Hoc; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; ET05 Hoc  
**Subject:** RE: Emailing: boardfile.htm

We are working it with our site team... they say they will not know until they can ask NISA (tomorrow).

Rani

---

**From:** McGinty, Tim  
**Sent:** Friday, March 25, 2011 8:44 AM  
**To:** Nelson, Robert; LIA06 Hoc  
**Cc:** LIA08 Hoc; PMT09 Hoc; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; ET05 Hoc  
**Subject:** Re: Emailing: boardfile.htm

Just #3 left. You'll have to ask PMT I guess.

Sent from my NRC blackberry  
Tim McGinty

(b)(6)

---

**From:** Nelson, Robert  
**To:** McGinty, Tim; LIA06 Hoc  
**Cc:** LIA08 Hoc; PMT09 Hoc; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; Glitter, Joseph; Westreich, Barry; Kobetz, Timothy; ET05 Hoc; Zimmerman, Jacob  
**Sent:** Fri Mar 25 08:10:19 2011  
**Subject:** RE: Emailing: boardfile.htm

If the Ops Center provides the answers to 1 – 3 (my team has no way to interact with the

NRC-Japan team), my comm. team can get the answer to Item 4 and prepare a consolidated response for OPA review.

NELSON

---

**From:** McGinty, Tim  
**Sent:** Friday, March 25, 2011 2:18 AM  
**To:** LIA06 Hoc; Nelson, Robert  
**Cc:** LIA08 Hoc; PMT09 Hoc; McGinty, Tim; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; Glitter, Joseph; Westreich, Barry; Kobetz, Timothy; ET05 Hoc; Zimmerman, Jacob  
**Subject:** FW: Emailing: boardfile.htm

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**To:** McGinty, Tim  
**Subject:** Emailing: boardfile.htm

**From:** OST02 HOC  
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- 3.) Two workers were reported to have been hospitalized due to radiation exposure. Have there been any more workers hospitalized, and do we know how they were exposed?
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Thanks.

**From:** Sheron, Brian  
**To:** Droqgitis, Spiros; Shane, Raeann  
**Subject:** FW: Emailing: boardfile.htm  
**Date:** Friday, March 25, 2011 11:13:00 AM  
**Attachments:** [image001.png](#)  
[TI Objectives.docx](#)

---

Here is the staff's response to question #4. Can you clean up the format and send it on to the staffers?

---

**From:** Ross-Lee, MaryJane  
**Sent:** Friday, March 25, 2011 11:12 AM  
**To:** Sheron, Brian; ET05 Hoc  
**Subject:** FW: Emailing: boardfile.htm

---

**From:** Kobetz, Timothy  
**Sent:** Friday, March 25, 2011 7:39 AM  
**To:** McGinty, Tim; LIA06 Hoc; Nelson, Robert  
**Cc:** LIA08 Hoc; PMT09 Hoc; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; Giitter, Joseph; Westreich, Barry; ET05 Hoc; Zimmerman, Jacob; Brown, Frederick  
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Tim and Bob,

**#4.** The TI (issued March 23, 2011) has inspectors verify that the licensees have performed walkdowns. This can done in various ways. For example the inspector could walkdown the system with the licensee or perform an independent walkdown and compare those results with the licensee's results (or a combination of both). In some cases the inspector may choose to just review the licensee's documentation of findings from the walkdown.

For more information on the TI a one page set of talking points is attached.

Tim

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CH/345



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Thanks.



Overview of TI 2515/183, "FOLLOWUP TO THE FUKUSHIMA DAIICHI NUCLEAR STATION  
FUEL DAMAGE EVENT"

March 23, 2011

TI Objectives

- The objective of this TI is a high-level, independent assessment, of the adequacy of actions taken by licensees in response to the Fukushima Daiichi nuclear station fuel damage event.
- The inspection results from this TI will be used to evaluate the industry's readiness for a similar event and to aid in determining whether additional regulatory actions warranted.

TI Focus Areas

1. Assess the licensee's capability to mitigate conditions that result from beyond design basis events (e.g., B.5.b and 10 CFR 50.54(hh)).
2. Assess the licensee's capability to mitigate station blackout (SBO) conditions, as required by 10 CFR 50.63.
3. Assess the licensee's capability to mitigate internal and external flooding events required by station design.
4. Assess the thoroughness of the licensee's walkdowns and inspections of important equipment needed to mitigate fire and flood events to identify the potential that the equipment's function could be lost during seismic events possible for the site.

TI Inspection Methods

- Use existing inspection procedures and TIs for guidance
- Where applicable, inspectors should credit the baseline inspection program for samples reviewed during this TI assessment.
- Resources: 40 hours per site.

Other Issues

- The TI was issued on March 23, 2011. Each site will complete the inspection by April 29, 2011 and issue a stand-alone report by May 13, 2011
- An inspection report template is being prepared (and should be available mid-next week) to assist in documentation.
- The short inspection and documentation timeline could have a significant impact on regional resources.

**From:** Sheron, Brian  
**To:** Ross-Lee, MaryJane  
**Subject:** RE: Emailing: boardfile.htm  
**Date:** Friday, March 25, 2011 11:14:00 AM  
**Attachments:** image001.png

---

I forgot one question. One of the staffers said there was grey and/or black smoke coming from one of the units. Did we have any idea what that was due to?

---

**From:** Ross-Lee, MaryJane  
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**To:** Sheron, Brian; ET05 Hoc  
**Subject:** FW: Emailing: boardfile.htm

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CH/346

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Thanks.





**From:** Sheron, Brian  
**To:** Ross-Lee, MaryJane  
**Subject:** FW: NUCLEAR NEWS FLASHES  
**Date:** Friday, March 25, 2011 11:18:00 AM  
**Attachments:** nn110324.txt

---

See the first article on IRSN.

**From:** Flory, Shirley  
**Sent:** Friday, March 25, 2011 10:49 AM  
**To:** Case, Michael; Coe, Doug; Coyne, Kevin; Gibson, Kathy; Uhle, Jennifer; Richards, Stuart; Scott, Michael; Sheron, Brian; Valentin, Andrea  
**Subject:** NUCLEAR NEWS FLASHES

CH/347

**From:** Sheron, Brian  
**To:** HOO Hoc  
**Cc:** Weber, Michael; Virgilio, Martin  
**Subject:** FW: Japanese Earthquake 25 March 2011 0600 EDT Situation Report  
**Date:** Friday, March 25, 2011 11:23:00 AM  
**Attachments:** Japan Earthquake Response 03252011 0600a.ppt  
SITREP MAR25 0600 final.docx  
Version 5A --- DOE Triage - Japan Spectrum Compilation - As of 23 March 2011 (OUO) (3).xls

---

Please forward to ET, RST,&PMT Directors. Thx.

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

**From:** Adams, Ian [<mailto:Ian.Adams@Hq.Doe.Gov>]  
**Sent:** Friday, March 25, 2011 9:16 AM  
**To:** Adams, Ian; Binkley, Steve; Brinkman, Bill; Budnitz, Bob; Finck, Phillip; Garwin, Dick (EOP); Garwin, Dick (IBM); Grossenbacher, John (INL); Hurlbut, Brandon; John Holdren; Kelly, John E (NE); Koonin, Steven; Lee, Richard; Lyons, Peter; McFarlane, Harold; Owens, Missy; Peterson, Per; Sheron, Brian; Steve Fetter; Szilard, Ronalo  
**Subject:** FW: Japanese Earthquake 25 March 2011 0600 EDT Situation Report

Good morning,

Attached is this morning's Japan sit rep.

This information should not be shared or further distributed.

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

**From:** NITOPS  
**Sent:** Friday, March 25, 2011 6:20 AM  
**To:** (b)(6)

(b)(6)

CH/348

(b)(6)

Subject: Japanese Earthquake 25 March 2011 0600 EDT Situation Report

Please find attached the latest DOE SITREP regarding the ongoing earthquake and tsunami response in Japan.

This information is provided for your internal use and should be shared only with those who have a need to know.

The SITREP will be updated every 12 hours.

Nuclear Incident Team (NIT)

Office of Emergency Response (NA-42)

National Nuclear Security Administration U.S. Department of Energy nitops@nnsa.doe.gov

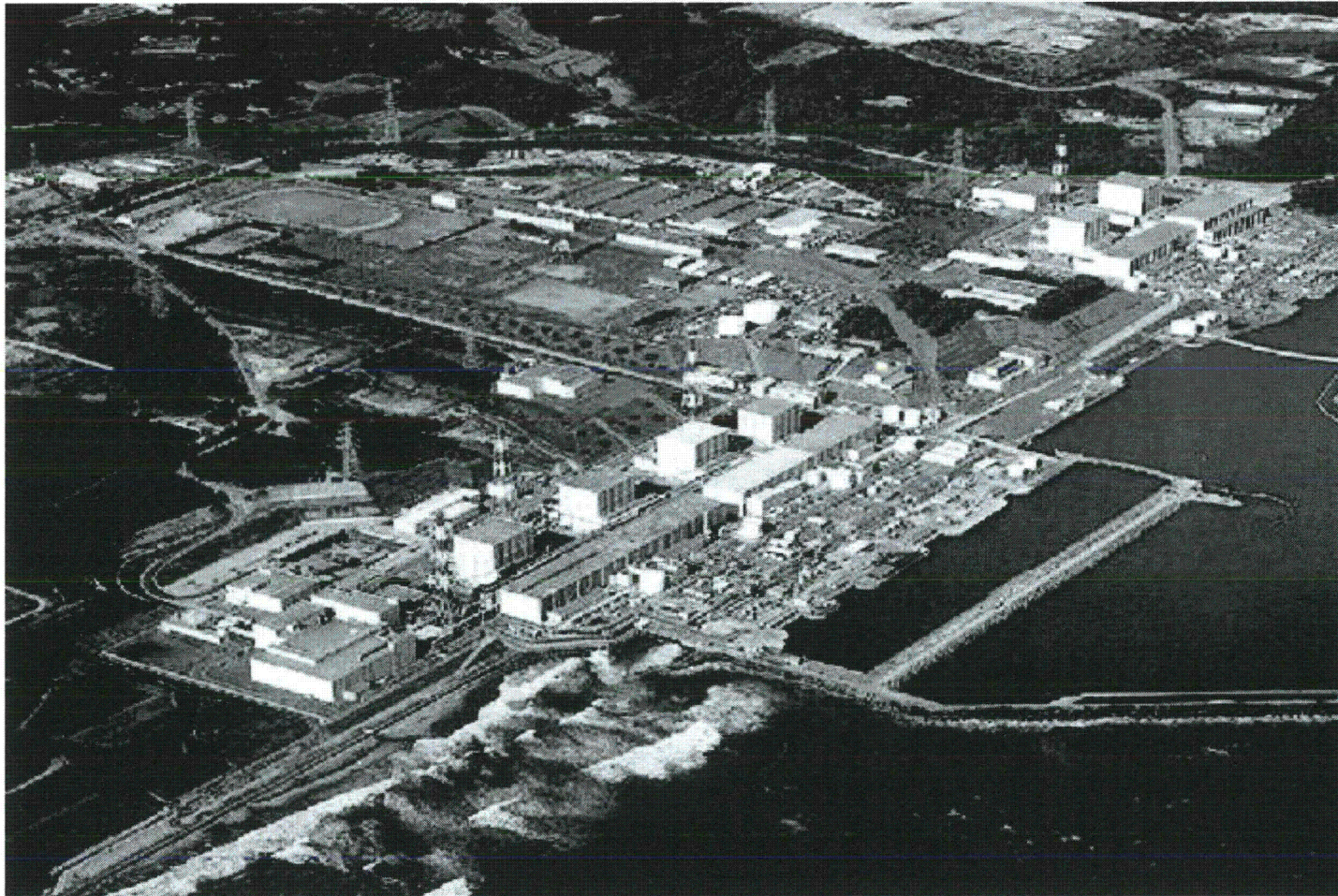
nit@doe.gov 202-586-8100



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# Japan Earthquake Response

## March 25, 2011 // 0600 EDT



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**This information is for limited  
distribution to those with a  
NEED TO KNOW  
and should not be forwarded outside  
your agency or organization without  
prior clearance from U.S. DOE**

**Contact: DOE/NNSA Nuclear Incident  
Team: NITOPS@nnsa.doe.gov**

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# Current Status

- ◆ **No major changes in radiation levels at the Fukushima Daiichi Nuclear Power Plant**
  - Unit 1: Reactor water level stable, core damage est. 70%. Seawater injection is being converted to freshwater. Electrical power line connected (through Unit 2). At 1130 on March 24, lighting to unit 1 control room.
  - Unit 2: Reactor water level stable, core damage est. 33%. Spent fuel pool has been filled. Power restored and electric water pump systems being tested.
  - Unit 3: Seawater injection is being converted to freshwater in reactor; trucks pumping water into spent fuel pools. Water level stable and pressure stabilized. Power restored.
  - Unit 4: Spraying continues periodically for the spent fuel pond. Power restored. Trucks pumping water into spent fuel pools.
  - Units 5 & 6: Diesel generators supplying power to cooling system. Reactors appear stable. RHR seawater tripped at 1720 on March 23. Plans in place to start a standby pump on March 24.
- ◆ Japanese media reports levels of radioiodine reported in tap water in Tokyo decreased to levels considered safe for consumption by infants.
- ◆ Voluntary evacuation zone is being extended to 30km from Fukushima Daiichi.

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# DOE/NNSA Response

## ◆ Command, Control, Coordination:

- **Nuclear Incident Team (NIT):** Coordinating overall emergency response
- **Policy Working Group (PWG):** Coordinating overall policy
- **Senior Energy Official:** Primary Manager of deployed field teams
- **Liaisons:** DART, USPACOM, USAID, NRC

## ◆ Modeling

- **National Atmospheric Release Advisory Center (NARAC):** conducting predictive radioactive atmospheric dispersion modeling

## ◆ Monitoring and Sampling

- **Consequence Management Response Team (CMRT):** Conducting ground monitoring, air sampling and initial results analysis
- **Aerial Monitoring System (AMS):** Conducts aerial detection for mapping radiological ground material deposits

## ◆ Assessment

- **Consequence Management Home Team (CMHT):** Scientific assessment of data updated daily from ground measurements and AMS flights

## ◆ Medical Consultation

- **Radiation Emergency Assistance Center/Training Site (REAC/TS):** Providing medical advice about radiological exposure

### Deployed (45)

#### Yokota AB

- (1) FTL
- (28) CMRT
- (7) AMS

#### US Embassy Tokyo

- (1) SEO
- (1) SEO Staff
- (2) Foreign Service Nationals
- (2) Permanent Staff
- (1) DART LNO
- (1) Nuclear Energy Representative

#### USPACOM HQ

- (1) LNO

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# Significant Events: Past 24 Hrs.

- ◆ International Engagement:
  - Received formal request from MOD Japan Joint Staff including FRMAC support for airborne radiation monitoring
  - Met with various GOJ ministries; arranged for exchange of information and experts to better coordinate current response activities
- ◆ Nuclear Incident Team
  - Submitted input to NSS Contingency Working Group

## Operations

- ◆ Modeling
  - NARAC: Developing predictive plume models based on a revised release scenario and weather data from 14 -26 March.
- ◆ Field Monitoring and Assessment
  - AMS: Helicopter flight to Sendai postponed due to weather; C-12 flight abbreviated after instruments readings indicated possible contamination.
  - CMRT: Ground teams sampled around Fukushima Daiichi to corroborate aerial measurements; continued monitoring at the US Embassy (Tokyo).
- ◆ Medical Consult
  - REAC/TS provided information regarding population monitoring considerations and screening strategies to share with GOJ if requested.

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# External Data Providers

## ◆ Japan

- Ministry of Foreign Affairs (MOFA)
- Ministry of Education, Culture, Sports, Science, and Technology (MEXT)
- Tokyo Electric Power Company (TEPCO)
- Nuclear Safety Technology Center (NUSTEC)

## ◆ United States

- Japan Emergency Command Center, US Embassy, Tokyo
- USAF, BSC Commander
- USAF, WC-135 Constant Phoenix
- Futenma Marine Corps Air Station
- Nuclear Regulatory Commission
- Naval Reactors

~~Official Use Only~~



~~Official Use Only~~

# Guide to Interpretation

## Derived Response Levels (DRL)

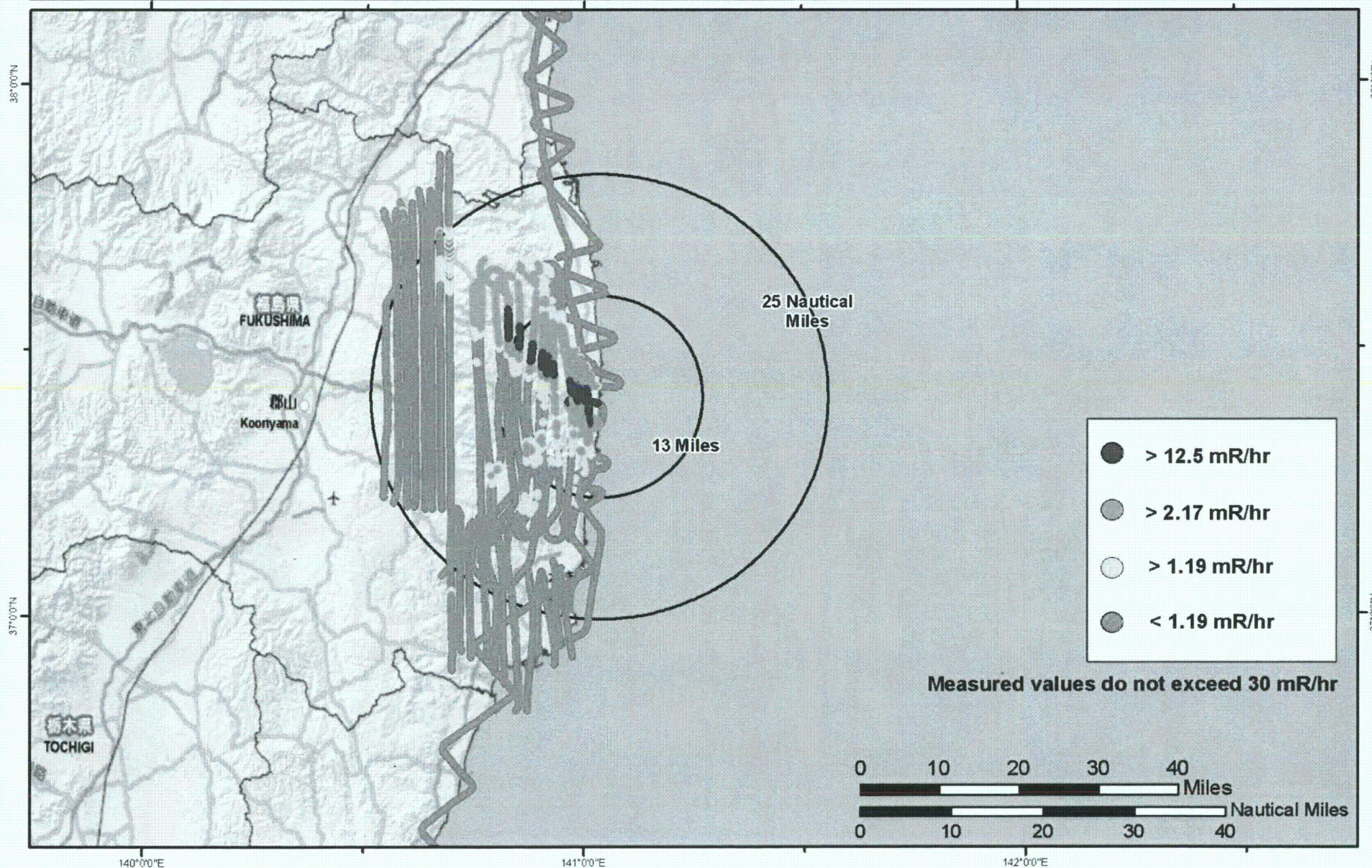
- ◆ **Early Phase DRL**
  - If a person is in danger of receiving an external radiation dose of 1 Rem over 4 days, the EPA recommends evacuation until radiation levels decrease. This area is indicated in red.
- ◆ **First Year DRL**
  - If a person is in danger of receiving an external radiation dose greater than 2 Rem during the first year, the EPA recommends relocation until radiation levels decrease. This is not an urgent action because the dose is received over a full year. This area is indicated in orange.
- ◆ **Fifty Year DRL**
  - If a person is in danger of receiving an external radiation dose greater than 5 Rem over 50 years, the EPA recommends relocation until radiation levels decrease. This is not an urgent action because the dose is received over fifty years. This area falls within the second year DRL.
- ◆ **Second Year DRL**
  - If a person is in danger of receiving an external radiation dose of greater than 0.5 Rem in the second year (or any subsequent year), the EPA recommends relocation until radiation levels decrease. This area is indicated in yellow.

These calculations account for multiple variables. For instance, radiation is most intense in the first days following its release therefore dose reduction may be met by evacuating early in the response.

Protective actions are frequently expressed in dose rates. The dose rate is an indicator that residents would accumulate the threshold dose if they stayed in the area the entire time expressed (e.g. 1 year, 2 years, 50 years)

~~Official Use Only~~



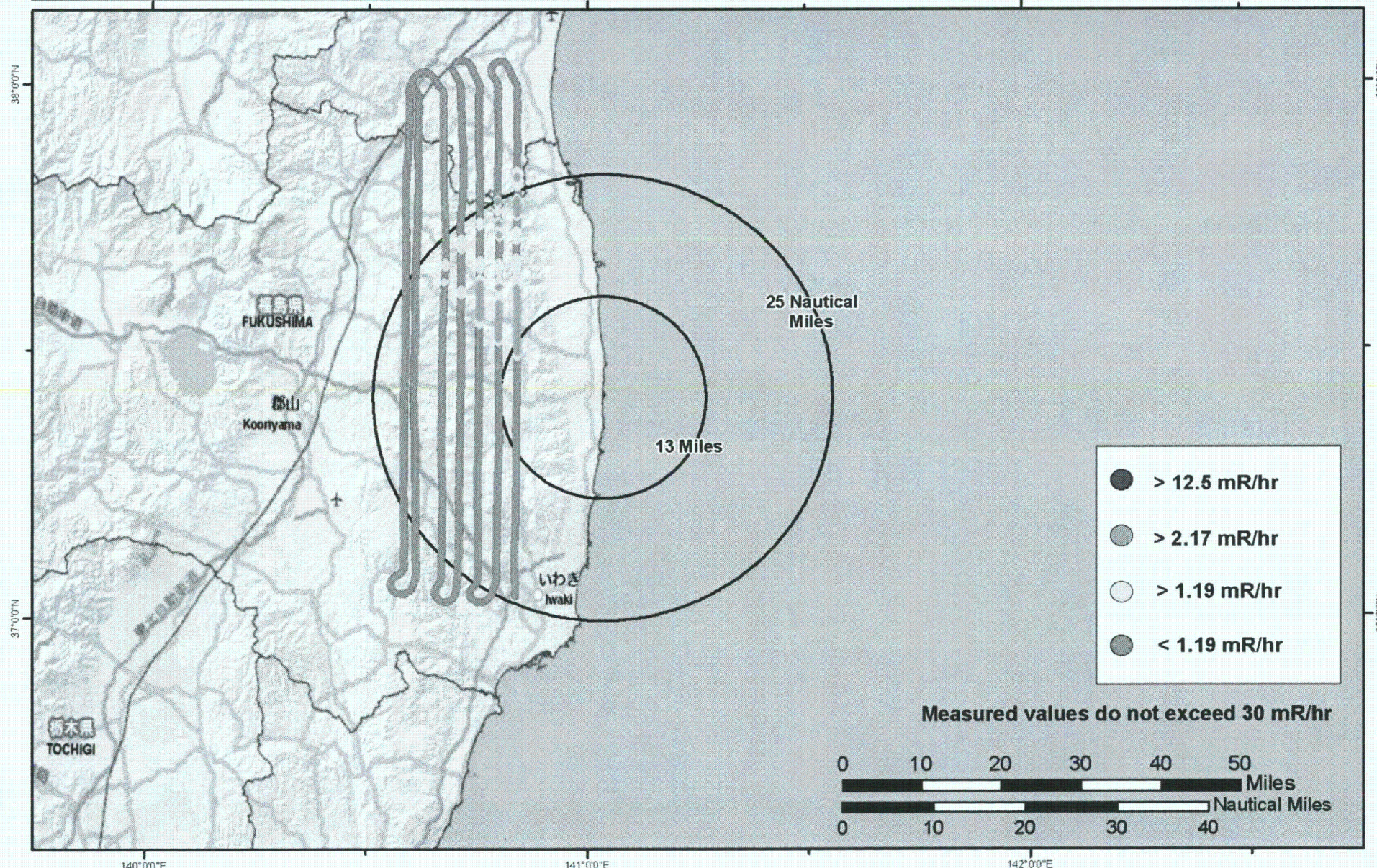


Map created on 03232011 0210 JST

Name: NIT\_C-12 23Mar2011 v4

Nuclear Incident Team DOE NIT  
Contact (202) 586 - 8100



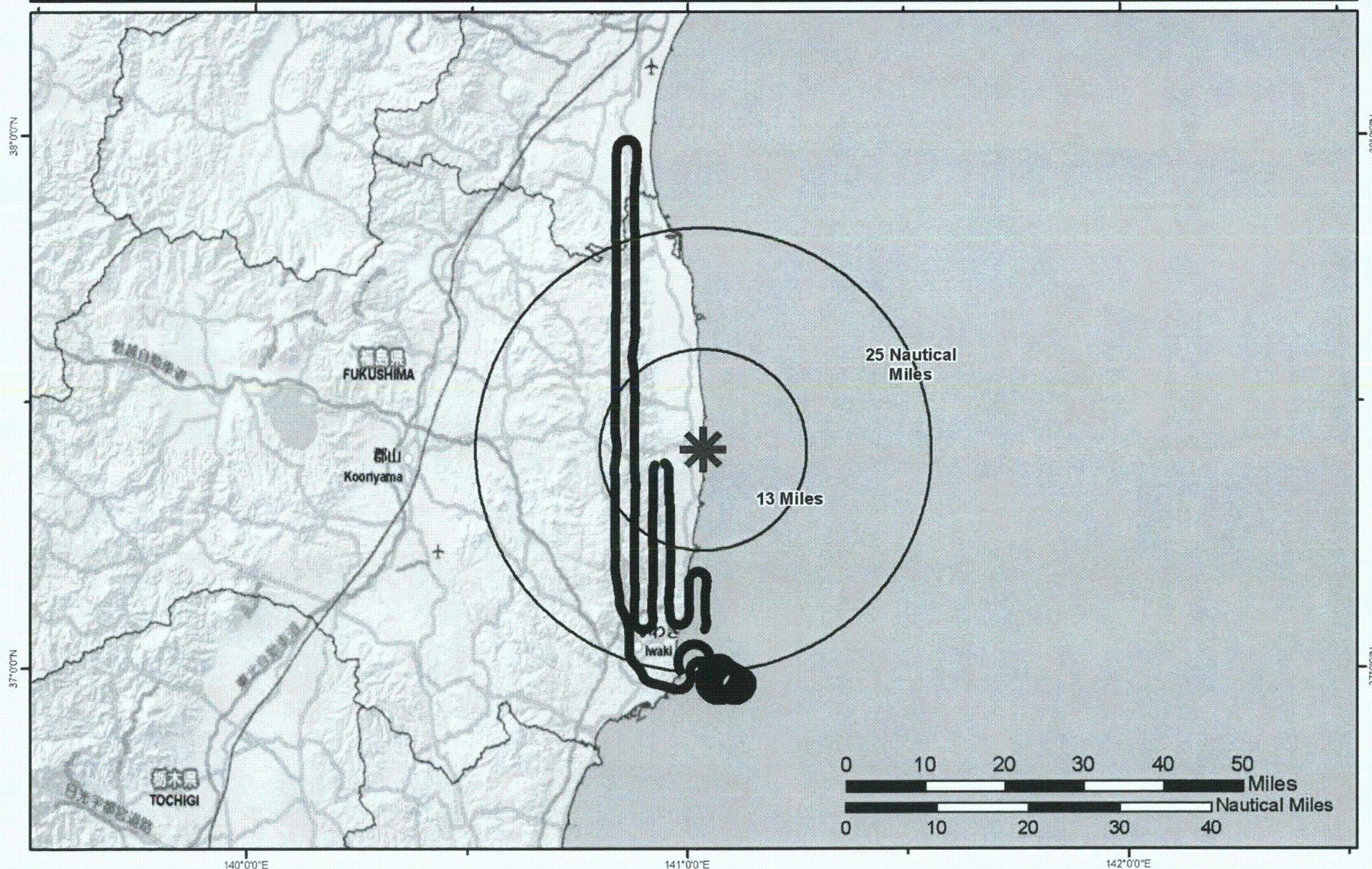






# Aerial Monitoring Path C-12 Flight

FUKUSHIMA DAIICHI  
JAPAN

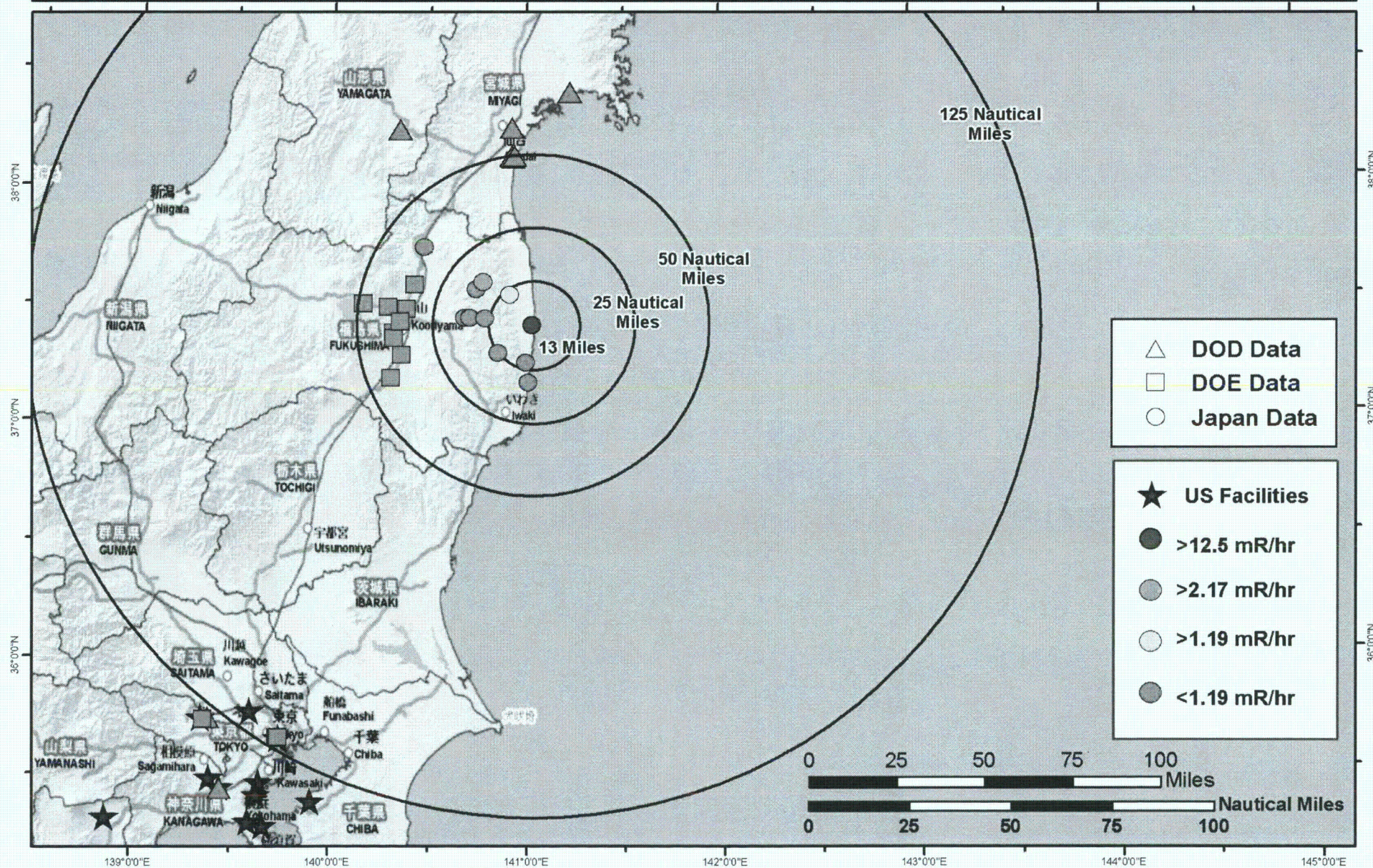


Map created on 03252011 1625 JST  
Name: NIT C-12\_24Mar2011

UNCLASSIFIED

Nuclear Incident Team DOE NIT  
Contact (202) 586 - 8100





Map created on 03252011 1800 JST  
Name: NIT 24hrsMonitoringResults 25Mar2011NS v1

UNCLASSIFIED

Nuclear Incident Team DOE NIT  
Contact (202) 586 - 8100





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# Assessment

## **Assessment:**

- ◆ Comparison of measurements gathered 24 March to previous measurements
  - Peak exposure rates are lower in comparable areas
    - Note: reduction in exposure rate is expected as a result of radioactive decay
  - No new areas of deposition are apparent although winds since March 19<sup>th</sup> have crossed the area measured
- ◆ Precipitation from March 20-22 has both positive and negative impacts:
  - Airborne radiation is forced to the ground improving confidence that measurements are indicative of ground deposition
  - Wet soil can mask radiation emissions resulting in lower readings

## **Conclusion:**

- ◆ Radiological material has not deposited in significant quantities in the area measured since March 19<sup>th</sup>

## **Path Forward:**

- ◆ Additional measurements will refine our knowledge of radiological conditions in the area surrounding Fukushima Daiichi.

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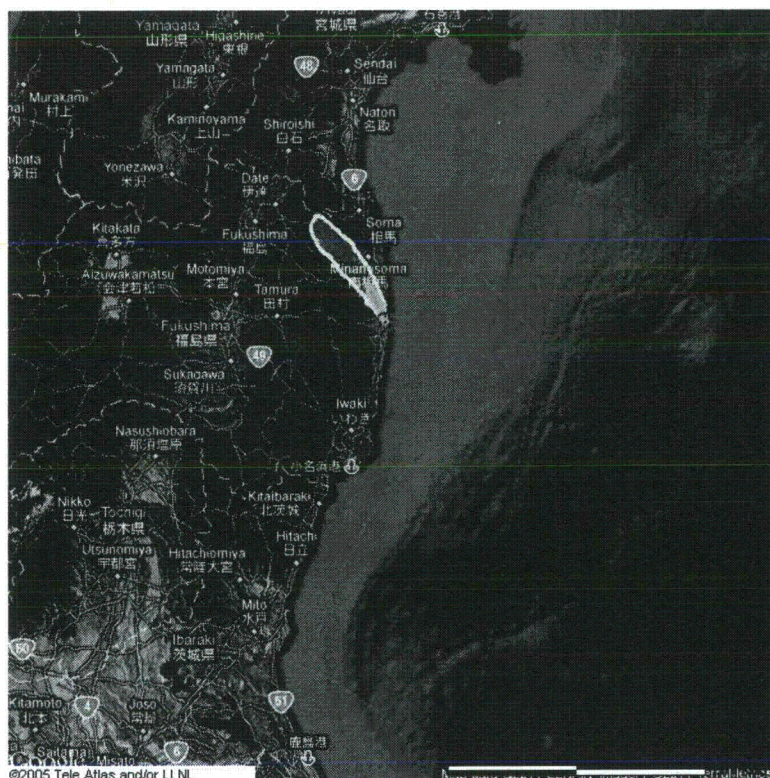




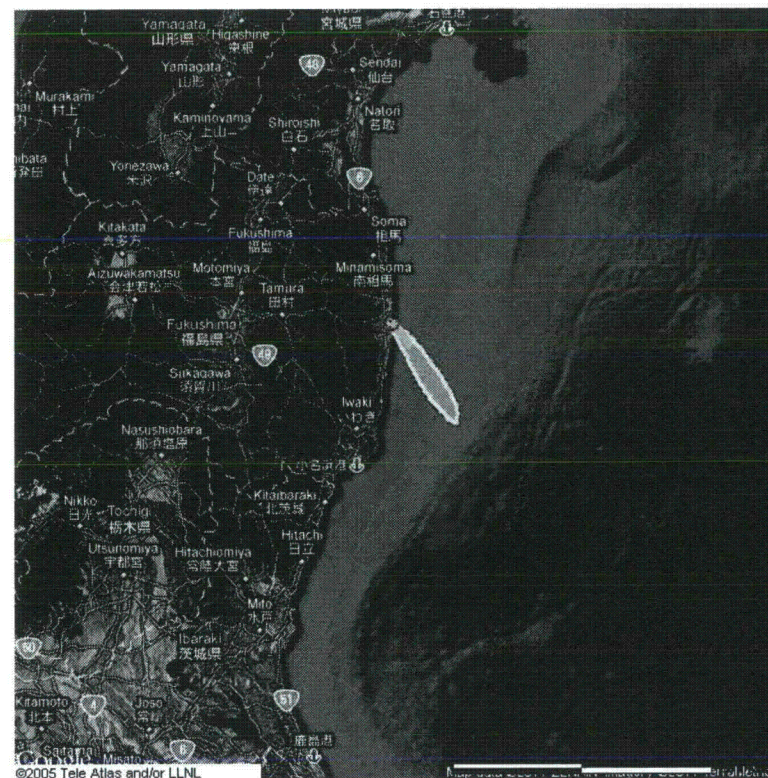
Official Use Only

# Forecasted Weather March 25-26

03/25/2011 19:00 JST

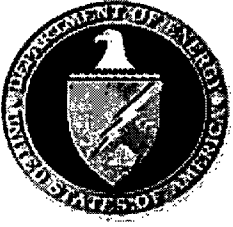


03/26/2011 07:00 JST



Official Use Only





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# Planned Operations: Next 24 Hrs

- ◆ Field Monitoring
  - AMS flight activities
    - ▣ C-12 will continue flying the area west of Fukushima Daiichi in the Tohoku Expressway Valley that indicated deposition previously
    - ▣ UH1 flying over Sendai area where Marines are stationed
  - Ground Monitoring Activities
    - ▣ 1 ground team going to the embassy
    - ▣ 2 ground teams to focus on area south of Fukushima Daiichi
- ◆ Preparation for 3<sup>rd</sup> aerial capability
  - GPU received
  - Working on receipt of 3rd aircraft
  - Flight crew in country for 3rd aircraft
- ◆ DOE participating in joint Monitoring and Assessment planning with DoD (US AFRAT)

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## **DEPARTMENT OF ENERGY SITUATION REPORT**

### **Earthquake & Tsunami in Japan**

25 March 2011

0600 (EDT) UPDATE

#### **POWER PLANT UPDATE AND OTHER NUCLEAR ISSUES**

Summary of information received as of 0600 (EDT) 25 March from the NRC, Embassy-Tokyo, IAEA Incident and Emergency Center, TEPCO, METI, NISA, Japan Atomic Industrial Forum, Nuclear Energy Institute, and media outlets. (NOTE: JST = EDT + 13 hours; EDT = GMT/UTC – 4 hours).

#### **Updates on Electrical Power Restoration Efforts:**

External power has replaced Emergency Diesel Generator power at Units 5 and 6. All reactors have a source of external power.

#### **Radiation Detection Update:**

Chief Cabinet Secretary Edano said residents located 20-30 kilometers (12-18 miles) from the Fukushima plant should prepare to evacuate voluntarily, an increase from the previous 20 kilometer (12 mile) radius. Edano said 130,000 residents in the area had been encouraged to leave to improve their quality of life, not because their health was at risk.

Per IAEA 1700 UTC March 24, radiation exposure on 3 TEPCO related workers was confirmed. They were working in the basement Unit 3 turbine building where contaminated water was on the floor. The radiation exposures of the 3 workers were 180 mSv, 179 mSv, and 173 mSv. Two of the workers had severely contaminated their feet and were transferred to the Fukushima Prefecture Medical University.

Per FEPC (0630 JST) on March 24, radiation level at the main gate (approximately 3281 feet from the Unit 2 building) was 204.5 micro Sv/hr.

#### **Revision of the Source Term:**

The NRC recommended on 24 March that the source term and the release rate should be revised from those that were previously provided to reflect updated assumptions including:

- Unit 1--assumed 70% core melt as provided by NRC and a 10% release rate/day as provided by the Japanese;
- Unit 2--assumed 33% core melt as before and a 5 in<sup>2</sup> hole in containment based on Japanese report;
- Unit 3--assumed 33% core melt as before and a 100% release rate/day based upon data provided by the Japanese.

The results should be available on March 25, 2011 as directed by the White House.

**Switching from Seawater to Fresh water:**

One train of temporary cooling equipment has been transported to Yokota Air Force Base. Plans are being made for the U.S. Navy to provide two fresh water barges to the Daiichi site. TEPCO expects to swap to freshwater injection (from the Dam source) on Units 1-3 on 3/25.

**Aerial Measurements Update:**

- ◆ Radiological material has not deposited in significant quantities in the area measured since March 19<sup>th</sup>
- ◆ Comparison of data gathered on 24 March with previous data shows that peak exposure rates have fallen (reduction in exposure rate is expected as a result of radioactive decay)
- ◆ No new areas of deposition are apparent
- ◆ Precipitation from March 20-22 has both positive and negative impacts:
  - Airborne radiation is forced to the ground improving confidence that measurements are indicative of ground deposition
  - Wet soil can mask radiation emissions resulting in lower readings
- ◆ Planned operations next 24 hours:
  - Fixed wing (C-12) will continue flying the area that indicated deposition during previous flights
  - Helo (UH-1) will continue flying over Sendai area where Marines are stationed
  - DOE is preparing for a 3<sup>rd</sup> aerial capability

**Updates by Reactor Unit**

**Fukushima Dai-ichi Unit 1 reactor (NRC priority 4):**

TEPCO reported that Unit 1 was receiving power from Unit 2 and that inspections on electrical equipment were being conducted. Increased the amount of water injection (2m<sup>3</sup>/h→18m<sup>3</sup>/h) to the Reactor Core by using water supply system in addition to water extraction system. Seawater is being injected into the reactor pressure vessel.

Per JAIF, 0600 JST 25 Mar, reactor parameters appear stable: pressure - 0.365 MPaG (depressurized); water level - 1.7 meters below the top of the fuel rods; containment vessel - 0.310MPa, spent fuel temperature remains relatively stable at 51° as of 1800 Mar 23. Reactor temperatures for Unit 1 have come down and are 230° C (down from 243° C) at the feedwater nozzle and 229° C at the bottom head.

Per the IAEA, the dose rate in the containment vessel (D/W) is 48 Sv/h and in the suppression chamber (S/C) is 29.9 Sv/h.

**Fukushima Dai-ichi Unit 2 reactor (NRC priority 3):**

Per JAIF, 06:10 JST, 25 Mar, reactor parameters appear stable: pressure - 0.020 MPaG (depressurized); water level - 1.1 meters below the top of the fuel rods; containment vessel - 0.107 MPa. Seawater injection to the Reactor Pressure Vessel (RPV) continues. The dose rate of the containment vessel is 50.7 Sv/h and in the suppression chamber is 1.67 Sv/h. Reactor temperature readings were 100° C (down from 102° C) at the feedwater nozzle and 105° C (down from 109° C) at the bottom head. SFP water temperature is 28C.

**Fukushima Dai-ichi Unit 3 reactor (NRC priority 1):**

Lighting was recovered in the Central Operation Room. (22:43 March 22nd); and seawater is being injected into the reactor pressure vessel as of 8:00am March 23rd. Per METI, technicians are working to attach fire hoses to the spent fuel pool's built-in coolant pipes and to fix a separate pump to circulate fresh water inside the reactor core.

Per JAIF, 0610 JST, 25 Mar, reactor pressure 0.038MPaG (A) -0.097 MPaG (B), reactor water level 1.9 m (A) 2.3 m (B) below the top of the fuel rods, containment vessel 0.107MPaabs.

On March 24th, it was confirmed by TEPCO that three workers from non-TEPCO companies who were in charge of cable laying work in the basement and 1st floor of the turbine building were exposed to a radiation dose of more than 170 mSv. Two out of three workers were hospitalized as it was confirmed that their legs (skin) were contaminated.

**Fukushima Dai-ichi Unit 4 reactor (NRC priority 2):**

Situation of Water Injection and Water Spray

TEPCO reported that off-site power recovery work was completed and that inspections on electrical equipment are being conducted. NISA, 1800 JST on March 23, water spray of around 150t of water using Concrete Pump Truck (50t/h) to the Unit 4 was started. Per METI, Technicians are aiming to attach fire hoses to the pool's built-in coolant pipes by Friday, March 25.

**Fukushima Dai-ichi Unit 5 reactor (NRC priority 5):**

Per JAIF (06:00 JST 3/25) spent fuel pool water temp 49.3°C , Reactor Pressure Vessel water temp 65.8°C. Water level in the reactor is 1.846 meters above the top of the fuel. As a result of restarting the Residual Heat Removal (RHR) pump (C), the Spent Fuel Pool is being maintained at 45.1.0°C. The temperature of the reactor vessel is 71.4°C. Power was switched to off-site power.

**Fukushima Dai-ichi Unit 6 reactor (NRC priority 6):**

The NISA as of March 24 at 0500 (JST): The reactor is in cold shutdown with a pressure in the Reactor vessel of 0.109 MPa. Water level in the reactor is 2.397 meters above the top of the fuel. The SFP temperature is currently 23.5.0°C. The RPV temperature is 24.1C. Power was switched from the diesel generator to off-site power.

### **Other Information**

#### **Media Reports**

Media sources report that passengers from Japan set off radiation detectors upon arrival in Beijing and Chicago. The media is also reporting that cesium was found in a vegetable grown in Tokyo for the first time, in amounts exceeding legal limits. (Source NHK)

#### **Maritime Monitoring**

The US Coast Guard has implemented additional protocols for vessels transiting within 50 miles of the Fukushima Daiichi reactors in Japan. For vessels only, USCG will perform additional screening prior to entry into a US port in accordance with current protocols and captain of the Port authority. USCG will follow longstanding resolution protocols for any radiation detection readings.

#### **Requests for US Assistance**

NRC is coordinating with the State Department to provide the US Ambassador the plume analysis to share with the Japanese government.

METI was especially interested in the radiation hardened camera, which they said is urgently needed. In general, METI identified remote monitoring and debris removal as priority areas of need. The GOJ will review the report and develop a formal request which will be handled through the Crisis Management Team.

We are looking to OSD to provide a small cell to the DART -- which would have a DOE technical advisor--to help facilitate with any logistics of items that would need to go into Japan or be moved around Japan to deal with the Japanese reactor crisis. Logistical support may be just to facilitate private companies donating/providing items or, in some cases, it may mean USFJ transport assistance or liaison. AID (DART) feels they lack the capacity and technical skills to perform this function and it is clearly not in the comfort zone of NRC.

### **CONTACTS WITH JAPANESE OFFICIALS**

Per JECS 23, MOD reported Prime Minister Hosno expressed strong interest in accepting all offers of robotic technology that could be put to use, as well as protective gear that had been offered. While Japan has iodine stockpiles Hosno noted that more could be needed. He thanked DOE for its report on robotic and remote systems that could be made available and said Japan would provide a list of specific needs. METI noted the

value of the reports timeline and the importance of equipment for remote monitoring, debris removal, and of radiation-hardened camera.

Per JECS 23, the NRC urged Japan not to delay the change from seawater to freshwater at the plant, emphasizing the importance of addressing salt water accumulation in reactor cooling systems. NRC noted the agreement of the NRC, DOE, NR, GE, and INPO that salt water accumulation should be addressed as a priority. In light of TEPCOs report of damage to the power supply to pumps that could bring fresh water from nearby dam to the plant, the US reiterated its offer to procure a barge to deliver fresh water to the Fukushima site and to provide water pumping system (now at Yokota AB).

#### **QUESTIONS BEING WORKED:**

DOE had a meeting with METI and industry representatives on potential DOE robotic and remote systems assistance. The Japanese stated their immediate priority was site mapping and surveillance to characterize the site for remediation. DOE is processing the data request.

#### **CONTACT INFORMATION:**

**Nuclear Incident Team in the Emergency Operations Center**  
**(NITOPS@NNSA.DOE.GOV) - 202-586-8100**

**Office of the Deputy Secretary 202-586-5500**

#### **Watch Schedule:**

Keith LeChien            0400/25 Mar – 0800/25 Mar  
Karyn Durbin  
Sal Golub

Dave Huizenga           1600/25 Mar – 2000/25 Mar  
Heather Looney  
Rebecca Smith-Kevern



Filename Serial	Time Serial	TRIAGE EVENT	TRIAGE SUBMISSION	TRIAGE REPORT	FOLDERNAME
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	3	2 TE-11-0208	3/21/2011	3/22/2011	Japan_Spectra_2
	2	3 TE-11-0208	3/21/2011	3/22/2011	Japan_Spectra_2
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	34	5 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	35	6 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
	6	7 TE-11-0208	3/21/2011	3/22/2011	Saved_Spectra_17
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2011_03_22_15_36_050.spc	AMS Instrument	Highways	22-Mar	15:54
2011_03_22_18_14_120.spc	AMS Instrument	Highways	22-Mar	15:57
2011_03_22_16_43_510.spc	AMS Instrument	Highways	22-Mar	16:26
2011_03_22_17_35_500.spc	AMS Instrument	Highways	22-Mar	17:18
2011_03_23_15_00_130.spc	AMS Instrument	Highways	23-Mar	14:24
2011_03_23_16_33_020.spc	AMS Instrument	Highways	23-Mar	15:42

Spectrum DUR-Secs	DATA/ NONDATA	Analyst 1	Analyst 2	Method	Not Avail=1.0	RELATIVE NUCLIDE ACT	
					I-131	I-132	I-133
1148	DATA	Casson	Wimer	GADRAS	1.90E+01	2.41E+00	1.00E+00
1101	DATA	Casson	Wimer	GADRAS	1.23E+01	1.91E+00	9.40E-01
1065	DATA	Casson	Wimer	GADRAS	2.47E+01	2.63E+00	1.34E+00
300	DATA	Casson	Wimer	GADRAS	1.68E+01	2.10E+00	
300	DATA	Casson	Wimer	GADRAS	7.10E+00	3.60E+00	
300	DATA	Casson	Wimer	GADRAS	7.80E+00	3.10E+00	
1000	DATA	Casson	Wimer	GADRAS	1.75E+01	3.08E+00	1.40E+00
1000	DATA	Casson	Wimer	GADRAS	1.72E+01	2.69E+00	1.00E+00
1000	DATA	Casson	Wimer	GADRAS	1.53E+01	2.58E+00	
1000	DATA	Casson	Wimer	GADRAS	1.41E+01	2.45E+00	
1000	DATA	Casson	Wimer	GADRAS	1.31E+01	2.35E+00	6.00E-01
1000	DATA	Casson	Wimer	GADRAS	1.72E+01	2.74E+00	6.00E-01
223	DATA	Casson	Wimer	GADRAS	5.64E+01	7.53E+01	3.50E+00
275	DATA	Casson	Wimer	GADRAS	8.86E+01	1.17E+02	5.20E+00
302	DATA	Casson	Wimer	GADRAS	1.31E+01	1.22E+01	6.00E-01
306	DATA	Casson	Wimer	GADRAS	8.30E+00	5.10E+00	2.60E-01
333	DATA	Casson	Wimer	GADRAS	7.40E+00	3.50E+00	2.70E-01
1002	DATA	Casson	Wimer	GADRAS	1.64E+01	2.61E+00	7.00E-01
1002	DATA	Casson	Wimer	GADRAS	1.61E+01	2.69E+00	8.00E-01
304	DATA	Casson	Wimer	GADRAS	1.55E+01	2.70E+00	1.10E+00
304	DATA	Casson	Wimer	GADRAS	1.73E+01	2.40E+00	6.00E-01
303	DATA	Casson	Wimer	GADRAS	1.61E+01	1.90E+00	
303	DATA	Casson	Wimer	GADRAS	1.71E+01	2.30E+00	1.30E+00
303	DATA	Casson	Wimer	GADRAS	1.56E+01	2.20E+00	
1006	DATA	Casson	Wimer	GADRAS	1.68E+01	3.10E+00	
1002	DATA	Casson	Wimer	GADRAS	1.67E+01	2.80E+00	3.00E-01
1002	DATA	Casson	Wimer	GADRAS	1.77E+01	3.10E+00	6.00E-01
1034	DATA	Casson	Wimer	GADRAS	1.75E+01	2.80E+00	5.00E-01
300	DATA	Casson	Wimer	GADRAS	1.89E+01	1.90E+00	
300	DATA	Casson	Wimer	GADRAS	1.32E+01	2.00E+00	
300	DATA	Wimer	Bounds	GADRAS	1.00E+00	1.00E-01	0.00E+00
300	DATA	Casson	Wimer	GADRAS	1.68E+01	2.40E+00	
300	DATA	Swanson	Bounds/Myer GamDes		2.98E+00	1.84E+00	
300	DATA	Swanson	Bounds/Myer GamDes		7.30E-01	7.54E-01	
300	DATA	Swanson	Bounds/Myer GamDes		4.08E+01	0.00E+00	
300	DATA	Swanson	Bounds/Myer GamDes		7.90E+01		
300	DATA	Swanson	Bounds/Myer GamDes		4.49E+01	6.41E+00	
300	DATA	Swanson	Bounds/Myer GamDes		4.60E+01		
300	DATA	Swanson	Bounds/Myer GamDes		5.05E+01		
300	DATA	Swanson	Bounds/Myer GamDes		3.19E+01	5.80E+00	
300	DATA	Swanson	Bounds/Myer GamDes		4.91E+01		
300	DATA	Swanson	Bounds/Myer GamDes		9.57E+01	1.43E+01	
300	DATA	Swanson	Bounds/Myer GamDes		7.27E+01	1.26E+01	
300	DATA	Swanson	Bounds/Myer GamDes		5.43E+01		
300	DATA	Swanson	Bounds/Myer GamDes		6.06E+01	1.40E+01	

300	DATA	Casson	Wimer	GADRAS	8.10E+00	4.90E+00	2.00E-01
300	DATA	Casson	Wimer	GADRAS	7.00E+00	3.60E+00	
300	DATA	Casson	Wimer	GADRAS	6.70E+00	2.40E+00	
807	DATA	Swanson	Wimer	GADRAS	2.04E+01	1.04E+00	0.00E+00
286	DATA	Bounds	Wimer	GADRAS	1.08E+00	2.77E-01	1.94E-03
730	DATA	Bounds	Wimer	GADRAS	3.45E+00	9.24E-01	4.62E-03
802	DATA	Bounds	Wimer	GADRAS	1.75E+00	1.01E+00	1.52E-02
580	DATA	Bounds	Wimer	GADRAS	3.19E+00	2.43E+00	3.16E-02
759	DATA	Bounds	Wimer	GADRAS	1.63E+00	1.20E+00	1.57E-02
891	DATA	Bounds	Wimer	GADRAS	1.43E+01	6.33E+00	5.07E-02
138	DATA	Bounds	Wimer				
165	DATA	Bounds	Wimer				
1041	DATA	FILES WAITING					
927	DATA	FILES WAITING					
813	DATA	FILES WAITING					
992	DATA	Bounds	Wimer	GADRAS	7.03E+01	1.89E+01	2.11E-01
756	DATA	Bounds	Wimer	GADRAS	6.20E+02	2.40E+02	
968	DATA	Bounds	Wimer	GADRAS	1.25E+02	3.74E+01	2.50E-01
530	DATA	Wimer	Bounds	GADRAS	2.64E+01	7.64E+00	7.91E-02
534	DATA	Wimer	Bounds	GADRAS	5.67E+01	1.39E+01	3.40E-01



ACTIVITY AT ASSAY (ARBITRARY UNITS)---NO DECAY CORRECTIONS PERFORMED

Te-129	Te-129m	Te-132	Cs-134	Cs-136	Cs-137	La-140	Mo-99	Tc-99m
		2.30E+00	5.20E-01					
		2.10E+00	5.60E-01					
		2.30E+00	5.20E-01					
		2.50E+00	9.00E-01					
		4.80E+00	1.33E+00					
		3.50E+00	7.00E-01					
		2.70E+00	9.60E-01					
		2.50E+00	8.50E-01					
		1.80E+00	7.90E-01					
		2.30E+00	6.70E-01					
		2.00E+00	8.50E-01					
		2.60E+00	7.30E-01					
		6.95E+01	2.73E+01					
		9.46E+01	4.52E+01					
		1.34E+01	3.50E+00					
		6.00E+00	1.38E+00					
		4.30E+00	8.30E-01					
		2.60E+00	7.50E-01					
		1.60E+00	7.80E-01					
		3.60E+00	9.00E-01					
		1.90E+00	6.00E-01					
		1.90E+00	8.00E-01					
		3.10E+00	8.00E-01					
		2.70E+00	4.00E-01					
		2.70E+00	9.00E-01					
		2.50E+00	6.00E-01					
		2.90E+00	7.00E-01					
		2.50E+00	9.00E-01					
		1.90E+00	8.00E-01					
		2.10E+00	6.00E-01					
0.00E+00	0.00E+00	1.40E-01	5.00E-02	0.00E+00	5.00E-02	0.00E+00		
		2.20E+00	5.00E-01					
		2.34E+00	4.97E-01		2.14E+00	0.00E+00		
		1.18E+00	2.47E-01	4.83E-02	2.05E-01	0.00E+00		
		6.81E+00			4.54E+00	0.00E+00		
						0.00E+00		
		8.55E+00			8.55E+00	0.00E+00		
						0.00E+00		
						0.00E+00		
		5.80E+00	1.45E+00		1.45E+00	0.00E+00		
						0.00E+00		
		9.57E+00			4.78E+00	0.00E+00		
		6.32E+00				0.00E+00		
						0.00E+00		
		9.32E+00				0.00E+00		

		5.80E+00	1.90E+00			
		4.70E+00	1.40E+00			
		3.70E+00	1.10E+00			
6.11E-01	7.13E-01	1.32E+00	4.89E-01	8.14E-02	4.48E-01	2.04E-02
3.10E-04	3.10E-05	2.85E-06	5.13E-08	2.57E-10	5.13E-12	5.13E-15
6.01E-04	6.07E-05	1.18E-05	2.71E-07	8.12E-10	1.79E-11	1.79E-14
5.20E-03	1.10E-03	2.41E-04	4.83E-06	1.93E-08	4.63E-10	4.63E-13
1.33E-02	3.20E-03	1.84E-03	5.14E-05	2.06E-07	6.99E-09	6.99E-12
7.42E-03	2.38E-03	1.70E-03	6.96E-05	4.18E-07	1.84E-08	1.84E-11
1.25E-02	1.73E-03	4.90E-04	1.67E-05	1.00E-07	3.40E-09	0.00E+00

		1.91E+01	1.02E+01	1.76E+00	9.42E+00	4.92E-01
		3.20E+02	1.87E+02	2.67E+01	1.49E+02	6.20E+00
		3.75E+01	2.51E+01	3.75E+00	2.21E+01	1.00E+00
3.14E+00	2.03E+00	2.85E+00	1.13E+00	1.32E-01	1.29E+00	
1.05E+01	9.53E+00	1.49E+01	9.98E+00	1.64E+00	8.79E+00	1.13E-01

## NON-VOLATILE SPECIES

Zr-95      Nb-95      Ce-143      Nd-147

## DEFN=1.0 NUCLEIDE ACTIVITY RATIO VERSUS I-131 AT AS

I-131	I-132	I-133	Te-129	Te-129m
1.00E+00	1.27E-01	5.26E-02	0.00E+00	0.00E+00
1.00E+00	1.55E-01	7.64E-02	0.00E+00	0.00E+00
1.00E+00	1.06E-01	5.43E-02	0.00E+00	0.00E+00
1.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	5.07E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	3.97E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	1.76E-01	8.00E-02	0.00E+00	0.00E+00
1.00E+00	1.56E-01	5.81E-02	0.00E+00	0.00E+00
1.00E+00	1.69E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	1.74E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	1.79E-01	4.58E-02	0.00E+00	0.00E+00
1.00E+00	1.59E-01	3.49E-02	0.00E+00	0.00E+00
1.00E+00	1.34E+00	6.21E-02	0.00E+00	0.00E+00
1.00E+00	1.32E+00	5.87E-02	0.00E+00	0.00E+00
1.00E+00	9.31E-01	4.58E-02	0.00E+00	0.00E+00
1.00E+00	6.14E-01	3.13E-02	0.00E+00	0.00E+00
1.00E+00	4.73E-01	3.65E-02	0.00E+00	0.00E+00
1.00E+00	1.59E-01	4.27E-02	0.00E+00	0.00E+00
1.00E+00	1.67E-01	4.97E-02	0.00E+00	0.00E+00
1.00E+00	1.74E-01	7.10E-02	0.00E+00	0.00E+00
1.00E+00	1.39E-01	3.47E-02	0.00E+00	0.00E+00
1.00E+00	1.18E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	1.35E-01	7.60E-02	0.00E+00	0.00E+00
1.00E+00	1.41E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	1.85E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	1.68E-01	1.80E-02	0.00E+00	0.00E+00
1.00E+00	1.75E-01	3.39E-02	0.00E+00	0.00E+00
1.00E+00	1.60E-01	2.86E-02	0.00E+00	0.00E+00
1.00E+00	1.01E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	1.52E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	1.00E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	1.43E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	6.17E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	1.03E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	1.43E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	1.82E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	1.50E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	1.74E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+00	2.31E-01	0.00E+00	0.00E+00	0.00E+00

1.00E+00	6.05E-01	2.47E-02	0.00E+00	0.00E+00
1.00E+00	5.14E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	3.58E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	5.10E-02	0.00E+00	3.00E-02	3.50E-02
1.00E+00	2.57E-01	1.80E-03	2.88E-04	2.88E-05
1.00E+00	2.68E-01	1.34E-03	1.74E-04	1.76E-05
1.00E+00	5.77E-01	8.66E-03	2.97E-03	6.26E-04
1.00E+00	7.62E-01	9.91E-03	4.16E-03	1.00E-03
1.00E+00	7.41E-01	9.63E-03	4.57E-03	1.46E-03
1.00E+00	4.42E-01	3.54E-03	8.70E-04	1.21E-04
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
1.00E+00	2.69E-01	3.00E-03	0.00E+00	0.00E+00
1.00E+00	3.87E-01	0.00E+00	0.00E+00	0.00E+00
1.00E+00	2.99E-01	2.00E-03	0.00E+00	0.00E+00
1.00E+00	2.90E-01	3.00E-03	1.19E-01	7.70E-02
1.00E+00	2.45E-01	6.00E-03	1.85E-01	1.68E-01
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

# SAY---NO DECAY CORRECTIONS PERFORMED

**NON-VOLATILE SPECIE:**

Te-132	Cs-134	Cs-136	Cs-137	La-140	Mo-99	Tc-99m	Zr-95	Nb-95
1.21E-01	2.74E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.71E-01	4.55E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.31E-02	2.11E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.49E-01	5.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.76E-01	1.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.49E-01	8.97E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.54E-01	5.49E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.45E-01	4.94E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.18E-01	5.16E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.63E-01	4.75E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.53E-01	6.49E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.51E-01	4.24E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.23E+00	4.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.07E+00	5.10E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.02E+00	2.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.23E-01	1.66E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.81E-01	1.12E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.59E-01	4.57E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.94E-02	4.84E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.32E-01	5.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.10E-01	3.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.18E-01	4.97E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.81E-01	4.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.73E-01	2.56E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.61E-01	5.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.50E-01	3.59E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.64E-01	3.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.43E-01	5.14E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.01E-01	4.23E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.59E-01	4.55E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.40E-01	5.00E-02	0.00E+00	5.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.31E-01	2.98E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.83E-01	1.67E-01	0.00E+00	7.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.61E+00	3.39E-01	6.61E-02	2.81E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.67E-01	0.00E+00	0.00E+00	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.90E-01	0.00E+00	0.00E+00	1.90E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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1.82E-01	4.55E-02	0.00E+00	4.55E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E-01	0.00E+00	0.00E+00	5.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.54E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

[illegible]



**S**

[illegible]

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#DIV/0!	#DIV/0!
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0.00E+00	0.00E+00
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#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!

**From:** Richard L. Garwin  
**To:** Binkley, Steve  
**Cc:** Brinkman, Bill; Hurlbut, Brandon; Sheron, Brian; Poneman, Daniel; "harold.mcfarlane@inl.gov"; Adams, Ian; (b)(6); Kelly, John E (NE); "john.grossenbacher@inl.gov"; Owens, Missy; "peterson@nuc.berkeley.edu"; Lyons, Peter; "phillip.finck@inl.gov"; (b)(6); "D.Budnitz@inl.gov"; "ronaldo.szilard@inl.gov"; SCHU; Aoki, Steven; Kuchin, Steven; (b)(6); DAgestino, Thomas  
**Subject:** Garwin comments of Science Group call of 03/24. To Binkley list of 03/24.  
**Date:** Friday, March 25, 2011 11:31:51 AM

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Some observations by Dick Garwin:

1. GET DATA ON VENTING AS IT HAPPENS. I believe it was John Kelly who said that if one watched Japanese TV one could hear a statement from TEPCO that they were about to vent, and there would be a TV image of the accompanying "white smoke" (steam). It would be very valuable to us all to have this information in the next report rather than "3 days later." There must be millions of Japanese people at home, glued to their TV, a few of whom could be asked/paid to send an email or IM or twitter recounting the venting statement. That way we would have redundant, timely reporting that could be provided in a section of the 12-hr SITREP or elsewhere.

2. DETAILS OF HARDENED VENT PIPE. We have heard of the "hardened vent pipe" to the plant stack. Could we have details of that, please, as well as of any filters in the stack? Bob Budnitz and I were two of the authors of the 1975 Report to the American Physical Society of the study group on light-water-reactor safety, [ [http://rmp.aps.org/pdf/RMP/v47/iS1/pS1\\_1](http://rmp.aps.org/pdf/RMP/v47/iS1/pS1_1) ] as was Frank von Hippel, who just published an OpEd in the New York Times [ <http://www.nytimes.com/2011/03/24/opinion/24VonHippel.html> ]. On page S110 of the Report we find,

**Similarly, in PWR accidents where the containment might fail due to melt-through by the core, rather than by overpressure, the total fission product release is assumed to be reduced greatly as a result of the filtering action of the soil (Draft WASH-1400, Appendix V).**

**These possible effects suggest that emphasis be placed on containment designs which ensure that, in case of containment failure, fission products would be scrubbed and/or filtered before their release. Thus, for example, a BWR containment might be designed to fail in a controlled way via pressure release valves which vented from the pressure-suppression pool or through large stabilized-bed filters. The remaining gases could then be filtered through the standby gas treatment system.**

The von Hippel OpEd states, "Even before Three Mile Island, a group of nuclear engineers had proposed that filtered vents be attached to buildings around reactors, which are intended to contain the gases released from overheated fuel. If the pressure inside these containment buildings increased dangerously — as has happened repeatedly at Fukushima — the vents would release these gases after the filters greatly reduced their radioactivity. France and Germany installed such filters in their plants, but the Nuclear Regulatory Commission declined to require them. Given the influence of America's example, had the commission demanded the addition of filtered vents, they would likely have been required worldwide, including in Japan."

CH/349

Perhaps TEPCO has installed such filters. Does any of the Science Group know?  
Can we provide some expedient filters that will handle the temperature and heat load?

3. MOVING FLUIDS BY PUMPING OR VALVING AIR. We mentioned moving fluids by periodically pressurizing containments or other vessels. This requires pipe access to the fluid to be moved. A generic pump of this kind would be a tank with an inlet valve and an outlet valve, with air space above the fluid. Closing the outlet valve, opening the inlet valve and venting the air (through a filter) would allow the pump volume to be largely filled with fluid. Closing the inlet, opening the outlet and pumping air into the head space would expel the fluid. If the fluid evolves hydrogen, then nitrogen should be used for pressurizing.

4. PREPARING FOR MASSIVE REPLUMBING. In the control of the Macondo well at 5000-ft water depth, remotely operated vehicles (ROV) were essential. But so were the ingenious and powerful hydraulically powered wrenches, not much bigger than the massive bolts and nuts they were to unscrew or reinsert. Our labs, industry, and counterparts on the Japanese side should amass and test this capability, together with waterjet cutters and other tools suitable for remote operation. It might even be desirable to bore holes through concrete containment under modest internal pressure, without leaking much of the contents.

I believe that that sort of operation is routine in the oil industry-- with structures under much higher pressure. Perhaps a US-Japanese technical working group could be created for this task.

5. MITIGATING CORROSION FROM SALT. In addition to the super-important impact of massive salt accumulation on the ability to cool the reactor, there was early recognition of the corrosive effects of salt. A note from a retired Canadian engineer experienced in both nuclear power and desalination is attached. Most of this we know and are acting on, but I was ignorant of the zirconium corrosion hazard. I pass this to those in contact with our experts, for whatever new it may add.

**From:** Richards, Stuart  
**To:** Sheron, Brian  
**Cc:** Case, Michael; Hogan, Rosemary; Graves, Herman; Gibson, Kathy  
**Subject:** FW: NUREG/CR-6920  
**Date:** Friday, March 25, 2011 11:35:57 PM

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Brian

As Herman notes below, NUREG/CR-6920 is cited by Ed Lyman in a Time magazine website article from earlier in the week. This might be the source of the question that you got today on your conference call.

fyi  
Stu

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**From:** Graves, Herman  
**Sent:** Friday, March 25, 2011 6:49 PM  
**To:** Richards, Stuart  
**Cc:** Hogan, Rosemary; Case, Michael  
**Subject:** RE: NUREG/CR-6920

Stu,

This is the Times article that may be the source of the inquiry (title of NUREG/CR-6920 is cited in the 2nd to the last paragraph of article).

<http://www.time.com/time/world/article/0,8599,2058700,00.html>

<<Herman>>  
<<301.251.7625>>  
mail to: Herman.Graves@nrc.gov<<mailto:Herman.Graves@nrc.gov>>

**From:** Richards, Stuart  
**Sent:** Friday, March 25, 2011 6:03 PM  
**To:** Sheron, Brian  
**Cc:** Gibson, Kathy; Case, Michael; Hogan, Rosemary; Graves, Herman  
**Subject:** RE: NUREG/CR-6920

Brian

We'll work with DSA on Monday.

Stu

**From:** Gibson, Kathy  
**Sent:** Friday, March 25, 2011 6:01 PM  
**To:** Sheron, Brian; Richards, Stuart  
**Cc:** Case, Michael; Schaperow, Jason; Tinkler, Charles  
**Subject:** RE: NUREG/CR-6920

I asked Jason and Charlie to get with DE next week and let us know.

[cid:image001.jpg@01CBEB1D.6F8865E0]

**From:** Sheron, Brian  
**Sent:** Friday, March 25, 2011 6:00 PM

CH/350

To: Richards, Stuart  
Cc: Gibson, Kathy; Case, Michael; Schaperow, Jason  
Subject: RE: NUREG/CR-6920

Do we still agree with the probability numbers in your third bullet based on what we learned from SOARCA?

From: Richards, Stuart  
Sent: Friday, March 25, 2011 5:54 PM  
To: Sheron, Brian  
Cc: Gibson, Kathy; Case, Michael  
Subject: NUREG/CR-6920

Brian

A quick look at NUREG/CR-6920 indicates the following preliminary information:

- The purpose of 6920 was to look at the impact of assumed degradation of the containment on the probability of containment failure. For instance, 6920 assumed cases of 25% or 50% corrosion of various locations within the containment as part of the study. The study looked at both PWRs and BWRs.
- 6920 used information from NUREG-1150 as a starting point.
- NUREG-1150 estimates about a 56% probability of early containment failure at Peach Bottom (Mark I containment) from all scenarios, and about a 36% probability from a direct melt-through of the containment once the core has breached the RPV. These numbers are relatively consistent with the 6920 numbers. 6920 concluded that the corrosion scenarios don't impact the numbers much because the probability is so dominated by the core melt through scenario.
- NUREG-1150 lists station blackout as the dominant risk.

Note that the probability of a melt-through of containment assumes a breach of the RPV. I think it also assumes a fairly quick accident progression, so the fact that the Japanese event started two weeks ago may impact the probability of containment failure.

We can provide more info on Monday.

Stu



**From:** Anthony Buhl  
**To:** ~~Sheron, Brian~~  
**Subject:** (b)(5)  
**Date:** Friday, March 25, 2011 12:10:02 PM  
**Attachments:** photo.JPG  
ATT00001.txt

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CH/351

(b)(5)

Sent from my iPhone

**From:**

OST02.HOC

**To:**

Abrams, Charlotte; Abu-Eid, Bobby; Adams, John; Afshar-Tous, Mugeh; Ahn, Hosung; Alemu, Bezakulu; Algama, Don; Alter, Peter; Anderson, Brian; Anderson, James; Arndt, Steven; Arribas-Colon, Maria; Ashkeboussi, Nima; Athey, George; Baker, Stephen; Ballam, Nick; Barnhurst, Daniel; Barr, Cynthia; Barss, Dan; Bazian, Samuel; Bens, Michelle; Bergman, Thomas; Berry, Rollee; Bhachu, Ujagar; Bloom, Steven; Blount, Tom; Boger, Bruce; Bonnette, Cassandra; Borchardt, Bill; Bowers, Anthony; Bowman, Gregory; Boyce, Tom (RES); Brandon, Lou; Brandt, Philip; Brenner, Eliot; Brock, Kathryn; Brown, Cris; Brown, David; Brown, Eva; Brown, Frederick; Brown, Michael; Bukharin, Oleg; Burnell, Scott; Bush-Goddard, Stephanie; Campbell, Stephen; Camper, Larry; Carpenter, Cynthia; Carter, Mary; Case, Michael; Casto, Greg; Cecere, Bethany; Cervera, Margaret; Chazell, Russell; Chen, Yen-Ju; Cheok, Michael; Chokshi, Niles; Chowdhury, Prosanta; Chung, Donald; Circle, Jeff; Clement, Richard; Clinton, Rebecca; Coggins, Angela; Collins, Frank; Cool, Donald; Correia, Richard; Corson, James; Costa, Arlon; Couret, Ivonne; Craffey, Ryan; Crutchley, Mary Glenn; Cruz, Zahira; Cuadrado, Leira; Dacus, Eugene; DeCicco, Joseph; Decker, David; Dembek, Stephen; Devlin, Stephanie; Dimmick, Lisa; Doane, Margaret; Dorman, Dan; Dorsey, Cynthia; Dozier, Jerry; Drake, Margaret; Drogitis, Spiros; Dube, Donald; Dudes, Laura; Eads, Johnny; Emche, Danielle; Englich, Lance; Erlanger, Craig; Esmaili, Hossein; Figueroa, Roberto; Fiske, Jonathan; Flanders, Scott; Flannery, Cindy; Floyd, Daphene; Foggie, Kirk; Foster, Jack; Fragoyannis, Nancy; Franovich, Rani; Frazier, Alan; Freshman, Steve; Fuller, Edward; Galletta, Thomas; Gambone, Kimberly; Gardocki, Stanley; Gartman, Michael; Gibson, Kathy; Glitter, Joseph; Gilmer, James; Glenn, Nichole; Gordon, Dennis; Gott, William; Grant, Jeffery; Greenwood, Carol; Greenwood, Carol; Grimes, Kelly; Grobe, Jack; Gross, Allen; Gulla, Gerald; Hale, Jerry; Hardesty, Duane; Hardin, Kimberly; Hardin, Leroy; Harrington, Holly; Harris, Tim; Harrison, Donnie; Hart, Ken; Hart, Michelle; Harvey, Brad; Hasselberg, Rick; Hayden, Elizabeth; Helton, Donald; Henderson, Karen; Hiland, Patrick; Holahan, Patricia; Holahan, Vincent; Holian, Brian; HOO Hoc; Horn, Brian; Howard, Tabitha; Huffert, Anthony; Hurd, Sapna; Huyck, Doug; Imboden, Andy; Isom, James; Jackson, Karen; Jacobson, Jeffrey; Jerve, Richard; Jessie, Janelle; Johnson, Michael; Jolicoeur, John; Jones, Andrea; Jones, Cynthia; Jones, Henry; Kahler, Carolyn; Kammerer, Annie; Karas, Rebecca; Kauffman, John; Khan, Omar; Kolb, Timothy; Kotzalas, Margie; Kowalczyk, Jeffrey; Kratchman, Jessica; Kugler, Andrew; Lamb, Christopher; Lane, John; Larson, Emily; Laur, Steven; LaVie, Steve; Lewis, Robert; Li, Yong; Lichatz, Taylor; Lising, Jason; Lombard, Mark; Lubinski, John; Lui, Christiana; Lukes, Kim; Lynch, Jeffery; Ma, John; Mamish, Nader; Manahan, Michelle; Marksberry, Don; Marshall, Jane; Masao, Nagai; Maupin, Cardelia; Mayros, Lauren; Mazaika, Michael; McConnell, Keith; McCoppin, Michael; McDermott, Brian; McGinty, Tim; McGovern, Denise; McIntyre, David; McMurtry, Anthony; Merritt, Christina; Meyer, Karen; Miller, Charles; Miller, Chris; Milligan, Patricia; Miranda, Samuel; Mohseni, Aby; Moore, Scott; Morlang, Gary; Morris, Scott; Mroz (Sahm), Sara; Munson, Clifford; Murray, Charles; Nerret, Amanda; Nguyen, Caroline; Norris, Michael; Norton, Charles; Opara, Stella; Ordaz, Vonna; Owens, Janice; Padovan, Mark; Parillo, John; Patel, Jay; Patel, Pravin; Patrick, Mark; Perin, Vanice; Pope, Tia; Powell, Amy; Purdy, Gary; Quinlan, Kevin; Raddatz, Michael; Ragland, Robert; Ralph, Melissa; Ramsey, Jack; Reed, Elizabeth; Reed, Sara; Reed, Wendy; Reeves, Rosemary; Reis, Terrence; Resner, Mark; Riley (OCA), Timothy; Riner, Kelly; Rini, Brett; Robinson, Edward; Rodriguez-Luccioni, Hector; Roggenbrodt, William; Ropon, Kimberly; Rosales-Cooper, Cindy; Rosenberg, Stacey; Ross-Lee, MaryJane; Roundtree, Amy; Ruland, William; Russell, Tonya; Ryan, Michelle; Salay, Michael; Salter, Susan; Salus, Amy; Sanfilippo, Nathan; Santos, Daniel; Scarbrough, Thomas; Schaperow, Jason; Schmidt, Duane; Schmidt, Rebecca; Schoenebeck, Greg; Schrader, Eric; Schwartzman, Jennifer; Seber, Dogan; See, Kenneth; Shane, Raeann; Shea, James; Shepherd, Jill; Sheron, Brian; Skarda, Raymond; Skeen, David; Sloan, Scott; Smirardo, Elizabeth; Smith, Brooke; Smith, Stacy; Smith, Theodore; Stahl, Eric; Stang, Annette; Stark, Johnathan; Steger (Tucci), Christine; Stieve, Alice; Stone, Rebecca; Stransky, Robert; Sturz, Fritz; Sullivan, Randy; Summers, Robert; Sun, Casper; Tappert, John; Tegeler, Bret; Temple, Jeffrey; Thaggard, Mark; Thomas, Eric; Thorp, John; Tiruneh, Nebiyu; Tobin, Jennifer; Trefethen, Jean; Tschiltz, Michael; Turtill, Richard; Uhle, Jennifer; Valencia, Sandra; Vaughn, James; Vick, Lawrence; Virgilio, Martin; Virgilio, Rosetta; Ward, Leonard; Ward, William; Wastler, Sandra; Watson, Bruce; Webber, Robert; Weber, Michael; White, Bernard; Wiggins, Jim; Williams, Donna; Williams, Joseph; Williamson, Linda; Willis, Dori; Wimbush, Andrea; Wittick, Brian; Wray, John; Wright, Lisa (Gibney); Wright, Ned; Wunder, George; Young, Francis; Zimmerman, Jacob; Zimmerman, Roy

**Subject:**

Suspending the PMTR GIS Analyst & PMTR Meteorologist Positions...

**Date:**

Friday, March 25, 2011 12:12:56 PM

**Importance:**

High

Please be advised that the position of PMTR GIS Analyst and PMTR Meteorologist has been suspended effective Pay Period 8 (Sunday, March 27).

Thank you for your support during the Japan Earthquake & Tsunami Event.

EST Admin Support

NRC Operations Center

eMail: [OST02.HOC@nrc.gov](mailto:OST02.HOC@nrc.gov)

301-816-5100 x5600

CH | 352

**From:** Ross-Lee, MaryJane  
**To:** Sheron, Brian  
**Subject:** FW: Emailing: boardfile.htm  
**Date:** Friday, March 25, 2011 12:27:15 PM  
**Attachments:** image001.png

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**From:** RST01 Hoc  
**Sent:** Friday, March 25, 2011 12:26 PM  
**To:** Ross-Lee, MaryJane  
**Subject:** RE: Emailing: boardfile.htm

MJ,

We discussed possible sources with industry consortium on our 1100 call. No one knows for sure, several sources are possible. We will brainstorm for input into our 1400 RST Assessment. Not knowing the extent of damage to the buildings/interior walls, etc, we can only speculate at this point. Possibilities include:

1. (unlikely) MSVI/FW check valve leakage
2. (unlikely) Rx Bldg sump to Turb bldg sump
3. (More likely) H2 explosion ejecting some of the SFP water and debris, coupled with ongoing firewater spray into the building in efforts to cover SFP (essentially washing debris down into Turb bldg). Industry consortium seems to agree that there could be a "washing down" effect from refueling floor. The tsunami hit the Turb building...extent of damage to turb building makes it uncertain as to whether there is a pathway from Rx Bldg to Turb bldg.

The isotopic makeup of the water in the turbine building suggests that some of it may be from Rx Coolant.

Bottom line is we just don't know at this point.

Eric

**From:** Ross-Lee, MaryJane  
**Sent:** Friday, March 25, 2011 11:41 AM  
**To:** Sheron, Brian  
**Cc:** ET05 Hoc; RST01 Hoc; RST02 Hoc  
**Subject:** RE: Emailing: boardfile.htm

All we know is there is flooding in the turbine building and it was verified Rx coolant.

No verification on melt through.

**From:** Sheron, Brian  
**Sent:** Friday, March 25, 2011 11:18 AM  
**To:** Ross-Lee, MaryJane

CH/353

**Subject:** RE: Emailing: boardfile.htm

Also, there was a report in Nuclear News Flashes today that said IRSN (the French research/technical agency) was saying that there may have been a vessel melt-through in the unit 3 vessel. I'll forward the article. I'm guessing I'll get a question on this during my conference call with congressional staff at 3 pm today. Do we have any information or insights?

---

**From:** Ross-Lee, MaryJane  
**Sent:** Friday, March 25, 2011 11:12 AM  
**To:** Sheron, Brian; ET05 Hoc  
**Subject:** FW: Emailing: boardfile.htm

**From:** Kobetz, Timothy  
**Sent:** Friday, March 25, 2011 7:39 AM  
**To:** McGinty, Tim; LIA06 Hoc; Nelson, Robert  
**Cc:** LIA08 Hoc; PMT09 Hoc; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; Giitter, Joseph; Westreich, Barry; ET05 Hoc; Zimmerman, Jacob; Brown, Frederick  
**Subject:** RE: Emailing: boardfile.htm

Tim and Bob,

#4. The TI (issued March 23, 2011) has inspectors verify that the licensees have performed walkdowns. This can be done in various ways. For example the inspector could walkdown the system with the licensee or perform an independent walkdown and compare those results with the licensee's results (or a combination of both). In some cases the inspector may choose to just review the licensee's documentation of findings from the walkdown.

For more information on the TI a one page set of talking points is attached.

Tim

---

**From:** McGinty, Tim  
**Sent:** Friday, March 25, 2011 2:18 AM  
**To:** LIA06 Hoc; Nelson, Robert  
**Cc:** LIA08 Hoc; PMT09 Hoc; McGinty, Tim; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; Giitter, Joseph; Westreich, Barry; Kobetz, Timothy; ET05 Hoc; Zimmerman, Jacob  
**Subject:** FW: Emailing: boardfile.htm

Jake – for the call this evening with the in-country team, we discussed that the NRC-Japan team may be the best source of information to address questions 1 and 2 below, and may also have insights on question 3. Please see what insights we can get from the team so we can pass them along to the line organization (Nelson is the focal point for comms).

For Question 4, I think the best response would come from DIRS on day shift, regarding the information that is in the TI being developed.

Nelson – the midnight shift ET wanted to get this tasker out of the Operations Center and into the line organization. The Protective Measures Team has a number of other higher

priorities that we want them to be able to focus on. Can you respond to this email accepting the tasking so I can get it out of the Ops Center task tracker? Thanks, Tim

---

**From:** McGinty, Tim  
**Sent:** Friday, March 25, 2011 12:47 AM  
**To:** McGinty, Tim  
**Subject:** Emailing: boardfile.htm

**From:** OST02 HOC  
**Sent:** Thursday, March 24, 2011 7:03 PM  
**To:** ET05 Hoc  
**Subject:** FW: Congressional call Today

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**From:** HOO Hoc  
**Sent:** Thursday, March 24, 2011 5:46 PM  
**To:** LIA07 Hoc; OST01 HOC; OST02 HOC; OST03 HOC  
**Subject:** FW: Congressional call Today

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

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**From:** Sheron, Brian  
**Sent:** Thursday, March 24, 2011 3:40 PM  
**To:** HOO Hoc  
**Subject:** Congressional call Today

I received the following questions from congressional staff which I could not readily answer. Can you please ask the ET, RST and/or the PMT if they have any information that can address these questions?

- 1.) Two workers were reported to have been hospitalized due to radiation exposure. Have there been any more workers hospitalized, and do we know how they were exposed?
- 2.) Three workers were reported to have received radiation burns to their feet by spending too much time walking in contaminated water. Do we have any more information on this?
- 3.) It was reported that the Iodine levels in the Tokyo drinking water went down below



allowable limits. Do we know what this is attributable to? Was it due to a shift in wind direction? Did the releases from the plant go down"?

- 4.) What action is the NRC taking regarding licensee plans to walk down their plants to confirm systems, procedures, etc., are in place to deal with natural phenomena? Are the resident inspectors going to accompany the licenses during the walkdowns?

Thanks.

**From:** Per F. Peterson  
**To:** Brinkman, Bill; Hurlbut, Brandon; Sheron, Brian; Poneman, Daniel; "harold.mcfarlane@inl.gov"; Adams, Ian; (b)(6); Kelly, John E (NE); "john.grossenbacher@inl.gov"; Owens, Missy; peterson@nuc.berkeley.edu; Lyons, Peter; "phillip.finck@inl.gov"; (b)(6); "p.budnitz@inl.gov"; "ronaldo.szilard@inl.gov"; SCHU; Aoki, Steven; Koonin, Steven; (b)(6); DAgostino, Thomas  
**Subject:** Tank Waste Retrieval, Processing, and On-site Disposal at Three Department of Energy Sites  
**Date:** Friday, March 25, 2011 12:30:53 PM

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Following up on the discussion during our conference call, I wanted to point everyone to some information about the technologies that were developed in the U.S. to pump, store, and treat radioactive effluents from defense reprocessing facilities. I've had a lot of experience with these technologies, since one of my first jobs before going to grad school was to work at Bechtel on the design of the Defense Waste Processing Facility at SRS.

An important capability that will be needed for the clean up and remediation of Units 1-3 at Fukushima will be the capacity to flush fresh water through the reactor vessel and containment and discharge it into some type of collection tank, similar to the waste tanks that exist at SRS, Hanford, and INL. The practice at these sites is to simply bury the transfer lines 1 to 2 m below ground, which provides appropriate shielding for personnel during transfers of radioactive fluids. At Fukushima, the simpler approach may be to stack shielding material on top of transfer lines.

An evaporator system will be needed to concentrate the salt and solids in these flush water streams, and the resulting water can be recollected to use for further flushing and cooling operations. The tanks will need to be designed so that heat removal can be provided, as is the case at SRS. Eventually the material collected in these tanks will need to be further processed into appropriate waste forms for disposal, and methods for doing that can be derived from the similar technologies developed at SRS for processing salt and sludge from waste tanks. Sufficient flushing of the primary system and containment should help bring radiation levels down and allow access to remove damaged fuel from the reactors.

Chapter 3, "Tank Waste Retrieval", in the following National Academies report provides a brief overview of the technology.

"Tank Waste Retrieval, Processing, and On-site Disposal at Three Department of Energy Sites: Final Report," National Academies Press, 2006.

[http://www.nap.edu/catalog.php?record\\_id=11618#toc](http://www.nap.edu/catalog.php?record_id=11618#toc)

Here is a photo from the report showing a typical transfer pump. It is designed like a sump pump and can be lowered down into a tank to pump out and transfer radioactive fluids.

CH/354

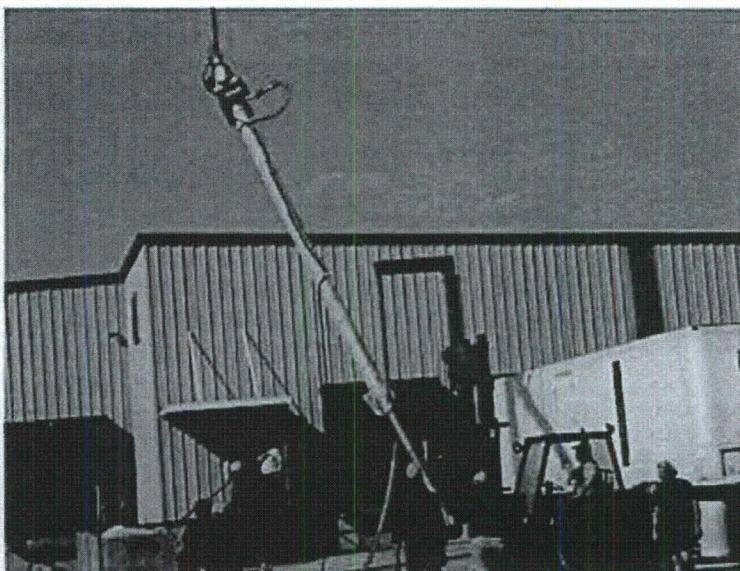


FIGURE III-1 The SEEPEX transfer pump before installation (pg. 35).

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-Per

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Per F. Peterson  
Professor and Chair  
Department of Nuclear Engineering  
University of California  
4153 Etcheverry Hall  
Berkeley, California 94720-1730  
peterson@nuc.berkeley.edu  
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[http://www.nuc.berkeley.edu/People/Per\\_Peterson](http://www.nuc.berkeley.edu/People/Per_Peterson)

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From: Per F. Peterson  
To: Brinkman, Bill; Hurlbut, Brandon; Sheron, Brian; Poneman, Daniel; "harold.mcfarlane@inl.gov"; Adams, Ian;  
(b)(6); Kelly, John E (NE); "john.grossenbacher@inl.gov"; Owens, Missy;  
"peterson@nuc.berkeley.edu"; Lyons, Peter; "phillip.finck@inl.gov"; (b)(6);  
"RJBudnitz@lbl.gov"; "ronaldo.szilard@inl.gov"; SCHU; Aoki, Steven; Koonin, Steven;  
(b)(6); Dagostino, Thomas  
Subject: Fwd: Tank Waste Retrieval, Processing, and On-site Disposal at Three Department of Energy Sites  
Date: Friday, March 25, 2011 12:34:04 PM

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It looks like some activities are already underway. This is something where the U.S. can likely provide advice and potentially equipment too.

**09:57 March 25, 2011 Friday (TV-Asahi: TEPCO to set up temporary pool to pump highly radioactive water at turbine building of Reactor No.3):** TV-Asahi reported at 9:45 that following a finding that water which three workers were exposed to at the Fukushima Daiichi NPP contained radioactive materials 10,000 times normal levels, TEPCO is planning to pump the water out of the turbine building at Reactor No. 3 and into a separate, temporary containment pool, so that workers can regain access to the building and resume efforts to restore the cooling system of the reactor.

-Per

Date: Fri, 25 Mar 2011 09:30:41 -0700

To: "Brinkman, Bill" <Bill.Brinkman@science.doe.gov>, "Hurlbut, Brandon" <Brandon.Hurlbut@Hq.Doe.Gov>, "Brian.sheron@nrc.gov" <Brian.sheron@nrc.gov>, "Poneman, Daniel" <Daniel.Poneman@Hq.Doe.Gov>, "harold.mcfarlane@inl.gov" <harold.mcfarlane@inl.gov>, "Adams, Ian" <Ian.Adams@Hq.Doe.Gov>, (b)(6), (b)(6), "Kelly, John E (NE)" <JohnE.Kelly@Nuclear.Energy.Gov>, "john.grossenbacher@inl.gov" <john.grossenbacher@inl.gov>, "Owens, Missy" <Missy.Owens@Hq.Doe.Gov>, "peterson@nuc.berkeley.edu" <peterson@nuc.berkeley.edu>, "Lyons, Peter" <Peter.Lyons@Nuclear.Energy.Gov>, "phillip.finck@inl.gov" <phillip.finck@inl.gov>, (b)(6), (b)(6), "RJBudnitz@lbl.gov" <RJBudnitz@lbl.gov>, "ronaldo.szilard@inl.gov" <ronaldo.szilard@inl.gov>, SCHU <SCHU@Hq.Doe.Gov>, "Aoki, Steven" <Steven.Aoki@nnsa.doe.gov>, "Koonin, Steven" <Steven.Koonin@science.doe.gov>, (b)(6), "Dagostino, Thomas" <Thomas.DAgostino@nnsa.doe.gov>  
From: "Per F. Peterson" <peterson@nuc.berkeley.edu>  
Subject: Tank Waste Retrieval, Processing, and On-site Disposal at Three Department of Energy Sites  
Cc:  
Bcc:  
X-Attachments:

CH/355

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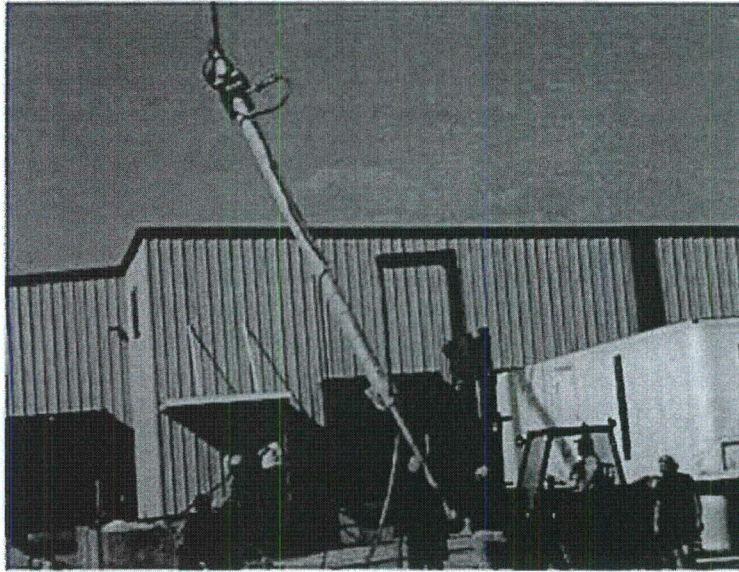


FIGURE III-1 The SEEPEX transfer pump before installation (pg. 35).

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[http://www.nuc.berkeley.edu/People/Per\\_Peterson](http://www.nuc.berkeley.edu/People/Per_Peterson)

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**From:** Rini, Brett  
**To:** Richards, Stuart; Case, Michael; Coyne, Kevin; Coe, Doug; Gibson, Katny; Elkins, Scott  
**Cc:** Sheron, Brian; Uhle, Jennifer  
**Subject:** FYI: RST Watch Bill through April 9th  
**Date:** Friday, March 25, 2011 12:37:36 PM  
**Attachments:** 03-24 to 04-09 RST Watch Bill.xlsx

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Division Directors,

Here is the most up to date watch bill for the Reactor Safety Team. All the positions have been filled through day shift on Friday, April 1. For your staff that are interested in joining the RST, I recommend they shadow someone in their position for at least a ½ shift, if not a full shift, to ensure they understand the duties of the position. I'm working swing shift this afternoon, and I will discuss this with the RST schedulers. I will also send out the specific duties of the positions that are being staffed, so staff can identify what position(s) they are qualified for.

If it would make things easier, I'm willing to serve as the RES POC for coordinating staffing of RES employees during our response to this event.

Let me know if you have any questions.

Thanks,

Brett

*Brett A. Rini*  
Technical Assistant  
Office of Nuclear Regulatory Research  
U.S. Nuclear Regulatory Commission  
(301)251-7615  
Brett.Rini@nrc.gov

---

**From:** RST13 Hoc  
**Sent:** Friday, March 25, 2011 11:37 AM  
**To:** Brown, Frederick; Hasselberg, Rick; Circle, Jeff; Alter, Peter; Thorp, John; Ruland, William; Rini, Brett; Laur, Steven; Norton, Charles; Hart, Ken; Holian, Brian; Boyce, Tom (RES); Helton, Donald; Brown, Eva; Roggenbrodt, William; Hiland, Patrick; Thomas, Eric; Arndt, Steven; Summers, Raymond; Williams, Donna; Solorio, Dave; Collins, Frank; Reeves, Rosemary; Brown, Michael; Orr, Mark; Dozier, Jerry; Gardocki, Stanley; Skeen, David; Skarda, Raymond; McGovern, Denise; Howe, Andrew; Padovan, Mark; Mitman, Jeffrey; Gilmer, James; Ward, Leonard; Jervy, Richard; Morlang, Gary; Harrison, Donnie; Shea, James; Horn, Brian; Uhle, Jennifer; Esmaili, Hossein; Schoenebeck, Greg; Fuller, Edward; Kugler, Andrew; Bloom, Steven; Case, Michael; Chung, Donald; Bukharin, Oleg; Dudes, Laura; RST02 Hoc; RST03 Hoc; RST04 Hoc; RST05 Hoc; RST06 Hoc; RST07 Hoc; RST08 Hoc; RST09 Hoc; RST10 Hoc; RST11 Hoc; RST12 Hoc; RST13 Hoc; RST14 Hoc; RST15 Hoc  
**Cc:** Dozier, Jerry; Gray, Kathy; Hasselberg, Rick; Alter, Peter; RST01 Hoc  
**Subject:** URGENT RST Watch Bill through April 9th

Good Morning,

Attached and below is the Reactor Safety Team Watch Bill that goes through Saturday April 9 th [the end of the next pay period].

You have either signed up for or said you would cover the positions during the time/dates indicated.

If there are any mistakes on our part please email [rst01.hoc@nrc.gov](mailto:rst01.hoc@nrc.gov) [rick.hasselberg@nrc.gov](mailto:rick.hasselberg@nrc.gov) [peter.alter@nrc.gov](mailto:peter.alter@nrc.gov) as soon as possible. Also please volunteer for the RST Coordinator, BWR Expert, and RST Communicator positions that are blank.

If you wish to add to or change the RST Director Watch Bill, please contact [Kathy.Gray@nrc.gov](mailto:Kathy.Gray@nrc.gov) she is the POC for the RST Director Watch Bill. She will forward any changes to Rick and Peter [and RST01].

If you wish to add to or change the Accident Analyst Watch Bill, please contact [Jerry.Dozier@nrc.gov](mailto:Jerry.Dozier@nrc.gov) he is the POC for the Accident Analyst Watch Bill. He is also trying to get some volunteers from Research and NRO. He will forward any changes to Rick and Peter [and RST01].

*Rick & Peter*

Date	Day	Time	Shift	RST Director	RST Coordinator	Accident Analyst	BWR Expert	RST Communicator
3/24/2011	Thursday	0700 - 1500	Day	Fred Brown	R Hasselberg	Jeff Circle	Peter Alter	John Thorp
3/24/2011	Thursday	1500 - 2300	Swing	Bill Ruland	Brett Rini	Steve Laur	Chuck Norton	Ken Hart
2/24/2011	Thursday	2300 - 0700	Midnight	Brian Holian	Tom Boyce	Don Helton	Eva Brown	Bill Roggenbrodt
3/25/2011	Friday	0700 - 1500	Day	Pat Hiland	Eric Thomas	Steve Arndt	Bob Summers	Donna Williams

CH 356

3/25/2011	Friday	1500 - 2300	Swing	Bill Ruland	Brett Rini	Steve Laur	Chuck Norton	Dave Solorio
3/25/2011	Friday	2300 - 0700	Midnight	Brian Holian	Frank Collins	Don Helton	Eva Brown	R Reeves
3/26/2011	Saturday	0700 - 1500	Day	Pat Hiland	Eric Thomas	Steve Arndt	Mike Brown	John Thorp
3/26/2011	Saturday	1500 - 2300	Swing	Bill Ruland	Mark Orr	Jerry Dozier	Chuck Norton	Stan Gardocki
3/26/2011	Saturday	2300 - 0700	Midnight	Dave Skeen	Bret Rini	Ray Skarda	Eva Brown	Denise McGovern
3/27/2011	Sunday	0700 - 1500	Day	Pat Hiland	Peter Alter	Andy Howe	Mike Brown	Mark Padovan
3/27/2011	Sunday	1500 - 2300	Swing	Fred Brown	R Hasselberg	Jeff Mitman	Chuck Norton	Bill Roggenbrodt
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3/28/2011	Monday	0700 - 1500	Day	Pat Hiland	Peter Alter	Jeff Circle	Mike Brown	Mark Padovan
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3/31/2011	Thursday	0700 - 1500	Day	Jennifer Uhle	Peter Alter	Don Chung	Mike Brown	Jerry Dozier
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## 03-24 to 04-09 RST Watch Bill.xlsx

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4/9/2011	Saturday	0700 - 1500	Day					
4/9/2011	Saturday	1500 - 2300	Swing					
4/9/2011	Saturday	2300 - 0700	Midnight					

**From:** Sheron, Brian  
**To:** Lee, Richard  
**Subject:** FW: Garwin comments of Science Group call of 03/24. To Binkley list of 03/24.  
**Date:** Friday, March 25, 2011 12:43:00 PM

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**From:** Richard L Garwin [mailto:rlg2@us.ibm.com]  
**Sent:** Friday, March 25, 2011 11:32 AM  
**To:** Binkley, Steve  
**Cc:** Brinkman, Bill; Hurlbut, Brandon; Sheron, Brian; Poneman, Daniel; 'harold.mcfarlane@inl.gov'; Adams, Ian; (b)(6); Kelly, John E (NE); 'john.grossenbacher@inl.gov'; Owens, Missy; 'peterson@nuc.berkeley.edu'; Lyons, Peter; 'phillip.finck@inl.gov'; (b)(6); 'RJBudnitz@lbl.gov'; 'ronaldo.szilard@inl.gov'; SCHU; Aoki, Steven; Koonin, Steven; (b)(6); DAgostino, Thomas  
**Subject:** Garwin comments of Science Group call of 03/24. To Binkley list of 03/24.

Some observations by Dick Garwin:

1. GET DATA ON VENTING AS IT HAPPENS. I believe it was John Kelly who said that if one watched Japanese TV one could hear a statement from TEPCO that they were about to vent, and there would be a TV image of the accompanying "white smoke" (steam). It would be very valuable to us all to have this information in the next report rather than "3 days later." There must be millions of Japanese people at home, glued to their TV, a few of whom could be asked/paid to send an email or IM or twitter recounting the venting statement. That way we would have redundant, timely reporting that could be provided in a section of the 12-hr SITREP or elsewhere.

2. DETAILS OF HARDENED VENT PIPE. We have heard of the "hardened vent pipe" to the plant stack. Could we have details of that, please, as well as of any filters in the stack? Bob Budnitz and I were two of the authors of the 1975 Report to the American Physical Society of the study group on light-water-reactor safety, [ [http://rmp.aps.org/pdf/RMP/v47/iS1/pS1\\_1](http://rmp.aps.org/pdf/RMP/v47/iS1/pS1_1) ] as was Frank von Hippel, who just published an OpEd in the New York Times [ <http://www.nytimes.com/2011/03/24/opinion/24VonHippel.html> ]. On page S110 of the Report we find,

**Similarly, in PWR accidents where the containment might fail due to melt-through by the core, rather than by overpressure, the total fission product release is assumed to be reduced greatly as a result of the filtering action of the soil (Draft WASH-1400, Appendix V).**

**These possible effects suggest that emphasis be placed on containment designs which ensure that, in case of containment failure, fission products would be scrubbed and/or filtered before their release. Thus, for example, a BWR containment might be designed to fail in a controlled way via pressure release valves which vented from the pressure-suppression pool or through large stabilized-bed filters. The remaining gases could then be filtered through the standby gas treatment system.**

CH/357

The von Hippel OpEd states, "Even before Three Mile Island, a group of nuclear engineers had proposed that filtered vents be attached to buildings around reactors, which are intended to

contain the gases released from overheated fuel. If the pressure inside these containment buildings increased dangerously — as has happened repeatedly at Fukushima — the vents would release these gases after the filters greatly reduced their radioactivity. France and Germany installed such filters in their plants, but the Nuclear Regulatory Commission declined to require them. Given the influence of America's example, had the commission demanded the addition of filtered vents, they would likely have been required worldwide, including in Japan." Perhaps TEPCO has installed such filters. Does any of the Science Group know? Can we provide some expedient filters that will handle the temperature and heat load?

3. MOVING FLUIDS BY PUMPING OR VALVING AIR. We mentioned moving fluids by periodically pressurizing containments or other vessels. This requires pipe access to the fluid to be moved. A generic pump of this kind would be a tank with an inlet valve and an outlet valve, with air space above the fluid. Closing the outlet valve, opening the inlet valve and venting the air (through a filter) would allow the pump volume to be largely filled with fluid. Closing the inlet, opening the outlet and pumping air into the head space would expel the fluid. If the fluid evolves hydrogen, then nitrogen should be used for pressurizing.

4. PREPARING FOR MASSIVE REPLUMBING. In the control of the Macondo well at 5000-ft water depth, remotely operated vehicles (ROV) were essential. But so were the ingenious and powerful hydraulically powered wrenches, not much bigger than the massive bolts and nuts they were to unscrew or reinsert. Our labs, industry, and counterparts on the Japanese side should amass and test this capability, together with waterjet cutters and other tools suitable for remote operation. It might even be desirable to bore holes through concrete containment under modest internal pressure, without leaking much of the contents.

I believe that that sort of operation is routine in the oil industry-- with structures under much higher pressure. Perhaps a US-Japanese technical working group could be created for this task.

5. MITIGATING CORROSION FROM SALT. In addition to the super-important impact of massive salt accumulation on the ability to cool the reactor, there was early recognition of the corrosive effects of salt. A note from a retired Canadian engineer experienced in both nuclear power and desalination is attached. Most of this we know and are acting on, but I was ignorant of the zirconium corrosion hazard. I pass this to those in contact with our experts, for whatever new it may add.

**From:** Sheron, Brian  
**To:** LIA08 Hoc; Ross-Lee, MaryJane; McGinty, Tim; Nelson, Robert; LIA06 Hoc  
**Cc:** PMT09 Hoc; ET07 Hoc; RST01 Hoc; ET05 Hoc  
**Subject:** RE: Emailing: boardfile.htm  
**Date:** Friday, March 25, 2011 12:55:00 PM  
**Attachments:** Image001.png

---

I'm OK with the 4 questions I sent yesterday. You gave me responses, which I forwarded to OCA. They will reformat them and then send them to the various hill staffers that were in on yesterday's call. I'm more worried about the Nuclear news Flashes article on the IRSN speculation that the vessel in unit 3 was breached by a core melt. I would expect if any of the staffers saw that article, I'll get a question on it.

---

**From:** LIA08 Hoc  
**Sent:** Friday, March 25, 2011 11:43 AM  
**To:** Ross-Lee, MaryJane; McGinty, Tim; Nelson, Robert; LIA06 Hoc; Sheron, Brian  
**Cc:** PMT09 Hoc; ET07 Hoc; RST01 Hoc; ET05 Hoc  
**Subject:** RE: Emailing: boardfile.htm

We'll take the action and get input from PMT and RST.  
Rani

---

**From:** Ross-Lee, MaryJane  
**Sent:** Friday, March 25, 2011 9:59 AM  
**To:** LIA08 Hoc; McGinty, Tim; Nelson, Robert; LIA06 Hoc; Sheron, Brian  
**Cc:** PMT09 Hoc; ET07 Hoc; RST01 Hoc; ET05 Hoc  
**Subject:** RE: Emailing: boardfile.htm

Ok, will Brian have what he needs for the 3:00 phone call? LT – can you compile results as we have them?

---

**From:** LIA08 Hoc  
**Sent:** Friday, March 25, 2011 9:39 AM  
**To:** McGinty, Tim; Nelson, Robert; LIA06 Hoc  
**Cc:** PMT09 Hoc; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; ET05 Hoc  
**Subject:** RE: Emailing: boardfile.htm

We are working it with our site team... they say they will not know until they can ask NISA (tomorrow).  
Rani

---

**From:** McGinty, Tim  
**Sent:** Friday, March 25, 2011 8:44 AM  
**To:** Nelson, Robert; LIA06 Hoc  
**Cc:** LIA08 Hoc; PMT09 Hoc; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; ET05 Hoc  
**Subject:** Re: Emailing: boardfile.htm

Just #3 left. You'll have to ask PMT I guess.

Sent from my NRC blackberry  
Tim McGinty

CH/358



(b)(6)

**From:** Nelson, Robert  
**To:** McGinty, Tim; LIA06 Hoc  
**Cc:** LIA08 Hoc; PMT09 Hoc; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; Gitter, Joseph; Westreich, Barry; Kobetz, Timothy; ET05 Hoc; Zimmerman, Jacob  
**Sent:** Fri Mar 25 08:10:19 2011  
**Subject:** RE: Emailing: boardfile.htm

If the Ops Center provides the answers to 1 – 3 (my team has no way to interact with the NRC-Japan team), my comm. team can get the answer to Item 4 and prepare a consolidated response for OPA review.

NELSON

**From:** McGinty, Tim  
**Sent:** Friday, March 25, 2011 2:18 AM  
**To:** LIA06 Hoc; Nelson, Robert  
**Cc:** LIA08 Hoc; PMT09 Hoc; McGinty, Tim; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; Gitter, Joseph; Westreich, Barry; Kobetz, Timothy; ET05 Hoc; Zimmerman, Jacob  
**Subject:** FW: Emailing: boardfile.htm

Jake – for the call this evening with the in-country team, we discussed that the NRC-Japan team may be the best source of information to address questions 1 and 2 below, and may also have insights on question 3. Please see what insights we can get from the team so we can pass them along to the line organization (Nelson is the focal point for comms).

For Question 4, I think the best response would come from DIRS on day shift, regarding the information that is in the TI being developed.

Nelson – the midnight shift ET wanted to get this tasker out of the Operations Center and into the line organization. The Protective Measures Team has a number of other higher priorities that we want them to be able to focus on. Can you respond to this email accepting the tasking so I can get it out of the Ops Center task tracker? Thanks, Tim

**From:** McGinty, Tim  
**Sent:** Friday, March 25, 2011 12:47 AM  
**To:** McGinty, Tim  
**Subject:** Emailing: boardfile.htm

**From:** OST02 HOC  
**Sent:** Thursday, March 24, 2011 7:03 PM  
**To:** ET05 Hoc  
**Subject:** FW: Congressional call Today

**From:** HOO Hoc  
**Sent:** Thursday, March 24, 2011 5:46 PM  
**To:** LIA07 Hoc; OST01 HOC; OST02 HOC; OST03 HOC

**Subject:** FW: Congressional call Today

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

---

**From:** Sheron, Brian  
**Sent:** Thursday, March 24, 2011 3:40 PM  
**To:** HOO Hoc  
**Subject:** Congressional call Today

I received the following questions from congressional staff which I could not readily answer. Can you please ask the ET, RST and/or the PMT if they have any information that can address these questions?

- 1.) Two workers were reported to have been hospitalized due to radiation exposure. Have there been any more workers hospitalized, and do we know how they were exposed?
- 2.) Three workers were reported to have received radiation burns to their feet by spending too much time walking in contaminated water. Do we have any more information on this?
- 3.) It was reported that the Iodine levels in the Tokyo drinking water went down below allowable limits. Do we know what this is attributable to? Was it due to a shift in wind direction? Did the releases from the plant go down"?
- 4.) What action is the NRC taking regarding licensee plans to walk down their plants to confirm systems, procedures, etc., are in place to deal with natural phenomena? Are the resident inspectors going to accompany the licenses during the walkdowns?

Thanks.

**From:** [Ross-Lee, MaryJane](#)  
**To:** [Sheron, Brian](#)  
**Cc:** [ET05 Hoc](#); [RST01 Hoc](#); [RST02 Hoc](#)  
**Subject:** RE: Emailing: boardfile.htm  
**Date:** Friday, March 25, 2011 12:58:33 PM  
**Attachments:** [RE Emailing boardfile.htm.msg](#)  
[image001.png](#)

---

Attached is best guesstimate.

---

**From:** Sheron, Brian  
**Sent:** Friday, March 25, 2011 12:52 PM  
**To:** Ross-Lee, MaryJane  
**Cc:** ET05 Hoc; RST01 Hoc; RST02 Hoc  
**Subject:** RE: Emailing: boardfile.htm

They are adding seawater to the vessel. My understanding is that the core is  $\frac{1}{2}$  or  $\frac{2}{3}$  covered and the steam generated in the vessel is going to the suppression pool. I am assuming the suppression pool is saturated and steam exists in the top portion of the torus. I also understand the licensee is periodically venting the torus to prevent overpressure. So how do you get primary coolant in the turbine building? Do we have any idea what the release path is?

---

**From:** Ross-Lee, MaryJane  
**Sent:** Friday, March 25, 2011 11:41 AM  
**To:** Sheron, Brian  
**Cc:** ET05 Hoc; RST01 Hoc; RST02 Hoc  
**Subject:** RE: Emailing: boardfile.htm

All we know is there is flooding in the turbine building and it was verified Rx coolant.

No verification on melt through.

---

**From:** Sheron, Brian  
**Sent:** Friday, March 25, 2011 11:18 AM  
**To:** Ross-Lee, MaryJane  
**Subject:** RE: Emailing: boardfile.htm

Also, there was a report in Nuclear News Flashes today that said IRSN (the French research/technical agency) was saying that there may have been a vessel melt-through in the unit 3 vessel. I'll forward the article. I'm guessing I'll get a question on this during my conference call with congressional staff at 3 pm today. Do we have any information or insights?

---

**From:** Ross-Lee, MaryJane  
**Sent:** Friday, March 25, 2011 11:12 AM  
**To:** Sheron, Brian; ET05 Hoc  
**Subject:** FW: Emailing: boardfile.htm

---

**From:** Kobetz, Timothy

CH/359

**Sent:** Friday, March 25, 2011 7:39 AM  
**To:** McGinty, Tim; LIA06 Hoc; Nelson, Robert  
**Cc:** LIA08 Hoc; PMT09 Hoc; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; Gitter, Joseph; Westreich, Barry; ET05 Hoc; Zimmerman, Jacob; Brown, Frederick  
**Subject:** RE: Emailing: boardfile.htm

Tim and Bob,

#4. The TI (issued March 23, 2011) has inspectors verify that the licensees have performed walkdowns. This can be done in various ways. For example the inspector could walkdown the system with the licensee or perform an independent walkdown and compare those results with the licensee's results (or a combination of both). In some cases the inspector may choose to just review the licensee's documentation of findings from the walkdown.

For more information on the TI a one page set of talking points is attached.

Tim

---

**From:** McGinty, Tim  
**Sent:** Friday, March 25, 2011 2:18 AM  
**To:** LIA06 Hoc; Nelson, Robert  
**Cc:** LIA08 Hoc; PMT09 Hoc; McGinty, Tim; ET07 Hoc; RST01 Hoc; Ross-Lee, MaryJane; Gitter, Joseph; Westreich, Barry; Kobetz, Timothy; ET05 Hoc; Zimmerman, Jacob  
**Subject:** FW: Emailing: boardfile.htm

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**To:** McGinty, Tim  
**Subject:** Emailing: boardfile.htm

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**Sent:** Thursday, March 24, 2011 7:03 PM  
**To:** ET05 Hoc  
**Subject:** FW: Congressional call Today

**From:** HOO Hoc  
**Sent:** Thursday, March 24, 2011 5:46 PM  
**To:** LIA07 Hoc; OST01 HOC; OST02 HOC; OST03 HOC  
**Subject:** FW: Congressional call Today

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

---

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**Sent:** Thursday, March 24, 2011 3:40 PM  
**To:** HOO Hoc  
**Subject:** Congressional call Today

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- 4.) What action is the NRC taking regarding licensee plans to walk down their plants to confirm systems, procedures, etc., are in place to deal with natural phenomena? Are the resident inspectors going to accompany the licenses during the walkdowns?

Thanks.

**From:** Sheron, Brian  
**To:** RST01 Hoc; Ross-Lee, MaryJane; RST02 Hoc  
**Cc:** ET05 Hoc  
**Subject:** RE: Emailing: boardfile.htm  
**Date:** Friday, March 25, 2011 1:03:00 PM

---

That's fine. If we don't know, we don't know.

---

**From:** RST01 Hoc  
**Sent:** Friday, March 25, 2011 12:27 PM  
**To:** Ross-Lee, MaryJane; RST02 Hoc  
**Cc:** ET05 Hoc; Sheron, Brian  
**Subject:** RE: Emailing: boardfile.htm

We don't have an answer to the cause of grey/black smoke.

Eric  
RST Coordinator

---

**From:** Ross-Lee, MaryJane  
**Sent:** Friday, March 25, 2011 11:39 AM  
**To:** RST01 Hoc; RST02 Hoc  
**Cc:** ET05 Hoc; Sheron, Brian  
**Subject:** FW: Emailing: boardfile.htm

RST – can you answer the question below for Brian?

---

**From:** Sheron, Brian  
**Sent:** Friday, March 25, 2011 11:15 AM  
**To:** Ross-Lee, MaryJane  
**Subject:** RE: Emailing: boardfile.htm

I forgot one question. One of the staffers said there was grey and/or black smoke coming from one of the units. Did we have any idea what that was due to?

CH/360

**From:** Sheron, Brian  
**To:** Lee, Richard  
**Subject:** FW: Tank Waste Retrieval, Processing, and On-site Disposal at Three Department of Energy Sites  
**Date:** Friday, March 25, 2011 1:05:00 PM

---

**From:** Per F. Peterson [mailto:peterson@nuc.berkeley.edu]  
**Sent:** Friday, March 25, 2011 12:31 PM  
**To:** Brinkman, Bill; Hurlbut, Brandon; Sheron, Brian; Poneman, Daniel; 'harold.mcfarlane@inl.gov'; Adams, Ian; (b)(6); Kelly, John E (NE); 'john.grossenbacher@inl.gov'; Owens, Missy; 'peterson@nuc.berkeley.edu'; Lyons, Peter; 'phillip.finck@inl.gov'; (b)(6); 'RJBudnitz@lbl.gov'; 'ronaldo.szilard@inl.gov'; SCHU; Aoki, Steven; Koonin, Steven; (b)(6); DAgostino, Thomas  
**Subject:** Tank Waste Retrieval, Processing, and On-site Disposal at Three Department of Energy Sites

Following up on the discussion during our conference call, I wanted to point everyone to some information about the technologies that were developed in the U.S. to pump, store, and treat radioactive effluents from defense reprocessing facilities. I've had a lot of experience with these technologies, since one of my first jobs before going to grad school was to work at Bechtel on the design of the Defense Waste Processing Facility at SRS.

An important capability that will be needed for the clean up and remediation of Units 1-3 at Fukushima will be the capacity to flush fresh water through the reactor vessel and containment and discharge it into some type of collection tank, similar to the waste tanks that exist at SRS, Hanford, and INL. The practice at these sites is to simply bury the transfer lines 1 to 2 m below ground, which provides appropriate shielding for personnel during transfers of radioactive fluids. At Fukushima, the simpler approach may be to stack shielding material on top of transfer lines.

An evaporator system will be needed to concentrate the salt and solids in these flush water streams, and the resulting water can be recollected to use for further flushing and cooling operations. The tanks will need to be designed so that heat removal can be provided, as is the case at SRS. Eventually the material collected in these tanks will need to be further processed into appropriate waste forms for disposal, and methods for doing that can be derived from the similar technologies developed at SRS for processing salt and sludge from waste tanks. Sufficient flushing of the primary system and containment should help bring radiation levels down and allow access to remove damaged fuel from the reactors.

Chapter 3, "Tank Waste Retrieval", in the following National Academies report provides a brief overview of the technology.

"Tank Waste Retrieval, Processing, and On-site Disposal at Three Department of Energy Sites: Final Report," National Academies Press, 2006.

[http://www.nap.edu/catalog.php?record\\_id=11618#toc](http://www.nap.edu/catalog.php?record_id=11618#toc)

Here is a photo from the report showing a typical transfer pump. It is designed like a sump pump and can be lowered down into a tank to pump out and transfer radioactive fluids.

CH/361



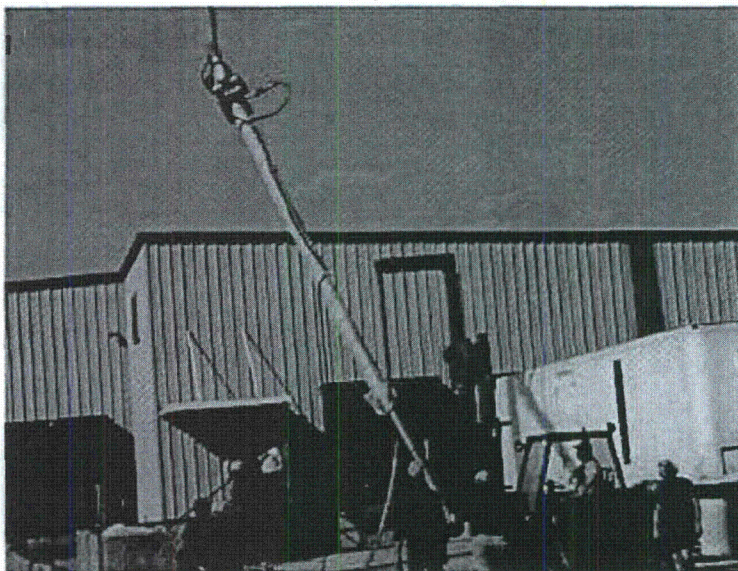


FIGURE III-1 The SEEPEX transfer pump before installation (pg. 35).

I see the key issues being how to figure out how to perform let down and injection to flush the salt and contaminated fluids out of the reactor and containment systems. I like very much Dick's idea that one can just use pressure to force fluids out. Injection of fresh water can be done at the same time. The key thing that is needed is a nice big tank to discharge the effluent into and the capability to evaporate water away to concentrate it, and to recycle the water back into the flushing operation. There is no rocket science here, since this is something that was done extensively in the U.S..

-Per

--

---

Per F. Peterson  
Professor and Chair  
Department of Nuclear Engineering  
University of California  
4153 Etcheverry Hall  
Berkeley, California 94720-1730  
peterson@nuc.berkeley.edu  
Office: (510) 643-7749      Fax: (510) 643-9685  
[http://www.nuc.berkeley.edu/People/Per\\_Peterson](http://www.nuc.berkeley.edu/People/Per_Peterson)

---

**From:** Sheron, Brian  
**To:** HOO Hoc  
**Cc:** Weber, Michael  
**Subject:** FW: Time history of radiation readings from sensors  
**Date:** Thursday, March 24, 2011 8:06:00 AM  
**Attachments:** Dose rate history.ppt

---

Please forward to PMT Director.

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

From: Per F. Peterson [<mailto:peterson@nuc.berkeley.edu>]

Sent: Wednesday, March 23, 2011 10:48 PM

To: Adams, Ian; Aoki, Steven; Binkley, Steve; Bob Budnitz; Sheron, Brian; Brinkman, Bill; Dick Garwin; Dick Garwin; Finck, Phillip; Grossenbacher, John (INL); Hurlbut, Brandon; Kelly, John E (NE); Koonin, Steven; McFarlane, Harold; Owens, Missy; Per Peterson; Rolando Szilard; Steve Fetter  
Subject: Time history of radiation readings from sensors

The attached dose rate history figure from NEA is very helpful in seeing when significant releases occurred and what specific events at the plant the releases are linked to. But this plot only goes to March 17. Are there any that go out further in time?

-Per

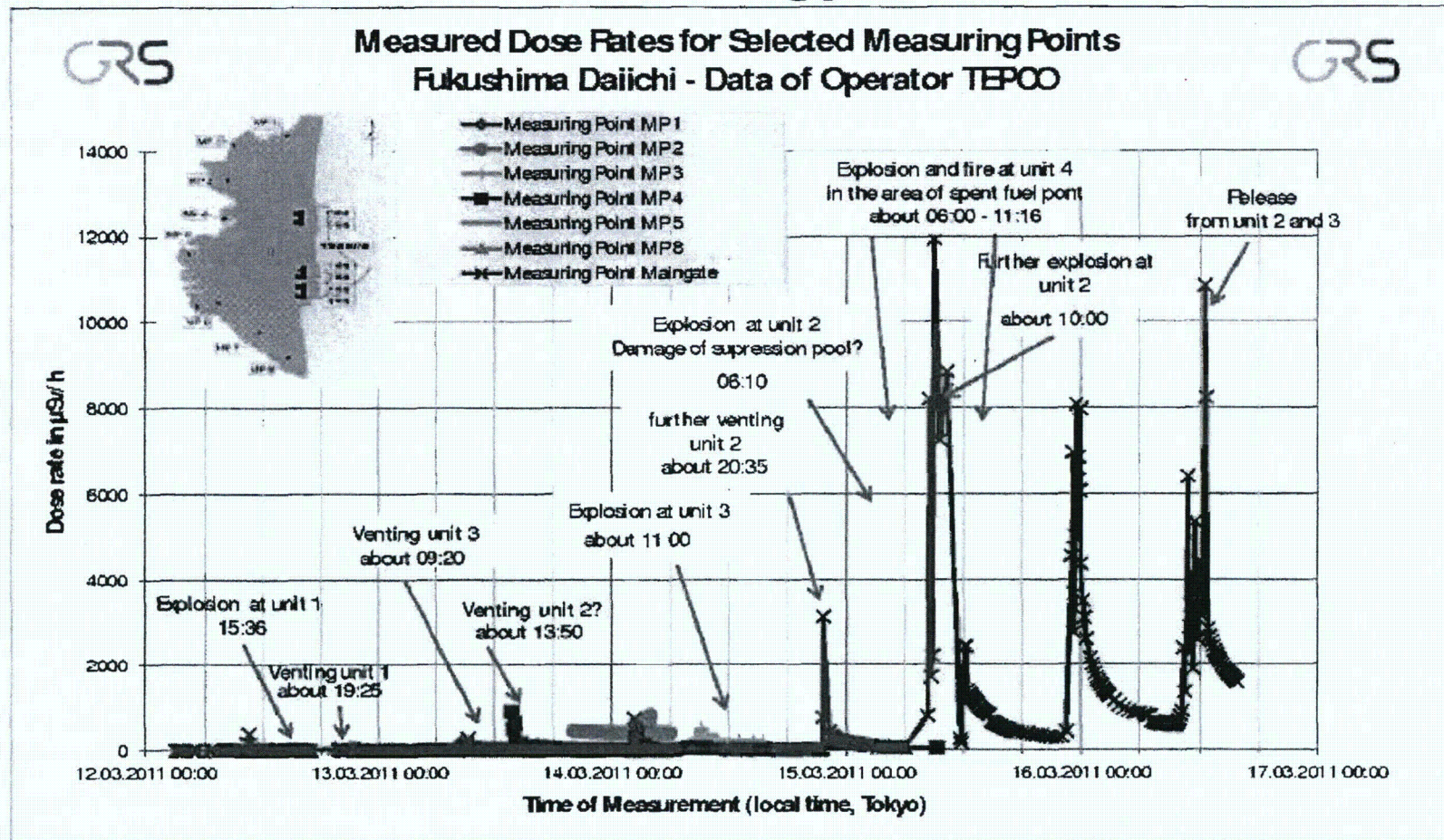
--

-----  
Per F. Peterson  
Professor and Chair  
Department of Nuclear Engineering  
University of California  
4153 Etcheverry Hall  
Berkeley, California 94720-1730  
[peterson@nuc.berkeley.edu](mailto:peterson@nuc.berkeley.edu)  
Office: (510) 643-7749 Fax: (510) 643-9685  
[http://www.nuc.berkeley.edu/People/Per\\_Peterson](http://www.nuc.berkeley.edu/People/Per_Peterson)  
-----

CH/362



# Radiation release chronology – Fukushima Dai-ichi



UC Berkeley

Source: OECD Nuclear Energy Agency

**From:** Sheron, Brian  
**To:** Rini, Brett  
**Cc:** Uhle, Jennifer; Veltri, Debra; Flory, Shirley  
**Subject:** RE: QUERY: Schedule for NRC:What It Is & What It Does March 29-30th  
**Date:** Friday, March 25, 2011 1:09:00 PM

---

I can do it, and Jennifer can owe me one.

---

**From:** Rini, Brett  
**Sent:** Friday, March 25, 2011 1:04 PM  
**To:** Sheron, Brian  
**Cc:** Uhle, Jennifer; Veltri, Debra; Flory, Shirley  
**Subject:** QUERY: Schedule for NRC:What It Is & What It Does March 29-30th  
**Importance:** High

Brian,

Jennifer is scheduled to be RST Coordinator next Wednesday during the time that she would be presenting at the NRC: What it is and What it does. The RES timeslot is 11:05-11:40. Do you want to fill in for her, or should we ask one of the division directors to do it?

Thanks,

Brett

---

**From:** Cupidon, Les  
**Sent:** Friday, March 25, 2011 8:37 AM  
**To:** Rini, Brett  
**Subject:** FW: Schedule for NRC:What It Is & What It Does March 29-30th  
**Importance:** High

Brett,

Is Jennifer still doing the "NRC:What It Is & What It Does March 29-30<sup>th</sup>"

Please see below and the attached.

Les

---

**From:** Montgomery, Carlos  
**Sent:** Thursday, March 24, 2011 4:53 PM  
**To:** Armstrong, Janine; Ash, Darren; Bartley, Malion; Bellosi, Susan; Boger, Bruce; Bollwerk, Paul; Borchardt, Bill; Boyce, Thomas (OIS); Breskovic, Clarence; Brown, Milton; Cannady, Ashley; Casby, Marcia; Chernoff, Margaret; Chokshi, Niles; Cohen, Miriam; Colleli, Catherine; Corley, Cherrie; Crockett, Steven; Cupidon, Les; Cutchin, James; Daniels, Stanley; Dean, Bill; Deegan, George; Dickey, Karen; Doane, Margaret; Doolittle, Elizabeth; Dyer, Jim; Erwin, Kenneth; Evans, Bridget; Freeland, Kendra; Gallo, Jenny; Garland, Stephanie; Gold, Meg; Gonzalez, Hipolito; Greene, Kathryn; Grobe, Jack; Hackett, Edwin; Hackworth, Sandra; Hamilton, Brandi; Haney, Catherine; Harrington, Holly; Higginbotham, Tina; Hilton, Nick; Holahan, Gary; Howard, Patrick; Hudson, Sharon; Jarriel, Lisamarie; Jefferson, Steven; Johnson, Michael; Kelley, Corenthis; Kenney, Susan; Kokajko, Lawrence; Kreuter, Jane; Krupnick, David; Langlie, Liz; Leeds, Eric; Lewis, Doris; Lindsay, Sandy; Lyons, James; Madden, Patrick; Marks, Sharon; Marziale, Riqueza; McCormick, Chad; McCrary, Cheryl; McCree, Victor; Miles, Patricia; Miller, Charles; Moore, Mary; Nourbakhsh, Hossein; Olive, Karen; ORourke, Christine; Pedersen, Renee; Raspa,

CH/363

Rossana; Reyes, Luis; Rihm, Roger; Rivera, Eric; Ronewicz, Lynn; Ross, Robin; Ruland, William; Sall, Basia; Salus, Amy; Samuel, Olive; Schaeffer, James; Sheron, Brian; Sims, Carolyn; Southerland, Angela; Steger (Tucci), Christine; Taylor, Renee; Thomas, Loretta; Walker, Dwight; Weber, Michael; Wellock, Thomas; Wertz, Trent; Williams, Barbara; Williams, Donna; Zimmerman, Roy

**Cc:** Powers, Dale

**Subject:** Schedule for NRC:What It Is & What It Does March 29-30th

**Importance:** High

Hello, Everyone.

I know many of you have been busy in one way or another with the Japanese event, and so the speaker schedule for next week's offering of *NRC:What It Is & What It Does* may have been impacted. Please check the attached schedule to ensure the speaker's names and titles are correct and notify me of any corrections, changes, etc. as soon as possible.

Thanks, and I'll see you all next week.

Mr. Carlos Montgomery

Senior Training Program Specialist USNRC

Gateway Building 7201-4A19

Mailstop GW 4A18

301-492-2311

**From:** Sheron, Brian  
**To:** Flory, Shirley  
**Subject:** FW: QUERY: Schedule for NRC:What It Is & What It Does March 29-30th  
**Date:** Friday, March 25, 2011 1:10:00 PM  
**Attachments:** Schedule MARCH 2011.doc  
**Importance:** High

---

Can you move my meeting with Cindy up ½ hour so I can do the NRC-What it is and what it does course?

---

**From:** Rini, Brett  
**Sent:** Friday, March 25, 2011 1:04 PM  
**To:** Sheron, Brian  
**Cc:** Uhle, Jennifer; Veltri, Debra; Flory, Shirley  
**Subject:** QUERY: Schedule for NRC:What It Is & What It Does March 29-30th  
**Importance:** High

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Brett

---

**From:** Cupidon, Les  
**Sent:** Friday, March 25, 2011 8:37 AM  
**To:** Rini, Brett  
**Subject:** FW: Schedule for NRC:What It Is & What It Does March 29-30th  
**Importance:** High

Brett,

Is Jennifer still doing the "NRC:What It Is & What It Does March 29-30<sup>th</sup>"

Please see below and the attached.

Les

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**From:** Montgomery, Carlos  
**Sent:** Thursday, March 24, 2011 4:53 PM  
**To:** Armstrong, Janine; Ash, Darren; Bartley, Malion; Bellosi, Susan; Boger, Bruce; Bollwerk, Paul; Borchardt, Bill; Boyce, Thomas (OIS); Breskovic, Clarence; Brown, Milton; Cannady, Ashley; Casby, Marcia; Chernoff, Margaret; Chokshi, Niles; Cohen, Miriam; Colleti, Catherine; Corley, Cherrie; Crockett, Steven; Cupidon, Les; Cutchin, James; Daniels, Stanley; Dean, Bill; Deegan, George; Dickey, Karen; Doane, Margaret; Doolittle, Elizabeth; Dyer, Jim; Erwin, Kenneth; Evans, Bridget; Freeland, Kendra; Gallo, Jenny; Garland, Stephanie; Gold, Meg; Gonzalez, Hipolito; Greene, Kathryn; Grobe, Jack; Hackett, Edwin; Hackworth, Sandra; Hamilton, Brandi; Haney, Catherine; Harrington, Holly; Higginbotham, Tina; Hilton, Nick; Holahan, Gary; Howard, Patrick; Hudson, Sharon; Jarriel, Lisamarie; Jefferson, Steven; Johnson, Michael; Kelley, Corenthis; Kenney, Susan; Kokajko, Lawrence; Kreuter, Jane; Krupnick, David;

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Langlie, Liz; Leeds, Eric; Lewis, Doris; Lindsay, Sandy; Lyons, James; Madden, Patrick; Marks, Sharon; Marziale, Riqueza; McCormick, Chad; McCrary, Cheryl; McCree, Victor; Miles, Patricia; Miller, Charles; Moore, Mary; Nourbakhsh, Hossein; Olive, Karen; ORourke, Christine; Pedersen, Renee; Raspa, Rossana; Reyes, Luis; Rihm, Roger; Rivera, Eric; Ronewicz, Lynn; Ross, Robin; Ruland, William; Sall, Basia; Salus, Amy; Samuel, Olive; Schaeffer, James; Sheron, Brian; Sims, Carolyn; Southerland, Angela; Steger (Tucci), Christine; Taylor, Renee; Thomas, Loretta; Walker, Dwight; Weber, Michael; Wellock, Thomas; Wertz, Trent; Williams, Barbara; Williams, Donna; Zimmerman, Roy

**Cc:** Powers, Dale

**Subject:** Schedule for NRC:What It Is & What It Does March 29-30th

**Importance:** High

Hello, Everyone.

I know many of you have been busy in one way or another with the Japanese event, and so the speaker schedule for next week's offering of *NRC:What It Is & What It Does* may have been impacted. Please check the attached schedule to ensure the speaker's names and titles are correct and notify me of any corrections, changes, etc. as soon as possible.

Thanks, and I'll see you all next week.

Mr. Carlos Montgomery  
Senior Training Program Specialist USNRC  
Gateway Building 7201-4A19  
Mailstop GW 4A18  
301-492-2311



# NRC: WHAT IT IS AND WHAT IT DOES

## COURSE SCHEDULE

\*All presenters subject to change\*

**March 29th, 2011**

**Day 1**

**Tab**

**LOCATION:**

**TWFN Auditorium**

8:30 - 8:35 a.m.		Welcome and Introductions Carlos Montgomery, Senior Training Program Specialist, HRTD/RFT
8:35 - 9:05 a.m.	<b>1</b>	Office of the Executive Director for Operations Bill Borchardt, Executive Director for Operations
9:05 - 9:40 a.m.	<b>2</b>	History of the NRC Tom Wellock, NRC Historian
9:40 - 9:50 a.m.		Break
9:50 - 10:20 a.m.	<b>3</b>	Office of Public Affairs Holly Harrington, Public Affairs Officer, OPA
10:20 - 10:50am	<b>4</b>	Office of International Programs Margie Doane - Director
10:50 - 11:00 a.m.		Break
11:00 - 11:30 a.m.	<b>5</b>	Office of Nuclear Reactor Regulation (NRR) John Lubinski, Acting Director, Division of Component Integrity
11:30 - 12:00 p.m.	<b>6</b>	NSIR and Incident Response Operations Michael C. Layton, Deputy Director, Division of Security Policy, NSIR
12:00 - 1:00 p.m.		Lunch
1:00 - 1:40 p.m.	<b>7</b>	Atomic Safety and Licensing Board Panel Bollwerk <b>NOTE: Held in the ASLBP Courtroom - T3B45</b>
1:40 - 2:20 p.m.	<b>8</b>	Commission Procedures and External Relationships Steven Crockett, Special Counsel for Legal Counsel, Legislation, and Special Projects <b>NOTE: Held in the ASLBP Courtroom - T3B45</b>
2:20 - 2:35.m.		Break
2:35 - 3:20 p.m.		Operations Center Tour (Group 1) <b>(T4-B9)</b>
3:20 - 4: 05 p.m.		Operations Center Tour (Group 2) <b>(T4-B9)</b>

# NRC: WHAT IT IS AND WHAT IT DOES

## COURSE SCHEDULE

\*All presenters subject to change\*

**March 30th, 2011**

**LOCATION:**

**Day 2**

**Tab**

**TWFN Auditorium**

8:30 – 9:05 a.m.	<b>9</b>	Regional Operations and Program Management Dale Powers, R IV Senior Technical Analyst
9:05 – 9:50 a.m.	<b>10</b>	Office of Investigations Cheryl McCrary, Office Director, OI
9:50 – 10:05 a.m.		Break
10:05 – 11:05 a.m.	<b>11</b>	NRC Corporate Management Panel (OEDO/OIS/CFO/ADM/HR/SBCR/CSO) & Q&A session
11:05 – 11:40 a.m.	<b>12</b>	Office of Nuclear Regulatory Research Dr. Jennifer Uhle, Deputy Director, RES
11:40 - 12:15 a.m.	<b>13</b>	Office of Federal & State Materials and Environmental Management (FSME), Scott Moore, Acting Deputy Director
12:15 – 1:15 p.m.		Lunch
1:15 – 1:55 p.m.	<b>14</b>	Office Of Enforcement Roy Zimmerman, Director, Office of Enforcement Renee Pedersen, Differing Views Program Manager
1:55 – 2:25 p.m.	<b>15</b>	Office of New Reactors William Burton, Branch Chief, Rulemaking and Policy Branch
2:25 – 2:35 p.m.		Break
2:35 – 2:55 p.m.	<b>16</b>	Advisory Committee on Reactor Safeguards Ed Hackett, Executive Director, ACRS
2:55 – 3:35 p.m.	<b>17</b>	Office of Nuclear Material Safety and Safeguards Catherine Haney, Office Director, NMSS
3:35 – 4:15 pm	<b>18</b>	Office of the Inspector General Rossana Raspa (Investigations) Paul Rades (Audits)

**NRC: WHAT IT IS AND WHAT IT DOES**  
**COURSE SCHEDULE**

**\*All presenters subject to change\***

**From:** Sheron, Brian  
**To:** Droggitis, Spiros; Shane, Raeann  
**Subject:** Sources of grey/black smoke  
**Date:** Friday, March 25, 2011 1:14:00 PM

---

Our Reactor Safety team does not know what the source of the grey/black smoke was that was coming from one of the buildings. This was one of yesterday's questions from the congressional staffers. Please pass on to them. Thx.

CTH/365

**From:** [Sheron, Brian](#)  
**To:** [Schmidt, Rebecca](#)  
**Subject:** Response to Congressional Staff Q's  
**Date:** Friday, March 25, 2011 1:21:00 PM  
**Attachments:** [Sources of greyblack smoke.msg](#)  
[Responses to Congressional Staff Questions.msg](#)  
[FW Emailing boardfile.htm.msg](#)

---

Becky, during the congressional staffer briefing at 3 pm yesterday, I got several questions I could not readily answer, and I promised to get back to them with the answers. Attached are the e-mails I recently sent Spiros and Raeann that respond to the questions. I have not heard back from either of them, so I'm wondering if they are in today? If not, can someone forward these to the staffers that were in on the call yesterday? I do not have the list of staffers. I believe Spiros and/or Raeann have the list. Thanks. Go Duke! (yuk, yuk, yuk).

CH/366

**From:** Schmidt, Rebecca  
**To:** Sheron, Brian  
**Subject:** Re: Response to Congressional Staff Q's  
**Date:** Friday, March 25, 2011 1:21:53 PM

---

Thanks. Will do

---

**From:** Sheron, Brian  
**To:** Schmidt, Rebecca  
**Sent:** Fri Mar 25 13:21:03 2011  
**Subject:** Response to Congressional Staff Q's

Becky, during the congressional staffer briefing at 3 pm yesterday, I got several questions I could not readily answer, and I promised to get back to them with the answers. Attached are the e-mails I recently sent Spiros and Raeann that respond to the questions. I have not heard back from either of them, so I'm wondering if they are in today? If not, can someone forward these to the staffers that were in on the call yesterday? I do not have the list of staffers. I believe Spiros and/or Raeann have the list. Thanks. Go Duke! (yuk, yuk, yuk).

CH/367

**From:** Flory, Shirley on behalf of RidsResOd Resource  
**To:** Sheron, Brian; Uhle, Jennifer  
**Subject:** FW: Low Priority Generic Issues  
**Date:** Friday, March 25, 2011 1:24:57 PM  
**Attachments:** [Memo.docx](#)  
[Enclosure.docx](#)  
[Email.rtf](#)  
[Memo Concurrence Recommendation Summary.doc](#)  
[ML092520025.APK](#)

---

Brian: If you want a hard copy of the report, I will get one.

Thanks - Shirley

---

**From:** Siu, Carolyn  
**Sent:** Friday, March 25, 2011 1:12 PM  
**To:** Reisifard, Mehdi; Kauffman, John; Beasley, Benjamin; Coe, Doug; Correia, Richard; Ader, Charles; McGinty, Tim; Uhle, Jennifer; Case, Michael; ODriscoll, James; Rosenberg, Stacey; Jackson, Christopher; Gibson, Kathy; Purnell, Blake  
**Cc:** RidsResOd Resource  
**Subject:** Low Priority Generic Issues

If you have any questions or comments, please contact Mehdi Reisi Fard or John Kauffman at 301-251-7490 or 301-251-7465, respectively.

**Carolyn Siu**

Fiction reveals truths that reality obscures.  
Division line: 301-251-7430  
Direct line: 301-251-7568  
Fax: 301-251-7424  
Email: [Carolyn.Siu@nrc.gov](mailto:Carolyn.Siu@nrc.gov)

CH/368



(b)(5)

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**From:** Sheron, Brian  
**To:** Johnson, Michael  
**Subject:** FW: Response - Japanese Earthquake 24 March 2011 1800 EDT Situation Report  
**Date:** Friday, March 25, 2011 1:31:00 PM

---

Per our conversation at lunch.

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

**From:** Wiggins, Jim  
**Sent:** Friday, March 25, 2011 8:23 AM  
**To:** Sheron, Brian; Evans, Michele  
**Cc:** Weber, Michael; Virgilio, Martin; McDermott, Brian  
**Subject:** RE: Response - Japanese Earthquake 24 March 2011 1800 EDT Situation Report

I'm concerned that joining the 2 SITREPS would be overly onerous and provide a substantial challenge to our ability to issue them on any specified schedule as the 2 orgs debate points in it. Our report has a substantial internal audience - the 4 Commission Offices and those of us off-shift. I'd hate to see us stumble in issuing the SITREPS and further complicate our lives during TA calls, etc.

Maybe we could think of embedding a responder in the DOE EOC to keep us better aligned.

Thoughts?

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

**From:** Sheron, Brian  
**Sent:** Friday, March 25, 2011 8:16 AM  
**To:** Wiggins, Jim; Evans, Michele  
**Subject:** FW: Response - Japanese Earthquake 24 March 2011 1800 EDT Situation Report

See below. If you agree, do you want to initiate a contact with the DOE IRC for the purpose of coordinating Sitreps so the info coming out of the NRC and DOE is consistent and not conflicting?

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

**From:** Sheron, Brian  
**Sent:** Friday, March 25, 2011 8:09 AM  
**To:** Weber, Michael  
**Cc:** Dyer, Jim; LIA06 Hoc; LIA08 Hoc  
**Subject:** RE: Response - Japanese Earthquake 24 March 2011 1800 EDT Situation Report

Mike, the DOE Science Council that I participate on is not the group that puts out the DOE Situation Report. On the last page of the DOE Sitrep, it says it is put out by their Nuclear Incident team in the DOE's Emergency Operations Center. The e-mail is NITOPS@NNSA.DOE.GOV and the phone is 202-586, 8100. I would suggest that the NRC's IRC contact the DOE IRC and come up with a way to put out a combined Sitrep.

Do you want to direct the appropriate folks in the IRC to initiate a contact with the DOE IRC for the purpose of coordinating the Sitreps, or I can call Jim W. or Michele E. and ask.

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

**From:** Weber, Michael  
**Sent:** Friday, March 25, 2011 8:00 AM  
**To:** Sheron, Brian  
**Cc:** Dyer, Jim; LIA06 Hoc; LIA08 Hoc  
**Subject:** Response - Japanese Earthquake 24 March 2011 1800 EDT Situation Report

Thanks, Brian. On the next call, can you suggest that we and DOE collaborate on issuing a combined situation report with consistent information? I see that their distribution is broader and includes local government contacts (e.g., Montgomery County, Maryland).

CH/369

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

From: Sheron, Brian

To: HOO Hoc

Cc: Weber, Michael; Virgilio, Martin

Sent: Fri Mar 25 07:12:29 2011

Subject: FW: UPDATED: Japanese Earthquake 24 March 2011 1800 EDT Situation Report

Please forward to ET, RST, & PMT Directors. Thx.

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

From: Adams, Ian [<mailto:Ian.Adams@Hq.Doe.Gov>]

Sent: Thursday, March 24, 2011 7:23 PM

To: Adams, Ian; Aoki, Steven; Binkley, Steve; Brinkman, Bill; Budnitz, Bob; Finck, Phillip; Garwin, Dick (EOP); Garwin, Dick (IBM); Grossenbacher, John (INL); Hurlbut, Brandon; John Holdren; Kelly, John E (NE); Koonin, Steven; Lyons, Peter; McFarlane, Harold; Miller, Neile; Mustin, Tracy; Owens, Missy; Peterson, Per; Sheron, Brian; Steve Fetter; Szilard, Ronalo

Subject: FW: UPDATED: Japanese Earthquake 24 March 2011 1800 EDT Situation Report

Good evening,

Attached is the latest Japan Sit Rep.

This information should not be shared or further distributed.

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

From: NITOPS

Sent: Thursday, March 24, 2011 7:17 PM

To: (b)(6)

(b)(6)

(b)(6)

(b)(6)

Subject: UPDATED: Japanese Earthquake 24 March 2011 1800 EDT Situation Report

Attached is an updated 24 March 1800 SITREP file. The original 1800 SITREP incorrectly reported that the radiation level at the main gate at Fukushima Dai-ichi (approximately 3281 feet from the Unit 2 building) was 204.5 mSv/hr vice the correct level of 204.5 micro Sv/hr.

Nuclear Incident Team (NIT)

Office of Emergency Response (NA-42)

National Nuclear Security Administration U.S. Department of Energy nitops@nnsa.doe.gov

nit@doe.gov 202-586-8100



**From:** Sheron, Brian  
**To:** Valentin, Andrea; Kardaras, Tom  
**Subject:** Men's Room handicap Stall  
**Date:** Friday, March 25, 2011 1:34:00 PM

---

Has had an "Out of order" sign on it for over a week. Do we know if it has been reported, and do we know why it is taking so long to fix?

CH/370

**From:** Gibson, Kathy  
**To:** "sypicke@sandia.gov"  
**Cc:** Valentin, Andrea; Parks, Jazel; Sheron, Brian; Uhle, Jennifer  
**Subject:** Re: Action: Fukushima FOIA  
**Date:** Friday, March 25, 2011 1:42:44 PM

---

I will pass this to our RES admin FOIA staff and we will get back to you. We may need guidance from our main FOIA people too. I suspect we will assign a POC for you on this. I am out on Monday, so I may not be able to get back to you until Tuesday.

---

**From:** Pickering, Susan Y <sypicke@sandia.gov>  
**To:** Gibson, Kathy  
**Sent:** Fri Mar 25 13:26:54 2011  
**Subject:** RE: Action: Fukushima FOIA

Howdy! The scope of the request is "all communication" related to the three Japanese sites. You can scroll down this message to the whole text, it is in black ink. The AP reporter mentions some officials by name.

---

**From:** Gibson, Kathy [mailto:Kathy.Gibson@nrc.gov]  
**Sent:** Friday, March 25, 2011 11:04 AM  
**To:** Pickering, Susan Y; Uhle, Jennifer; Santiago, Patricia; Lee, Richard; Rivers, Joseph  
**Cc:** Gauntt, Randall O; Burns, Shawn; Valentin, Andrea; Parks, Jazel  
**Subject:** Re: Action: Fukushima FOIA

We have one too but it is limited to internal NRC to NRC communications from 3/11-3/16/11. What does yours encompass?

Jazel Parks is RES FOIA coordinator. She will likely be involved. Also Andrea Valentin, our Administrative SES.

---

**From:** Pickering, Susan Y <sypicke@sandia.gov>  
**To:** Uhle, Jennifer; Gibson, Kathy; Santiago, Patricia; Lee, Richard; Rivers, Joseph  
**Cc:** Gauntt, Randall O <rogaunt@sandia.gov>; Burns, Shawn <spburns@sandia.gov>  
**Sent:** Fri Mar 25 12:34:06 2011  
**Subject:** FW: Action: Fukushima FOIA

Well, it was bound to happen. We are responding to a broad FOIA request from the Associated Press. To what extent would you like to be involved? Sigh...

---

**From:** Pickering, Susan Y  
**Sent:** Friday, March 25, 2011 10:32 AM  
**To:** Pickering, Susan Y; Pearson, Camelia D.; Fitzpatrick, Lynn; Gauntt, Randall O; Burns, Shawn; Rein, Amy; O'Canna, Myra L; Castellano, Dolores; Elliott, Russell D; Parks, M Bradley; Rhodes, William G; Bonano, Evaristo Jose; Sorenson, Ken B; McClellan, Yvonne; Lloyd, Janette; Khalil, Imane; Miller, David R; McMahon, Kevin A; Shanks, Arthur; Danneskiold, James D; Petti, Jason P; Hill, Marianne B; Knief, Ronald A; Philbin, Jeffrey S; Durbin, Samuel; Ammerman, Douglas J; Shoemaker, Paul E; Jones, Joe A; Wheeler, Timothy; Lipinski, Ronald J  
**Cc:** Silva, Jacquelyn R; Bauck, Steven C; Eanes, James L; Orrell, Stanley A; Walck, Marianne; Tatro, Marjorie; Hwang, Bob  
**Subject:** Action: Fukushima FOIA  
**Importance:** High

CH/371

Greetings,

**Your response is due to Camelia Pearson by COB Monday, 3/28!**

Here is what you need to know to respond:

- Freedom of Information Act (FOIA) is the law so respond quickly, accurately, and completely; as best you can given the short turnaround. NNSA is expediting this request.
- DOE received 3 nearly identical FOIA requests from the Associated Press. See, below
- The requests are for all communications including emails, faxes, and written correspondence. Provide only those communications between the listed entities, e.g., DOE, NRC, GE, other DOE labs, and the individuals specifically named.
- Verbal communication is outside the scope, you do not need to include it.
- Also out of scope are communications limited to LMC and Sandia, foreign entities and Sandia, or just between Sandians.
- In scope are communications Sandia contractors made that meet the request.
- If any content is OUO, propriety, or draft; please let Camelia Pearson know by adding a note in your email. Don't mark the document itself. The sensitive sections will be reviewed by classification folks for possible exemption/redaction.
- Send all communication to Camelia Pearson, electronically, if possible. For example, paste multiple emails into one email to her.
- Send communication from 3/11 to 4/1. Send all you have now and continue to send until COB 4/1.
- Keep all communication indefinitely. There could be follow-up action.
- There is no P/T, so use the one you charged when you generated the communication.
- Complete the attached form and send it to Camelia along w/ your communication. It is quick. Staff should complete section 5, managers section 6. Yes, the rates are woefully small. No, we don't get reimbursed (I asked).
- The requestor pays for the FOIA, but Dept of Justice keeps the money.

If you have no communication that matches the request, you can happily ignore this message. If you know of others that might, please forward it to them, including contractors. I will contact John Kelly, DOE NE, and Jennifer Uhle, NRC, about the request. You may let your customers know, too, if you like.

Transparency in government is what makes democracy great; but I know you weren't just hanging around playing dominoes! Thanks for your effort!  
syp

Requests:

1. The communications should include emails, faxes and written correspondence between Energy Secretary Steven Chu, his staff and his counsel, and all other

DOE employees to and from the NRC and to and from GE Energy, Hitach-GE Nuclear energy, and its designated representatives. Our request should include communications between DOE national laboratories and NRC and GE pertaining to the nuclear incident, as well as the 34 DOE personnel working in Japan.

NOTE: The requester later added the following individuals to the requests: Daniel Poneman; Thomas D'Agostino; Dr. Peter Lyons; Steven Aoki; Adm. Joseph Krol; and, Adm. Kirkland Donald

2. Requesting copies of all internal communications within the U.S. Department of Energy, including those to and from Energy Secretary Steven Chu, his chief of staff, and his counsel, pertaining to the Japanese nuclear incidents cause by the March 11 earthquake and tsunami. This includes problems at the following three facilities: Fukushima Dai-ichi, Fukushima Daini, and Onagawa. The communications should include emails, faxes, and written correspondence between DOE and Japanese officials, including: Energy Secretary Chu, his staff and counsel, the 34 employees deployed to Japan and those working for national laboratories helping to assess and monitor the events.

NOTE: The requester later added the following individuals to the requests: Daniel Poneman; Thomas D'Agostino; Dr. Peter Lyons; Steven Aoki; Adm. Joseph Krol; and, Adm. Kirkland Donald

3. Requesting copies of all internal communications within the U.S. Department of Energy, including those to and from Energy Secretary Steven Chu, his chief of staff, and his counsel, pertaining to the Japanese nuclear incidents cause by the March 11 earthquake and tsunami. This includes problems at the following three facilities: Fukushima Dai-ichi, Fukushima Daini, and Onagawa. The communications should include emails, faxes, and written correspondence between Energy Secretary Chu, his staff and counsel, and all other DOE employees to and from the NRC and to and from GE Energy, Hitachi-GE Nuclear Energy, and its designated representatives. Our request should include communications between DOE national laboratories and NRC and GE pertaining to the nuclear incident, as well as the 34 DOE personnel working in Japan.

NOTE: The requester later added the following individuals to the requests: Daniel Poneman; Thomas D'Agostino; Dr. Peter Lyons; Steven Aoki; Adm. Joseph Krol; and, Adm. Kirkland Donald

---

**From:** Pickering, Susan Y

**Sent:** Thursday, March 24, 2011 5:11 PM

**To:** Pearson, Camelia D.; Fitzpatrick, Lynn; Gauntt, Randall O; Burns, Shawn; Miller, Christopher C; Rein, Amy; O'Canna, Myra L; Castellano, Dolores; Elliott, Russell D; Parks, M Bradley; Rhodes, William G; Bonano, Evaristo Jose; Sorenson, Ken B; McClellan, Yvonne; Lloyd, Janette; Khalil, Imane; Miller, David R; McMahon, Kevin A

**Cc:** Silva, Jacquelyn R; Bauck, Steven C; Eanes, James L; Orrell, Stanley A

**Subject:** RE: EXPEDITE: New FOIA Request: FOIA 11-00303-H (CAPPIELLO)

Greetings,

Don't panic!

I just spoke w/ James Eanes and Camelia Pearson. I have a better understanding of the request and Camelia is researching some specific questions. I will follow-up w/ them tomorrow morning and send you an update.

I am not sure who all will need to respond to this request, so please forward it to others as necessary. Don't respond yet!

syp

---

**From:** Pearson, Camelia D.

**Sent:** Thursday, March 24, 2011 4:43 PM

**To:** Fitzpatrick, Lynn; Gauntt, Randall O; Burns, Shawn; Miller, Christopher C; Rein, Amy; O'Canna, Myra L; Castellano, Dolores; Pickering, Susan Y; Elliott, Russell D

**Cc:** Silva, Jacquelyn R; Bauck, Steven C

**Subject:** FW: EXPEDITE: New FOIA Request: FOIA 11-00303-H (CAPPIELLO)

**Importance:** High

***FYI, there is no project and task number to charge this work too, and because (FOIA) Freedom of Information Act is the law and it is part of our contract within our Prime Contract, we have clauses that make Sandia subject to the law in a timely and efficient manner:***

**72. DEAR 970.5204-2 LAWS, REGULATIONS, AND DOE DIRECTIVES (DEC 2000) (DEVIATION)**

*(a) In performing work under this contract, the contractor shall comply with the requirements of applicable Federal, State, and local laws and regulations (including DOE regulations), unless relief has been granted in writing by the appropriate regulatory agency.*

***Therefore, each department is responsible for fulfilling the law and charging their costs accordingly to their own project and task.***

**Hello: This is an Expedited FOIA Request,**  
**Normal Times for Delivery Does Not Apply.**  
**The DUE Date to NNSA is March 31, 2011.**

The attached Freedom of Information Act (FOIA) requests access to and copies of all communications between the Department of Energy, the U.S. Nuclear Regulatory Commission, GE Energy and Hitachi-GE Nuclear Energy pertaining to the Japanese nuclear incidents caused by the March 11 earthquake and tsunami. This includes problems at the following three facilities: Fukushima Dai-ichi, Fukushima Daini, and Onagawa.

**3 requests were aggregated into 1:**

2. The communications should include emails, faxes and written correspondence between Energy Secretary Steven Chu, his staff and his counsel, and all other DOE employees to and from the NRC and to and from GE Energy, Hitach-GE Nuclear energy, and its designated representatives. Our request should include communications between DOE national laboratories and NRC and GE pertaining to the nuclear incident, as well as the 34 DOE personnel working in Japan.

NOTE: The requester later added the following individuals to the requests: Daniel Poneman; Thomas D'Agostino; Dr. Peter Lyons; Steven Aoki; Adm. Joseph Krol; and, Adm. Kirkland Donald

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NOTE: The requester later added the following individuals to the requests: Daniel Poneman; Thomas D'Agostino; Dr. Peter Lyons; Steven Aoki; Adm. Joseph Krol; and, Adm. Kirkland Donald

(The original request begins on page 2 of the attached document.)

**Your response is greatly appreciated within 2 days**



by Monday March 28, 2011, for records that are only explicitly responsive to what the requester has asked. If there is more than one item or question listed, please indicate which record(s) respond to that specific item or question. An estimate of costs for processing, and/or a need for clarification/scope narrowing, and the time you need to review and gather documents to the FOIA request. In addition please fill out the LAST page of the Record of Freedom of Information (FOI) Processing Cost sheet for Contractor personnel that is attached to the original FOIA request (The instructions for filling out the form is on the next to the last page) and return to me within 5 days by Thursday October 15, 2011 for an estimate of cost and processing as indicated above. The FOIA will be considered INCOMPLETE if this information is not provided, IT WILL BE RETURNED FOR PROCESSING. Please use the amounts already embedded in the document any other amount is not accepted, these are set cost by FOIA.

If you are not the person to receive this FOIA request, (disregard) and please let me know if there are other individuals, I should contact to respond to this FOIA request.

In addition, if a search was conducted and no responsive records were found, I need you to answer the following four questions below and email me the response within 2 days by Monday March 28, 2011:

\_\_\_\_\_



1. Where was the search conducted?
2. What type of search was conducted, hand or computer?
3. If it was a computer, how was it conducted and what was searched? (What Keywords Was Used to Query the Database).
4. If by hand, how was it conducted and what was searched?

Please send one (1) copy of any unclassified or sensitive responsive information directly to Camelia Pearson, preferably electronically by email, or to MS 0180. **DO NOT SEND ANY RECORDS OR RESPONSIVE INFORMATION** to the requester, NNSA, SSO, or any other source. All FOIAs are routed through Corporate Contracts with the exception of classified information as indicated below.

One (1) copy of all classified responsive information must be sent to David Cain, Classification, at MS 0175. Please notify the FOIA Specialist/Coordinator at [redacted] when the records have been sent.

Please notify me by email if any of these Sandia records are **Contractor-Owned Records** according to Sandia's M&O contract, Clause I-73 (b) <http://www-irn.sandia.gov/corpdata/doe/prime/i-73.html>; therefore, they are **not agency records** and therefore not subject to FOIA.

When searching for responsive record(s) in your organization, this search should include records maintained in any format, including electronic files, active files, and retired files in the Archives. If you know responsive records are available through the following, state, this in your response and provide as much bibliographical information (title, url, if on the web, author, etc,) as possible to be provided to the requester.

- Office of Science and Technical Information (OSTI).
- National Technical Information Service (NTIS).

- Public Library.
- DOE Reading Room.

If the record's can be located in a DOE Reading Room and the requester is within 100 miles of that location, we are not required to provide the document's; it is consider to be in a public domain.

## **ADDITIONAL INFORMATION (Freedom of Information Act (FOIA Exemptions) :**

The following lists the nine categories of records, which are exempt from disclosure under FOIA:

1. Documents classified by executive order-(national security information)
2. Internal personnel rules and procedures—(examples: internal manuals and standard operating procedures)
3. Documents specifically exempted by statute—(restricted data, formerly restricted data, and unclassified controlled nuclear information)
4. Confidential or proprietary business information submitted to the Department of Energy—(examples: portions of contracts or proposal)
5. Records which are inter- or intra-agency memorandums or letters—(this exemption safeguards the deliberative policy-making process. Draft documents are usually considered pre-decisional, deliberative process documents. However, final decisions must be released, along with the factual information. This exemption also includes attorney-client work products)
6. Records which would be a clearly unwarranted invasion or personal privacy—(examples: documents contained in personnel or medical files)
7. Records of information compiled for "for enforcement purposes" (this would not include background investigative reports or documents concerning security clearances) to the extent that disclosure would:
  - a. Interfere with the enforcement proceedings;
  - b. Deny an individual of a right to a fair or impartial adjudication;
  - c. Be an unwarranted invasion of personal privacy;
  - d. Disclosure the identity of a confidential source;
  - e. Reveal investigator techniques or procedures;
  - f. Endanger the life or physical safety of any individual;
8. Records, which pertain to the regulation and supervision of financial institutions.
9. Maps and records containing geological and geophysical information concerning wells.

Thank you,

**From:** Shane, Raeann  
**To:** Sheron, Brian; Droggitis, Spiros  
**Cc:** Schmidt, Rebecca; Powell, Amy  
**Subject:** RE: Sources of grey/black smoke  
**Date:** Friday, March 25, 2011 1:53:25 PM

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Thanks Brian. I also got your earlier email with the other info. Thanks. I have been buried under testimony for next week.....

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**From:** Sheron, Brian  
**Sent:** Friday, March 25, 2011 1:14 PM  
**To:** Droggitis, Spiros; Shane, Raeann  
**Subject:** Sources of grey/black smoke

Our Reactor Safety team does not know what the source of the grey/black smoke was that was coming from one of the buildings. This was one of yesterday's questions from the congressional staffers. Please pass on to them. Thx.

CH/372

**From:** LIA02 Hoc  
**To:** Sheron, Brian  
**Cc:** McGinty, Tim; Nelson, Robert; LIA06 Hoc; LIA03 Hoc; LIA08 Hoc; Smith, Brooke; Foggie, Kirk  
**Subject:** Answers to questions from Congressional Call  
**Date:** Friday, March 25, 2011 1:55:49 PM  
**Attachments:** Answers to 4 questions from Brian Sheron from Congressional Call.docx  
TI Objectives.docx

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Brian,

The responses to the questions are attached. The first file contains the answers and the second file contains a TI referenced in the answer to question 4.

Steve

CH/373

- 1.) Two workers were reported to have been hospitalized due to radiation exposure. Have there been any more workers hospitalized, and do we know how they were exposed?
- 2.) Three workers were reported to have received radiation burns to their feet by spending too much time walking in contaminated water. Do we have any more information on this?

The following information taken from the IAEA website and answers these two questions:

As per the IAEA, three workers at the Fukushima Daiichi nuclear power plant were exposed on 24 March to elevated levels of radiation. The IAEA has received additional information on the incident from the Japanese authorities.

The three were contracted workers laying cables in the turbine building of the Unit 3 reactor. Two of them were found to have radioactivity on their feet and legs.

These were washed in the attempt to remove radioactivity, but since there was a possibility of Beta-ray burning of the skin, the two were taken to the Fukushima University Hospital for examination and then transferred to Japan's National Institute of Radiological Sciences for further examination. They are expected to be monitored for around four days.

It is thought that the workers ignored their dosimeters' alarm believing it to be false and continued working with their feet in contaminated water.

The Nuclear and Industrial Safety Agency (NISA) of Japan instructed TEPCO to review the radiation control system immediately in order to avoid similar incidents in the future.

As of 24 March, 19:30 Japan time, the number of workers at the Fukushima Daiichi nuclear power plant found to have received more than 100 millisieverts of radiation dose totalled 17 including the three contract workers. The remaining fourteen are TEPCO's employees.

- 3.) It was reported that the Iodine levels in the Tokyo drinking water went down below allowable limits. Do we know what this is attributable to? Was it due to a shift in wind direction? Did the releases from the plant go down?"

No quantitative cause analysis exists, but decay of iodine itself or reduction in rainfall with iodine, or their combination can be a plausible reason.

- 4.) What action is the NRC taking regarding licensee plans to walk down their plants to confirm systems, procedures, etc., are in place to deal with natural phenomena? Are the resident inspectors going to accompany the licenses during the walkdowns?

The TI (issued March 23, 2011) has inspectors verify that the licensees have performed walkdowns. This can be done in various ways. For example the inspector could walkdown the system with the licensee or perform an independent walkdown and compare those results with the licensee's results (or a combination of both). In some cases the inspector may choose to just review the licensee's documentation of findings from the walkdown.

For more information on the TI a one page set of talking points is attached.



Overview of TI 2515/183, "FOLLOWUP TO THE FUKUSHIMA DAIICHI NUCLEAR STATION  
FUEL DAMAGE EVENT"

March 23, 2011

TI Objectives

- The objective of this TI is a high-level, independent assessment, of the adequacy of actions taken by licensees in response to the Fukushima Daiichi nuclear station fuel damage event.
- The inspection results from this TI will be used to evaluate the industry's readiness for a similar event and to aid in determining whether additional regulatory actions warranted.

TI Focus Areas

1. Assess the licensee's capability to mitigate conditions that result from beyond design basis events (e.g., B.5.b and 10 CFR 50.54(hh)).
2. Assess the licensee's capability to mitigate station blackout (SBO) conditions, as required by 10 CFR 50.63.
3. Assess the licensee's capability to mitigate internal and external flooding events required by station design.
4. Assess the thoroughness of the licensee's walkdowns and inspections of important equipment needed to mitigate fire and flood events to identify the potential that the equipment's function could be lost during seismic events possible for the site.

TI Inspection Methods

- Use existing inspection procedures and TIs for guidance
- Where applicable, inspectors should credit the baseline inspection program for samples reviewed during this TI assessment.
- Resources: 40 hours per site.

Other Issues

- The TI was issued on March 23, 2011. Each site will complete the inspection by April 29, 2011 and issue a stand-alone report by May 13, 2011
- An inspection report template is being prepared (and should be available mid-next week) to assist in documentation.
- The short inspection and documentation timeline could have a significant impact on regional resources.



**From:** Rini, Brett  
**To:** RES PMDA; Flory, Shirley; Veltri, Debra; Cupidon, Les; Sheron, Brian; Uhle, Jennifer  
**Cc:** Parks, Jazel  
**Subject:** ACTION: FOIA Request on Japan Events  
**Date:** Friday, March 25, 2011 2:07:39 PM  
**Attachments:** [How to Respond to a FOIA Request.pdf](#)  
[FOIA Request from AP.PDF](#)  
**Importance:** High

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FO/PMDA staff,

We have been tasked with a FOIA Request (2<sup>nd</sup> attachment) from the Associated Press (AP) regarding internal communications within the NRC pertaining to the Japanese nuclear incidents at the Fukushima Dai-ichi, Fukushima Daini, and Onagawa power plants, consequence of the earthquake and tsunami events on March 11, 2011.

As detailed in the letter from AP, *"the communications should include emails, faxes, and written correspondence between the commission's chairman, its four commissioners, their staffs, the public affairs team, and employees of other offices such as the Office of Nuclear Reactor Regulation, the Office of Nuclear Security and Incident Response, and the NRC's 24-hour Operations Center"*. **This request covers a time frame from March 11, 2011 through March 16, 2011, when the request was issued.**

In addition, please identify those records that may contain information you believe should not be released to the public per the exemption instructions detailed in step 6 of the attached document on *"How to Respond to a FOIA Request"* (e.g., contains sensitive, proprietary, pre-decisional, or personal information).

**Please provide hard copies of any records that meet the above criteria to Brett Rini by noon on Wednesday, March 29th.** I've left a box right outside my office (CSB-6C07) on a chair to drop off any documents responsive to this request. Please clip the documents together and drop them in the box with your name on a post-it note. I apologize for the short turnaround on this request, but there was some confusion as to whether or not we needed to respond now.

Please charge any time spent on this activity to TAC# ZF0001.

Let me or Jazel Parks know if you have any questions.

Thanks in advance for your support,

Brett

*Brett A. Rini*  
Technical Assistant  
Office of Nuclear Regulatory Research  
U.S. Nuclear Regulatory Commission  
(301)251-7615  
Brett.Rini@nrc.gov

CH/374

# How To Respond To An Initial FOIA Request

## What is the Freedom of Information Act (FOIA)?

The FOIA was passed by Congress in 1966. It permits any person, whether a citizen or not, to request records in possession and control of a Federal agency, and the agency must provide access to those records unless they are exempted from disclosure by one of the nine exemption categories in the Act. You should follow the steps listed below as you process a FOIA request. Each step is explained following the list.

- \_\_\_\_\_ Step 1: Make sure you clearly understand what records the requester is seeking.
- \_\_\_\_\_ Step 2: Determine if you are likely to have records subject to the request.
- \_\_\_\_\_ Step 3: Provide an estimate of search and review time and an estimate of pages if required.
- \_\_\_\_\_ Step 4: What to do if expedited processing is required.
- \_\_\_\_\_ Step 5: Search for records responsive to the request.
- \_\_\_\_\_ Step 6: Determine if records are to be released or withheld from the requester.
- \_\_\_\_\_ Step 7: Bracket information that should be withheld.
- \_\_\_\_\_ Step 8: Organize the records responsive to the request and submit them to you office FOIA coordinator.
- \_\_\_\_\_ Step 9: Submit your response package to the FOIA/PA caseworker.

### Step 1: **Make sure you clearly understand what records the requester is seeking.**

The FOIA/PA caseworker will make every effort to clarify the scope of the request before forwarding the request to the office FOIA coordinators. However, if you have questions about the request you should contact your office FOIA coordinator. If you believe you need additional clarification on the scope of the request, you should ask your office FOIA coordinator to request that the agency FOIA/PA caseworker responsible for overseeing processing of the request contact the requester for clarification or alternatively arrange a conference call with the requester at which time you may ask questions or offer suggestions to further define the scope of the request. Note that no contact should be made with the requester unless approved by the agency FOIA/PA caseworker so that all contacts with the requester meet the needs of all others who have a role in processing the request.

### Step 2: **Determine if you are likely to have records subject to the request.**

Based on your knowledge of the subject matter of the request, you should determine if you will have records responsive to the request. You are only required to look for records where you believe it is reasonable to expect you will locate paper or electronic records covered by the subject matter of the request.

Only agency records that are in existence on the date NRC received the request are subject to a FOIA request. Agency records are records created or obtained by the agency and under the agency control at the time of request. This includes records created by the NRC staff, records submitted to the NRC by applicants, licensees, contractors, Federal and state agencies, international organizations and members of the public.

No records that are potentially responsive to the FOIA request may be destroyed after receipt of the FOIA request. However, there is no need to reconstruct a record that was destroyed prior to receipt of a request nor does NRC have to inform the requester that a record does not exist since it was destroyed prior to receipt of the request. As a matter of discretion, you may include records that can be released that were created after the date a request was received if you believe it would provide a clearer picture of agency actions regarding the subject of the request.

The agency is not obligated to create a record to respond to a request. Neither does the FOIA require an agency to answer questions that are asked in a request.

Some records may be determined to be **personal records** in that they may relate to the subject of the request but have not been circulated to anyone else in the agency, are not filed with any other agency records, and you were not required to create or retain them. These records still have to be identified and retained, but the agency does not have to invoke an exemption to withhold them. The agency does have to inform the requester that there are records that have been deemed to be personal records and the number of pages. Management Directive 3.1, Freedom of Information Act, contains a Personal Record Consideration Checklist that should be filled out by the owner of the personal records and submitted to the office FOIA coordinator. Contact your office FOIA coordinator for retention requirements.

Also, if you believe responsive records may be located in other offices, or with persons who may have been previously involved in the subject matter as staff in your organization or a member of a team or project, provide that information promptly to your office FOIA coordinator. The FOIA/PA caseworker will then contact the additional office(s) to begin searching for subject records.

**Step 3: Provide an estimate of search and review time and pages if required**

Within **four (4)** working days of your office's receipt of the request, your office may be required to provide to the FOIA/PA caseworker an estimate of the amount of time expected to be required to search for, and review records, and an estimate of the number of pages (or inches) you expect will be released to the requester. This includes pages that may be released in part. Whether your office will need to provide an estimate will depend upon whether or not the requester has been granted a fee waiver. The instructions on the FOIA E-Mail Assignment Form sent to your office FOIA coordinator will inform you if a fee waiver has been granted. If granted, fee estimates are not required. Proceed to Step 5. Otherwise if fees are required, your estimates must be given to your office FOIA coordinator within the time frame specified by your office.

Fee estimate for **search time** should include all time required to locate records responsive to the FOIA request. This includes time spent locating folders in file cabinets, looking for relevant records within file folders, and searching ADAMS and other databases, and consulting with others regarding the location of responsive records. **Review time** includes the actual time each person who will be involved in the review of the records will spend determining

if the records can be released in their entirety or in part and the process of bracketing any information that will be proposed to be withheld. Duplication estimate is based of the number of pages likely to be released to the requester and **does not** include the staff-hours used to copy the records.

**Step 4: What to do if expedited processing is required.**

Your office FOIA coordinator will inform you if a request has been granted expedited processing. If a request has been granted expedited processing, you should process the expedited FOIA request before processing any previous FOIA requests. Contact your office FOIA coordinator for more specific directions if needed.

**Step 5: Search for records responsive to the request**

- a. Begin your search when instructed by the office FOIA coordinator.

Your office FOIA coordinator will tell you when to begin your search. If you had to provide a search, review or page estimate, you can expect that there may be a delay before you are instructed to begin your search. A search can begin only when a request is "perfected," which means when all fee related or other issues are resolved. If no estimates are required, your office FOIA coordinator will advise you to immediately begin your search for records.

- b. Inform your office FOIA coordinator if you believe other offices or persons have responsive records.

If you believe responsive records may be located in other offices, or with persons who may have been previously involved in the subject matter as staff in your organization or a member of a team or project, provide that information promptly to your office FOIA coordinator. Notify your office FOIA coordinator when you are aware the Commissioners or the EDO, or a Deputy EDO has been involved in the subject matter and may have responsive records or the records may be the subject of an ongoing investigation. This information is valuable because it will ensure that the agency as a whole does an adequate search for responsive records. If you know others who are processing the same request or who should be, it may be useful to work closely with them, even if they are in other offices to both ensure an adequate search and to make the search more efficient.

- c. Search all relevant files.

You must conduct, based on your knowledge of the subject matter, an adequate search of those paper and electronic files where you believe it is reasonable to expect to locate records covered by the subject matter of the request. You must include in your search the following:

- (1) paper records under your personal control including working papers you have retained in your possession
- (2) paper records maintained in your office
- (3) paper records in the NRC File Center

- (4) e-mails including property sheets in the Received, Sent, Archives, and Trash files. Note that since trash files are still within your control, e-mails responsive to a FOIA request in the trash folder must be identified, retrieved, printed out, and processed. You should also move the e-mail out of the trash folder to eliminate the possibility that an automatic deletion of e-mail will destroy the only copy.
- (5) electronic records in ADAMS Main Library and Legacy Library including all versions.
- (6) other electronic files, including but not limited to WordPerfect, Microsoft Word, spreadsheets, presentation files including those files stored on disks
- (7) databases including those files stored on disks
- (8) audio or video files or tapes.

d. Record computer search criteria

When a computer database such as ADAMS is searched to locate records responsive to a request, the search criteria used for conducting the search must be provided with the office response. The Department of Justice has advised agencies in order to justify that they have done an adequate search they must maintain computer search criteria. The search criteria must be provided even if no records are identified as a result of the computer search.

e. Download or print information from computer spreadsheets or databases.

If the requested information is in a database or spreadsheet and is retrievable by using an existing computer program or by minor program modifications or simple computer instructions, the subject information should be provided. If a program would have to be written, inform your office FOIA coordinator.

f. If a record is already publicly available you only have to identify the ADAMS accession number and a description of the record and page count. No copy is required to be made. Otherwise you will have to provide a copy of all responsive records.

**Step 6: Determine if records are to be released or withheld from the requester.**

After you have searched and located records, you should review the records to determine if any information in the records should be withheld under any of the FOIA exemptions. In particular you should be on alert for personal privacy information, allegation information, investigative related records, proprietary information, classified, or safeguards information. When you have questions you should refer to the applicable management directive or contact your office FOIA coordinator.

Sometimes while reviewing records you will find that they contain not only information that is subject to the request but also information that is outside the scope of the request. If an entire page of a record is outside of the scope of the request, you should mark the page at the top to indicate it is "Outside-of-Scope." This page will not be provided to the requester. If outside-of-scope information is on a page containing information that is subject to the request, the outside-of-scope information must be marked "Outside-of-Scope." The requester will be provided a redacted copy of the record that does not reveal the information that is outside-of-scope. It is not necessary to apply any FOIA exemptions to the outside-of-scope information.

Brief descriptions of the FOIA Exemptions are noted below. Descriptions are also found in NRC Management Directive 3.1, Freedom of Information Act, and 10 CFR 9.17. Your office FOIA coordinator can also provide additional information.

Exemption 1: Information properly classified pursuant to an Executive Order. This includes information classified as Confidential National Security Information (C/NSI); Secret National Security Information (S/NSI) or Top Secret National Security Information (TS/NSI). **PROVIDE A FORESEEABLE HARM STATEMENT ONLY IF NOT OBVIOUS**

Exemption 2: Information relating solely to internal personnel rules and procedures.

Low 2: This exemption has historically applied to internal information of a trivial nature, such as NRC parking lists or room numbers for NRC office buildings. Public release of such information would typically cause no harm, so the agency should generally authorize discretionary release of Exemption 2(low) records.

High 2: More substantial internal matters the disclosure of which would risk circumvention of a legal requirement where the information is predominantly internal and disclosure significantly risks circumvention of statutes or agency regulations. Some examples are: critical infrastructure systems and assets, and vulnerability assessments. Other information properly withheld under this exemption includes general guidelines for conducting investigations, computer programs and source codes, bridge passcodes, agency credit card numbers, and crediting plans for future vacancies. **A FORESEEABLE HARM STATEMENT MUST BE PROVIDED FOR EXEMPTION 2(HIGH)**

Exemption 3: Information specifically exempted from public disclosure by statute. This includes (1) safeguards information (*Section 147 of Atomic Energy Act (AEA)*); (2) Restricted Data (RD) including Restricted Data classified at the CONFIDENTIAL (C/RD), SECRET (S/RD), and TOP SECRET (TS/RD) levels (*Sections 141-145 of the AEA*), (3) voluntary submitted critical infrastructure information (6 U.S.C. 133(a)(1)(A). and (4) contractor proposals not incorporated into the contract (41 U.S.C., *Section 253b(m)(1)*). **PROVIDE A FORESEEABLE HARM STATEMENT ONLY IF NOT OBVIOUS**

Exemption 4: Trade Secrets or commercial or financial information. This includes (1) confidential business (proprietary) information; (2) licensee's physical protection or material control and accounting program information for special nuclear material (see 10 CFR 2.390(d)(1)); and (3) information submitted by a foreign source and received in confidence pursuant to 2.390(d)(2).

For confidential business (proprietary) information submitted by a company, provide a copy of the company's affidavit providing a statement of the reasons supporting the company's request that the information should be protected from public disclosure and the NRC's determination letter sent to the company. If your office determines that the information continues to be proprietary, the FOIA/PA staff, with OGC concurrence, will inform the requester in the NRC's response to the request. If you believe the record or portions are no longer proprietary, indicate those portions in your response. The FOIA/PA Officer will send a letter to the submitting company when an initial determination is made that information the

company claims as proprietary should be disclosed. The letter gives the company the opportunity to object to disclosure and if the company has any objection it must provide the agency a statement specifying the grounds why the information continues to be proprietary. The FOIA staff in consultation with OGC and the originating office will review the statement and reach a final agency decision and inform the company and the requester of that decision. **PROVIDE A FORESEEABLE HARM STATEMENT ONLY IF NOT OBVIOUS**

Exemption 5: Interagency or intraagency records that are not available through discovery during litigation. This is normally referred to as predecisional information and includes information that would reveal (1) a deliberative process but only those portions which reveal advice, opinions, and recommendations, (2) attorney work-products and (3) records covered by the attorney-client privilege. This exemption's goal is to encourage the open, frank, and candid exchange of opinions needed for good decision making, protect against premature disclosure of public policies, and protect against public confusion by disclosure of reasons and rationale that are not in fact actual reasons for agency decisions. Note that final agency decisions and interpretations can not be withheld under this exemption. **A FORESEEABLE HARM STATEMENT MUST BE PROVIDED FOR EXEMPTION 5, DELIBERATIVE PROCESS ONLY. ATTORNEY-CLIENT PRIVILEGE AND ATTORNEY-WORK PRODUCT DO NOT REQUIRE A FORESEEABLE HARM STATEMENT**

Exemption 6: Information if released would result in a clearly unwarranted invasion of personal privacy. For example, this includes social security numbers, home addresses, home or personal telephone, cell and pager numbers, personal non-government e-mail addresses, date of birth, marital status, number of children, and non-job related interests, personal medical, financial, performance and disciplinary information. For application packages, candidate evaluations, personnel forms SF 50 and SF 52, and appraisal-related records, guidance can be obtained from your office FOIA coordinator. **PROVIDE A FORESEEABLE HARM STATEMENT ONLY IF NOT OBVIOUS**

Exemption 7: Records compiled for law enforcement purposes. Sections A, C, and D are the most frequently used parts of this exemption.

7A: Disclosure could reasonably be expected to interfere with an enforcement proceeding. This exemption is used for records involved in an open allegation file, an ongoing investigation by the Office of Investigation (OI) or Office of the Inspector General (OIG), or in an ongoing enforcement action. **PROVIDE A FORESEEABLE HARM STATEMENT ONLY IF NOT OBVIOUS**

7B: Would deprive a person of a fair trial or an impartial adjudication. **PROVIDE A FORESEEABLE HARM STATEMENT ONLY IF NOT OBVIOUS**



- 7C: Disclosure could reasonably be expected to constitute an unwarranted invasion of personal privacy. (See examples under Exemption 6.) Note the threshold for invoking Exemption 7C is less than that for Exemption 6 because Exemption 6 requires that the invasion of personal privacy be clearly unwarranted. **PROVIDE A FORESEEABLE HARM STATEMENT ONLY IF NOT OBVIOUS**
- 7D: Information consists of names of individuals and other information the disclosure of which could reasonably be expected to reveal the identities of confidential sources. Confidential sources generally must have a written confidentiality agreement with the NRC. However that is not required by the OIG. **PROVIDE A FORESEEABLE HARM STATEMENT ONLY IF NOT OBVIOUS**
- 7E: Disclosure would reveal techniques and procedures for law enforcement investigations or prosecutions, or guidelines that could reasonably be expected to risk circumvention of the law. **PROVIDE A FORESEEABLE HARM STATEMENT ONLY IF NOT OBVIOUS**
- 7F: Disclosure could reasonably be expected to endanger the life or physical safety of an individual. **PROVIDE A FORESEEABLE HARM STATEMENT ONLY IF NOT OBVIOUS**

If you have questions regarding the application of exemptions you should consult with your own management or office FOIA coordinator

**Step 7: Bracket information that should be withheld.**

If the entire record is to be withheld write at the top of the first page: "Withhold All" and note the applicable FOIA exemption(s). If only a part of a record is to be withheld, whether it be part of a page, paragraph, or sentence, the information should be enclosed in brackets preferably using a red pencil and the applicable FOIA exemption noted in the margin next to the brackets. The FOIA requires that information that can be released be segregated from that which is withheld, thus it is important that you carefully consider what information can be released and what must be withheld. In particular, facts in predecisional records must be segregated from any advice, opinions or recommendations or other deliberative process information that is to be withheld. Also, make sure that information you are proposing to be withheld has not already been released to the public. Finally, remember you are only to bracket information to be withheld. The FOIA /PA Specialist is responsible for actually deleting withheld information in records prior to their release to the requester.

**Step 8: Organize the records responsive to the request and submit them to your office FOIA coordinator.**

Organize the responsive records into the following categories and list on separate pages as follows. Remember that all responsive records must be provided to the office FOIA coordinator regardless of whether they will be released or withheld in whole or in part. (Note the suggested format for compiling a list of records is as follows: Record Date, Originator, Originator Organization, Brief Subject and Page Count.)

- (1) **Records Already Publicly Available** - if in ADAMS (main and legacy libraries) include the ADAMS Accession Number or include a printout if the records were identified via an ADAMS search along with the criteria used to perform the search.
- (2) **Records Being Released in Their Entirety** - if the record is already in the ADAMS but not publicly available include the record's ADAMS Accession Number.
- (3) **Records Containing Security-Related Information** - these records will be released only to the requester and not made publicly available in ADAMS until a third FOIA request is received for the same record. When a third request is received, the record will be made publicly available in ADAMS.
- (4) **Records Being Released in Part** with the exemption(s) noted (*a foreseeable harm statement must be provided for exemptions 2(high) and 5(Deliberative Process)*).
- (5) **Records Being Withheld in Their Entirety** with the exemption(s) noted (*a foreseeable harm statement must be provided for exemptions 2(high) and 5(Deliberative Process)*).
- (6) **Records to be Referred to the Originating Office, Agency, or Company.**
  - (a) Identify any records submitted to the Commission or a Commissioner and provide a recommendation whether the record should be released or withheld because NRC policy requires Commission approval of the recommendation.
  - (b) Identify if any responsive record(s) involve(s) a subject for which litigation is either ongoing or is probable. This will ensure coordination with the Office of General Counsel, the NRC Solicitor, and when necessary the Department of Justice.
  - (c) Where an email contains the exchange between two or more offices, the submitting office is responsible for making a disclosure determination on the portions of the email originated by its staff and indicating the originating office(s) for the remaining portions.
  - (d) If a record contains proprietary information, remember to provide a copy of any affidavit provided by the submitted and any NRC decision letter. If the decision is still pending on submitted request for proprietary treatment of the record please note that in the response. Also since a letter will be sent to the submitted by the FOIA/PA Officer, please provide an address if it is not apparent on the record.

**Step 9: Submit your response package to the FOIA/PA caseworker.**

Within **ten (10)** working days, your office is required to submit records to the FOIA/PA caseworker handling the processing of the request. You should provide your office FOIA coordinator your response package within the time frame specified by your office. If you can not respond within your office's time frame, you should obtain your management approval and inform your office FOIA coordinator as soon as possible and explain why a delay will occur and when you expect to provide the complete response.

Your transmittal memo to the FOIA/PA caseworker must indicate whether the response does or does not contain security-related information. Your memo must also provide foreseeable harm statements for exemptions 2(high) and 5(Deliberative Process). You only need to provide a foreseeable harm statement for exemptions 1, 3, 4, 6, 7A and 7C if the reason

is not obvious. While each document or portion of a document protected by exemptions 2(high) and 5(*Deliberative Process*) must be addressed in a foreseeable harm statement, a single statement may cover multiple documents or multiple portions of documents, provided that the harm foreseen, and the reasons why the harm is foreseen, are the same for each. While foreseeable harm statements do not need to be lengthy, they should be reasonably specific.

You should include in your response the actual search time and review time you spent on processing the request.

Do not put your office FOIA response in ADAMS. The FOIA/PA caseworker will place the FOIA request, NRC's response(s) to the requester (including the appendices and records) in ADAMS should the determination be made that the FOIA can be made publicly available.

**FOIA/PA REQUEST**

Case No.: 2011-0119  
Date Rec'd: 3-16-11  
Specialist: Raphael  
Related Case: \_\_\_\_\_

Dina Cappiello  
The Associated Press  
1100 13th Street NW  
Washington, DC 20005  
202-641-9446

March 16, 2011

Donna L. Sealing  
FOIA/Privacy Officer  
U.S. Nuclear Regulatory Commission  
Mailstop: T-5 F09  
Washington, DC 20555-0001

**FOIA REQUEST**

Dear Ms. Sealing:

Pursuant to the federal Freedom of Information Act, 5 U.S.C. § 552, I request access to and copies of all internal communications within the NRC (including its chairman, four commissioners and their staff members) pertaining to the Japanese nuclear incidents caused by the March 11 earthquake and tsunami. This includes problems at the following three facilities: Fukushima Dai-ichi, Fukushima Daini, and Onagawa.

The communications should include emails, faxes, and written correspondence between the commission's chairman, its four commissioners, their staffs, the public affairs team and employees of other offices such as the Office of Nuclear Reactor Regulation, the Office of Nuclear Security and Incident Response, and the NRC's 24-hour Operations Center.

Please consider this an expedited request under the FOIA, as this information is urgently required to inform the public about an actual or alleged federal government activity, namely the role the U.S. government is playing in the response to the Japan crisis and whether what is unfolding there has implications for U.S. nuclear policy. I certify that I am a full-time employee for The Associated Press, the world's largest news-gathering organization with more than 1 billion readers, listeners and viewers.

Whether an "urgency to inform" exists depends on several factors: (1) whether the information relates to a currently unfolding story; (2) whether delaying release of the information harms the public interest; and (3) whether the request concerns federal governmental activity (*see Al-Fayed v. CIA*, 245 F.3d 300 (D.C. Cir. 2001)). In addition, "the credibility of a requester" is also a relevant consideration.

Please release any information pursuant to my requests as it is received and/or reviewed by your office, rather than waiting to send me all the material I have requested. If you have questions or need to contact me, I can be reached at 202-641-9446 and [dcappiello@ap.org](mailto:dcappiello@ap.org).

As I am making this request on behalf of the AP for use in reporting the news, no fees may be assessed for searching or reviewing documents sought by this request, and no duplication fees should be charged to the AP for the first 100 pages of material (*see 5 U.S.C. § 552(a)(4)(A)(ii)(II)*). AP hereby consents to pay duplication charges up to a total not to exceed \$200. Please notify me in advance before incurring any duplication charges in excess of this amount.

1100 13<sup>th</sup> St. NW, Suite 700, Washington, DC 20005-4076  
T: 202.641.9000 voice; [www.ap.org](http://www.ap.org)

As you know, the Act permits you to reduce or waive the fees when the release of the information is considered as "primarily benefiting the public." I believe that this request fits that category and I therefore ask that you waive any fees.

If all or any part of this request is denied, please cite the specific exemption(s) that you think justifies your refusal to release the information and inform me of your agency's administrative appeal procedures available to me under the law.

To the extent that you affirm, in whole or in part, the denial of disclosure, we ask that you provide us with a list describing with specificity the categories of documents that have been withheld and explaining the grounds for the withholding (*see Vaughn v. Rosen*, 484 F.2d 820 (D.C. Cir. 1973)).

I would appreciate your handling this request as quickly as possible, and I look forward to hearing from you.

I look forward to your reply within 20 business days, as the statute requires.

Thank you for your assistance.

Sincerely,

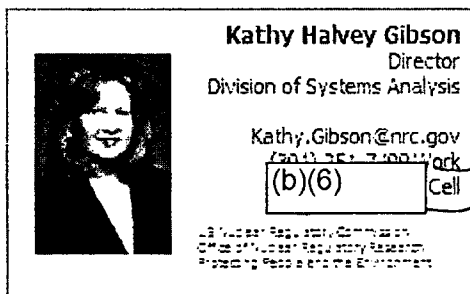
Dina Cappiello

**From:** Gibson, Kathy  
**To:** Sheron, Brian  
**Cc:** Valentin, Andrea; Parks, Jazel  
**Subject:** RE: Action: Fukushima FOIA  
**Date:** Friday, March 25, 2011 2:10:47 PM  
**Attachments:** Kathy Halvey Gibson.vcf

---

I was responding via Blackberry and reacting based on Susan's characterization of a "broad" FOIA request. Now that I'm back in the office and can read the actual language, it reads the same as our FOIA - e.g. "all internal communications **within the U.S. Department of Energy**".

So we are **not** involved in theirs and they are not involved in ours. Susan agrees. Whew!



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**From:** Sheron, Brian  
**Sent:** Friday, March 25, 2011 1:46 PM  
**To:** Gibson, Kathy  
**Subject:** RE: Action: Fukushima FOIA

Since when does a FOIA request to NRC also apply to a DOE Lab?

---

**From:** Gibson, Kathy  
**Sent:** Friday, March 25, 2011 1:43 PM  
**To:** 'sypicke@sandia.gov'  
**Cc:** Valentin, Andrea; Parks, Jazel; Sheron, Brian; Uhle, Jennifer  
**Subject:** Re: Action: Fukushima FOIA

I will pass this to our RES admin FOIA staff and we will get back to you. We may need guidance from our main FOIA people too. I suspect we will assign a POC for you on this. I am out on Monday, so I may not be able to get back to you until Tuesday.

---

**From:** Pickering, Susan Y <sypicke@sandia.gov>  
**To:** Gibson, Kathy  
**Sent:** Fri Mar 25 13:26:54 2011  
**Subject:** RE: Action: Fukushima FOIA

Howdy! The scope of the request is "all communication" related to the three Japanese sites. You can scroll down this message to the whole text, it is in black ink. The AP reporter mentions some officials by name.

CH/375

**From:** Gibson, Kathy [mailto:Kathy.Gibson@nrc.gov]  
**Sent:** Friday, March 25, 2011 11:04 AM  
**To:** Pickering, Susan Y; Uhle, Jennifer; Santiago, Patricia; Lee, Richard; Rivers, Joseph  
**Cc:** Gauntt, Randall O; Burns, Shawn; Valentin, Andrea; Parks, Jazel  
**Subject:** Re: Action: Fukushima FOIA

We have one too but it is limited to internal NRC to NRC communications from 3/11-3/16/11. What does yours encompass?

Jazel Parks is RES FOIA coordinator. She will likely be involved. Also Andrea Valentin, our Administrative SES.

---

**From:** Pickering, Susan Y <sypicke@sandia.gov>  
**To:** Uhle, Jennifer; Gibson, Kathy; Santiago, Patricia; Lee, Richard; Rivers, Joseph  
**Cc:** Gauntt, Randall O <rogaunt@sandia.gov>; Burns, Shawn <spburns@sandia.gov>  
**Sent:** Fri Mar 25 12:34:06 2011  
**Subject:** FW: Action: Fukushima FOIA

Well, it was bound to happen. We are responding to a broad FOIA request from the Associated Press. To what extent would you like to be involved? Sigh...

---

**From:** Pickering, Susan Y  
**Sent:** Friday, March 25, 2011 10:32 AM  
**To:** Pickering, Susan Y; Pearson, Camelia D.; Fitzpatrick, Lynn; Gauntt, Randall O; Burns, Shawn; Rein, Amy; O'Canna, Myra L; Castellano, Dolores; Elliott, Russell D; Parks, M Bradley; Rhodes, William G; Bonano, Evaristo Jose; Sorenson, Ken B; McClellan, Yvonne; Lloyd, Janette; Khalil, Imane; Miller, David R; McMahon, Kevin A; Shanks, Arthur; Danneskiold, James D; Petti, Jason P; Hill, Marianne B; Knief, Ronald A; Philbin, Jeffrey S; Durbin, Samuel; Ammerman, Douglas J; Shoemaker, Paul E; Jones, Joe A; Wheeler, Timothy; Lipinski, Ronald J  
**Cc:** Silva, Jacquelyn R; Bauck, Steven C; Eanes, James L; Orrell, Stanley A; Walck, Marianne; Tatro, Marjorie; Hwang, Bob  
**Subject:** Action: Fukushima FOIA  
**Importance:** High

Greetings,

**Your response is due to Camelia Pearson by COB Monday, 3/28!**

Here is what you need to know to respond:

- Freedom of Information Act (FOIA) is the law so respond quickly, accurately, and completely; as best you can given the short turnaround. NNSA is expediting this request.
- DOE received 3 nearly identical FOIA requests from the Associated Press. See, below
- The requests are for all communications including emails, faxes, and written correspondence. Provide only those communications between the listed entities, e.g., DOE, NRC, GE, other DOE labs, and the individuals specifically named.
- Verbal communication is outside the scope, you do not need to include it.
- Also out of scope are communications limited to LMC and Sandia, foreign entities and Sandia, or just between Sandians.
- In scope are communications Sandia contractors made that meet the request.



- If any content is OUO, propriety, or draft; please let Camelia Pearson know by adding a note in your email. Don't mark the document itself. The sensitive sections will be reviewed by classification folks for possible exemption/redaction.
- Send all communication to Camelia Pearson, electronically, if possible. For example, paste multiple emails into one email to her.
- Send communication from 3/11 to 4/1. Send all you have now and continue to send until COB 4/1.
- Keep all communication indefinitely. There could be follow-up action.
- There is no P/T, so use the one you charged when you generated the communication.
- Complete the attached form and send it to Camelia along w/ your communication. It is quick. Staff should complete section 5, managers section 6. Yes, the rates are woefully small. No, we don't get reimbursed (I asked). The requestor pays for the FOIA, but Dept of Justice keeps the money.

If you have no communication that matches the request, you can happily ignore this message. If you know of others that might, please forward it to them, including contractors. I will contact John Kelly, DOE NE, and Jennifer Uhle, NRC, about the request. You may let your customers know, too, if you like.

Transparency in government is what makes democracy great; but I know you weren't just hanging around playing dominoes! Thanks for your effort!  
syp

#### Requests:

1. The communications should include emails, faxes and written correspondence between Energy Secretary Steven Chu, his staff and his counsel, and all other DOE employees to and from the NRC and to and from GE Energy, Hitach-GE Nuclear energy, and its designated representatives. Our request should include communications between DOE national laboratories and NRC and GE pertaining to the nuclear incident, as well as the 34 DOE personnel working in Japan.

NOTE: The requester later added the following individuals to the requests: Daniel Poneman; Thomas D'Agostino; Dr. Peter Lyons; Steven Aoki; Adm. Joseph Krol; and, Adm. Kirkland Donald

2. Requesting copies of all internal communications within the U.S. Department of Energy, including those to and from Energy Secretary Steven Chu, his chief of staff, and his counsel, pertaining to the Japanese nuclear incidents cause by the March 11 earthquake and tsunami. This includes problems at the following three facilities: Fukushima Dai-ichi, Fukushima Daini, and Onagawa. The communications should include emails, faxes, and written correspondence between DOE and Japanese officials, including: Energy Secretary Chu, his staff and counsel, the 34 employees deployed to Japan and those working for national laboratories helping to assess and monitor the events.

NOTE: The requester later added the following individuals to the requests: Daniel Poneman; Thomas D'Agostino; Dr. Peter Lyons; Steven Aoki; Adm. Joseph Krol; and, Adm. Kirkland Donald

3. Requesting copies of all internal communications within the U.S. Department of Energy, including those to and from Energy Secretary Steven Chu, his chief of staff, and his counsel, pertaining to the Japanese nuclear incidents cause by the March 11 earthquake and tsunami. This includes problems at the following three facilities: Fukushima Dai-ichi, Fukushima Daini, and Onagawa. The communications should include emails, faxes, and written correspondence between Energy Secretary Chu, his staff and counsel, and all other DOE employees to and from the NRC and to and from GE Energy, Hitachi-GE Nuclear Energy, and its designated representatives. Our request should include communications between DOE national laboratories and NRC and GE pertaining to the nuclear incident, as well as the 34 DOE personnel working in Japan.

NOTE: The requester later added the following individuals to the requests: Daniel Poneman; Thomas D'Agostino; Dr. Peter Lyons; Steven Aoki; Adm. Joseph Krol; and, Adm. Kirkland Donald

**From:** Pickering, Susan Y

**Sent:** Thursday, March 24, 2011 5:11 PM

**To:** Pearson, Camelia D.; Fitzpatrick, Lynn; Gauntt, Randall O; Burns, Shawn; Miller, Christopher C; Rein, Amy; O'Canna, Myra L; Castellano, Dolores; Elliott, Russell D; Parks, M Bradley; Rhodes, William G; Bonano, Evaristo Jose; Sorenson, Ken B; McClellan, Yvonne; Lloyd, Janette; Khalil, Imane; Miller, David R; McMahon, Kevin A

**Cc:** Silva, Jacquelyn R; Bauck, Steven C; Eanes, James L; Orrell, Stanley A

**Subject:** RE: EXPEDITE: New FOIA Request: FOIA 11-00303-H (CAPPIELLO)

Greetings,

Don't panic!

I just spoke w/ James Eanes and Camelia Pearson. I have a better understanding of the request and Camelia is researching some specific questions. I will follow-up w/ them tomorrow morning and send you an update.

I am not sure who all will need to respond to this request, so please forward it to others as necessary. Don't respond yet!

syp

**From:** Pearson, Camelia D.

**Sent:** Thursday, March 24, 2011 4:43 PM

**To:** Fitzpatrick, Lynn; Gauntt, Randall O; Burns, Shawn; Miller, Christopher C; Rein, Amy; O'Canna, Myra L; Castellano, Dolores; Pickering, Susan Y; Elliott, Russell D

**Cc:** Silva, Jacquelyn R; Bauck, Steven C  
**Subject:** FW: EXPEDITE: New FOIA Request: FOIA 11-00303-H (CAPPIELLO)  
**Importance:** High

***FYI, there is no project and task number to charge this work too, and because (FOIA) Freedom of Information Act is the law and it is part of our contract within our Prime Contract, we have clauses that make Sandia subject to the law in a timely and efficient manner:***

**72. DEAR 970.5204-2 LAWS, REGULATIONS, AND DOE DIRECTIVES (DEC 2000) (DEVIATION)**

*(a) In performing work under this contract, the contractor shall comply with the requirements of applicable Federal, State, and local laws and regulations (including DOE regulations), unless relief has been granted in writing by the appropriate regulatory agency.*

***Therefore, each department is responsible for fulfilling the law and charging their costs accordingly to their own project and task.***

**Hello: This is an Expedited FOIA Request,**  
**Normal Times for Delivery Does Not Apply.**  
**The DUE Date to NNSA is March 31, 2011.**

The attached Freedom of Information Act (FOIA) requests access to and copies of all communications between the Department of Energy, the U.S. Nuclear Regulatory Commission, GE Energy and Hitachi-GE Nuclear Energy pertaining to the Japanese nuclear incidents caused by the March 11 earthquake and tsunami. This includes problems at the following three facilities: Fukushima Dai-ichi, Fukushima Daini, and Onagawa.

**3 requests were aggregated into 1:**

2. The communications should include emails, faxes and written correspondence between Energy Secretary Steven Chu, his staff and his counsel, and all other DOE employees to and from the NRC and to and from GE Energy, Hitachi-GE Nuclear energy, and its designated representatives. Our request should include communications between DOE national laboratories and NRC and GE pertaining to the nuclear incident, as well as the 34 DOE personnel working in Japan.

NOTE: The requester later added the following individuals to the requests: Daniel Poneman; Thomas D'Agostino; Dr. Peter Lyons; Steven Aoki; Adm. Joseph Krol; and, Adm. Kirkland Donald

2. Requesting copies of all internal communications within the U.S. Department of Energy, including those to and from Energy Secretary Steven Chu, his chief of staff, and his counsel, pertaining to the Japanese nuclear incidents cause by the March 11 earthquake and tsunami. This includes problems at the following

three facilities: Fukushima Dai-ichi, Fukushima Daini, and Onagawa. The communications should include emails, faxes, and written correspondence between DOE and Japanese officials, including: Energy Secretary Chu, his staff and counsel, the 34 employees deployed to Japan and those working for national laboratories helping to assess and monitor the events.

NOTE: The requester later added the following individuals to the requests: Daniel Poneman; Thomas D'Agostino; Dr. Peter Lyons; Steven Aoki; Adm. Joseph Krol; and, Adm. Kirkland Donald

3. Requesting copies of all internal communications within the U.S. Department of Energy, including those to and from Energy Secretary Steven Chu, his chief of staff, and his counsel, pertaining to the Japanese nuclear incidents cause by the March 11 earthquake and tsunami. This includes problems at the following three facilities: Fukushima Dai-ichi, Fukushima Daini, and Onagawa. The communications should include emails, faxes, and written correspondence between Energy Secretary Chu, his staff and counsel, and all other DOE employees to and from the NRC and to and from GE Energy, Hitachi-GE Nuclear Energy, and its designated representatives. Our request should include communications between DOE national laboratories and NRC and GE pertaining to the nuclear incident, as well as the 34 DOE personnel working in Japan.

NOTE: The requester later added the following individuals to the requests: Daniel Poneman; Thomas D'Agostino; Dr. Peter Lyons; Steven Aoki; Adm. Joseph Krol; and, Adm. Kirkland Donald

(The original request begins on page 2 of the attached document.)

**Your response is greatly appreciated within 2 days by Monday March 28, 2011, for records that are only explicitly responsive to what the requester has asked. If there is more than one item or question listed, please indicate which record(s) respond to that specific item or question.** An estimate of costs for processing, and/or a need for clarification/scope narrowing, and the time you need to review and gather documents to the FOIA request. **In addition please fill out the LAST page of the Record of Freedom of Information (FOI) Processing Cost sheet for Contractor personnel that is attached to the original FOIA request** (The instructions for filling out the form is on the next to the last page) and return to me within 5 days by Thursday October



15, 2011 for an estimate of cost and processing as indicated above. The FOIA will be considered INCOMPLETE if this information is not provided, IT WILL BE RETURNED FOR PROCESSING. Please use the amounts already embedded in the document any other amount is not accepted, these are set cost by FOIA.

*If you are not the person to receive this FOIA request, (disregard) and please let me know if there are other individuals, I should contact to respond to this FOIA request.*

In addition, if a search was conducted and no responsive records were found, I need you to answer the following four questions below and email me the response within 2 days by Monday March 28, 2011:

1. Where was the search conducted?
2. What type of search was conducted, hand or computer?
3. If it was a computer, how was it conducted and what was searched? (What Keywords Was Used to Query the Database).
4. If by hand, how was it conducted and what was searched?

Please send one (1) copy of any unclassified or sensitive

[REDACTED]

[REDACTED] DO

**NOT SEND ANY RECORDS OR RESPONSIVE**

**INFORMATION to the requester, NNSA, SSO, or any other**

[REDACTED]



source.

One (1) copy of all classified responsive information must

when the records have been sent.

Please notify me by email if any of these Sandia records are **Contractor-Owned Records** according to Sandia's M&O contract, Clause I-73 (b) <http://www-irm.sandia.gov/corpdata/doe/prime/i-73.html>; therefore, they are **not agency records** and therefore not subject to FOIA.

When searching for responsive record(s) in your organization, this search should include records maintained in any format, including electronic files, active files, and retired files in the Archives. If you know responsive records are available through the following, state, this in your response and provide as much bibliographical information (title, url, if on the web, author, etc,) as possible to be provided to the requester.

- Office of Science and Technical Information (OSTI).
- National Technical Information Service (NTIS).
- Public Library.
- DOE Reading Room.

If the record's can be located in a DOE Reading Room and the requester is within 100 miles of that location, we are not required to provide the document's; it is consider to be in a public domain.

#### **ADDITIONAL INFORMATION** (Freedom of Information Act (FOIA Exemptions) :

The following lists the nine categories of records, which are exempt from disclosure under FOIA:

1. Documents classified by executive order-(national security information)
2. Internal personnel rules and procedures—(examples: internal manuals and standard operating procedures)
3. Documents specifically exempted by statute—(restricted data, formerly restricted data, and unclassified controlled nuclear information)

4. Confidential or proprietary business information submitted to the Department of Energy—(examples: portions of contracts or proposal)
5. Records which are inter- or intra-agency memorandums or letters—(this exemption safeguards the deliberative policy-making process. Draft documents are usually considered pre-decisional, deliberative process documents. However, final decisions must be released, along with the factual information. This exemption also includes attorney-client work products)
6. Records which would be a clearly unwarranted invasion of personal privacy—(examples: documents contained in personnel or medical files)
7. Records of information compiled for "for enforcement purposes" (this would not include background investigative reports or documents concerning security clearances) to the extent that disclosure would:
  - a. Interfere with the enforcement proceedings;
  - b. Deny an individual of a right to a fair or impartial adjudication;
  - c. Be an unwarranted invasion of personal privacy;
  - d. Disclosure the identity of a confidential source;
  - e. Reveal investigator techniques or procedures;
  - f. Endanger the life or physical safety of any individual;
8. Records, which pertain to the regulation and supervision of financial institutions.
9. Maps and records containing geological and geophysical information concerning wells.

Thank you,

---

**From:** Peigler, Wanda [mailto:WPeigler@doeal.gov]  
**Sent:** Thursday, March 24, 2011 2:39 PM  
**To:** Pearson, Camelia D.  
**Cc:** Deserisy, Lloyd Donald  
**Subject:** FW: EXPEDITE: New FOIA Request: FOIA 11-00303-H (CAPPIELLO)  
**Importance:** High

This is an expedited request that is due by March 31, 2011. I am preparing the official request, but sending this to you prior, so you can get this out to the SMEs. Thanks.

---

**From:** Hamblen, Christina H.  
**Sent:** Thursday, March 24, 2011 12:20 PM  
**To:** Vigil, Geraldine J.; Harkness, Debbie; Peigler, Wanda; Wyatt, Steven L (YSO); Slack, Terri (Y12)  
**Subject:** EXPEDITE: New FOIA Request: FOIA 11-00303-H (CAPPIELLO)  
**Importance:** High

ALL,

**EXPEDITED PROCESSING**

**DUE DATE: March 31, 2011**



**Important:** This FOIA is being coordinated by HQ DOE. Expedited processing was granted to the requester. Therefore, please move this FOIA to the top of your list and get it back to us as soon as possible. **DO NOT DELAY.**

**Here is DOE's guidance for this request:**

The interim response to this request is being review by GC/Susan Beard. There will be a consolidated response via DOE-HQ, the timeframe for the search is March 11-March 16. **1.** Index the records (categorically) as oppose to each individual document. **2.** The documents along with a signed certification sheet (attached) by an authorizing/denying official and a justification memo is to be sent/mailed to this office (SC FOIA Office). **3.** The documents should have been review by your office and any information should be bracketed and the FOIA exemption place next to the bracket. **4.** The justification memo should discuss the rational for withholding the information and how it relates to the exemption(s) being used. **5.** The memo should contain any other pertinent information about the documents that we should be aware of.

**3 requests were aggregated into 1:**

**1.** Requesting copies of all internal communications within the U.S. Department of Energy, including those to and from Energy Secretary Steven Chu, his chief of staff, and his counsel, pertaining to the Japanese nuclear incidents cause by the March 11 earthquake and tsunami. This includes problems at the following three facilities: Fukushima Dai-ichi, Fukushima Daini, and Onagawa.

The communications should include emails, faxes, and written correspondence between Energy Secretary Chu, his office and his staff, the Public Affairs Office, DOE national laboratories, and the 34 DOE personnel on the ground in Japan assisting in the response to the disaster.

NOTE: The requester later added the following individuals to the requests: Daniel Poneman; Thomas D'Agostino; Dr. Peter Lyons; Steven Aoki; Adm. Joseph Krol; and, Adm. Kirkland Donald

**2.** Requesting copies of all internal communications within the U.S. Department of Energy, including those to and from Energy Secretary Steven Chu, his chief of staff, and his counsel, pertaining to the Japanese nuclear incidents cause by the March 11 earthquake and tsunami. This includes problems at the following three facilities: Fukushima Dai-ichi, Fukushima Daini, and Onagawa.

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NOTE: The requester later added the following individuals to the requests: Daniel Poneman; Thomas D'Agostino; Dr. Peter Lyons; Steven Aoki; Adm. Joseph Krol; and, Adm. Kirkland Donald

Chris

**Christina Hamblen**  
**Information Programs Specialist**  
**Office of Public Affairs**  
**National Nuclear Security Administration**  
**Service Center**  
**Phone: (505) 845- 4765**  
**Fax: (505) 284-7205**



**SAVE PAPER - Please do not print this e-mail unless absolutely necessary**