From: Robert Meck <robert.meck@satsllc.us>
Sent: Monday, March 21, 2011 9:22 AM
To: Okoshi
Subject: FYI: I was credited as an information source for the New York Times

Dear Okoshi-san,

For your information, I was called by the New York Times concerning the model used by the Nuclear Regulatory Commission. As you know I worked on the Protective Measures Team for 25 years, with a number of years as the Deputy Director.

See: http://www.nytimes.com/interactive/2011/03/16/world/asia/japan-nuclear-evaculation-zone.html

I remain at your service.

Warm regards,
Bob

Robert A. Meck, Ph.D.
Science and Technology Systems, LLC
9408 Corsica Drive
Bethesda, MD 20814-2814

(301) 437-6139

http://satsllc.us

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From: Tupin.Edward@epamail.epa.gov
Sent: Monday, March 21, 2011 1:55 PM
To: Evans, Lynn (CDC/ONDIEH/NCEH)
Cc: Wiley, Albert (ORAU); Ansari, Armin (CDC/ONDIEH/NCEH); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Maher, Carmen T. (FDA/OC/OCS); Connell, Carol (ATSDR/DHAC/SRAB); Miller, Charles W. (CDC/ONDIEH/NCEH); Liles.Darrell@epamail.epa.gov; Morrison, Ellen F. (FDA/OC/OCTC); Jablonowski.Eugene@epamail.epa.gov; Hornsby-Myers, Jennifer (CDC/NIOSH/OD); Brozowski.George@epamail.epa.gov; Allen, George T. (FDA/ORA/NE-FO); Evans, Lynn (CDC/ONDIEH/NCEH); Cleveland, Gordon (USDA); Dixon, John E. (CDC/ONDIEH/NCEH); Cherniack, James J. (FDA/ORA/NE-FO); Sincek, Jeffrey A. (FDA/ORA/CE-FO); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); Jensen, John (USDA); 'Pavek, John (USDA)'; Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Smallwood, Karen R. (FDA/ORA/SE-FO); Keith, Sam (ATSDR/DTEM/ATB); Veal.Lee@epamail.epa.gov; Brandon, Lou; Russo, Mark R. (FDA/OC/OCTC); Brooks, Michael (ATSDR/DHAC/SRAB); Mena, RaJah (DOE/FRMAC); 'Noska, Mike (FDA)'; O'Laughlin, Colleen (DOE/FRMAC); Buzzell, Jennifer (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); Hansen, Patricia A. (FDA/CFSAN); Pemberton, Wendy (DOE/FRMAC); Petch, Peter (USDA); Evans, Rachel T. (FDA/ORA/CE-FO); Funk, Renee (CDC/NIOSH/OD); Goodman.Roger@epamail.epa.gov; Graham, Ron (USDA); DeCair.Sara@epamail.epa.gov; Hargrave, Scotty L. (FDA/ORA/SW-FO); Lough, Scott (USDA); Jones, Terri L. (FDA/ORA/P-FO); Howard King, Vinetta M. (FDA/OC/OCTC); Lotz, William G. (Greg) (CDC/NIOSH/DART); Cunningham, William C. (FDA/CFSAN); Cardarelli.John@epamail.epa.gov
Subject: Re: Advisory Team Call Agenda

Quick agenda for today

1. Roll call
2.Report from White house
3. Action item tracking process
4. Action items closed
    a. Food Guidance to Japan
5. Action items in process
    a. Clearance for stuff issue - CPB, USCG
    b. DOD request for advice on PAG application for area outside current evac area

    c. drinking water
    d. milk
    e.Modeling

Ed
Edward A. Tupin, MS, CHP
tupin.edward@epa.gov
Health Physicist
Center for Radiological Emergency Management US Environmental Protection Agency 6608J Washington, DC 20460
office: (202) 343-9383
cell: (b)(6)

DJ/202

Office Location
1310 L. ST, NW
Washington, DC 20005
****

From: Evans, Lynn (CDC/ONDIEH/NCEH) <gfn6@cdc.gov>
Sent: Tuesday, March 22, 2011 12:37 PM
To: Radke, Vincent (CDC/ONDIEH/NCEH); Talbert, Todd (CDC/OPHPR/DSLR); 'Ferris.John@dol.gov'; 'cardarelli.john@epa.gov'; 'boyd.mike@epa.gov'; Allen, George T. (FDA/ORA/NE-FO); Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Ansari, Armin (CDC/ONDIEH/NCEH); Brandon, Lou; Brooks, Michael (ATSDR/DHAC/SRAB); Brozowski, George (EPA); Buzzell, Jennifer (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); Cherniack, James J. (FDA/ORA/NE-FO); Cleveland, Gordon (USDA); Connell, Carol (ATSDR/DHAC/SRAB); Cunningham, William C. (FDA/CFSAN); DeCair, Sara (EPA); Dixon, John E. (CDC/ONDIEH/NCEH); Evans, Lynn (CDC/ONDIEH/NCEH); Evans, Rachel T. (FDA/ORA/CE-FO); Funk, Renee (CDC/NIOSH/OD); Goodman, Roger (EPA); Graham, Ron (USDA); Hansen, Patricia A. (FDA/CFSAN); Hargrave, Scotty L. (FDA/ORA/SW-FO); Hornsby-Myers, Jennifer (CDC/NIOSH/OD); Howard King, Vinetta M. (FDA/OC/OCTC); Jablonowski, Gene (EPA); Jensen, John (USDA); Jones, Terri L. (FDA/ORA/P-FO); Keith, Sam (ATSDR/DTEM/ATB); Liles, Darrell (EPA); Lotz, William G. (Greg) (CDC/NIOSH/DART); Lough, Scott (USDA); Maher, Carmen T. (FDA/OC/OCS); Mena, RaJah (DOE/FRMAC); Miller, Charles W. (CDC/ONDIEH/NCEH); Morrison, Ellen F. (FDA/OC/OCTC); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); Noska, Mike (FDA); O'Laughlin, Colleen (DOE/FRMAC); Pavek, John (USDA); Pemberton, Wendy (DOE/FRMAC); Petch, Peter (USDA); Russo, Mark R. (FDA/OC/OCTC); Sincek, Jeffrey A. (FDA/ORA/CE-FO); Smallwood, Karen R. (FDA/ORA/SE-FO); Tupin, Ed (EPA); Veal, Lee (EPA); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Wiley, Albert (ORAU)
Subject: FW: Advisory Team call agenda 3-22
Attachments: Draft Proposal for A-Team Discussion on CBP needs - 2.docx

See attached agenda for Advisory Team conference call at 1:00 pm today.

Phone number: 866-561-4509
Pass code: (b)(6)

Thanks!
Lynn

-----Original Message-----
From: Tupin.Edward@epamail.epa.gov [mailto:Tupin.Edward@epamail.epa.gov]
Sent: Tuesday, March 22, 2011 12:30 PM
To: Evans, Lynn (CDC/ONDIEH/NCEH); Kudarauskas.Paul@epamail.epa.gov; Sincek, Jeffrey A. (FDA/ORA/CE-FO); Cardarelli.John@epamail.epa.gov
Subject: Advisory Team call agenda 3-22

Please distribute to all.

Agenda:

1. Roll call

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2.Need hard end at 2:00 PM EDT for FRPCC all-in.
3. Action item tracking process and FTP site 4. Action items closed
    a. Food Guidance to Japan
5. Action items in process
    a. Clearance for stuff issue - CPB, USCG - see attachment
    b.Guam has requested guidance from FDA on disposal of food, should it be found to contain radioactive contamination. (Bill Cunningham)
    c. Domestically produced milk and drinking water -trigger for testing US supplies
    d. Imported milk -import screening values

6 Other business
7. Adjourn

(See attached file: Draft Proposal for A-Team Discussion on CBP needs -
2.

Ed
Edward A. Tupin, MS, CHP
tupin.edward@epa.gov
Health Physicist
Center for Radiological Emergency Management US Environmental Protection Agency 6608J Washington, DC 20460
office: (202) 343-9383
cell (b)(6)
Office Location
1310 L. ST, NW
Washington, DC 20005
****

Environmental Protection Agency
Office of Emergency Management
National Decontamination Team

1/23/2013

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From: PMT01 Hoc
Sent: Wednesday, March 23, 2011 6:50 AM
To: PMT01 Hoc; Imboden, Andy; Quinlan, Kevin; Mazaika, Michael; Brown, David; Harvey, Brad; Brandon, Lou; Schaaf, Robert; Galletta, Thomas
Subject: PMT01 Support Schedule
Attachments: Copy of PMT01 Support Schedule.xlsx

The attached was worked on by Imboden and Quinlan, following the principle of getting folks consecutive days off where possible. If we found a "solution" for three shifts per day, we coded it green. Unavailable people are red. Available times were left yellow for days where there is no clear solution. A copy of this schedule is on the PMT01 desktop. Because of people's sleep schedules, etc., we recommend PMT01 control the file, with email distribution for sharing information only. This way we would avoid version control problems.

Observations:

- We will have a problem the weekend of 2 April with staffing.
- NARAC is ***not*** staffing 24/7 anymore. We will no longer be receiving routine met data (NARAC is available in case of emergency).
- They start work around 8 AM Pacific Time ... we suspect we will not receive new met data until 11 AM earliest.
- The attached spreadsheet is assuming 3 shifts – 24/7, but we may want to reconsider going to 2 given NARAC's schedule.

Andy and Kevin

DU 204

Month	Date	Day	Mazaika	Imboden	Harvey	Brown	Quinlan	Galletta			
Mar	23	W	7A-3P	11 pm -7am	3pm-11pm						Scheduled
	24	Th			3pm-11pm	7am-3pm	11pm-7am				
	25	F	7A-3P		3pm-11pm		11pm-7am				Preference
	26	Sa	NA	7am-3pm	3pm-11pm		11 pm -7am				
	27	Su	3P-11P		7am-3pm		11 pm -7am				Not Avail
	28	M	7A-3P	3, 1	3pm-11pm	3pm-11pm	11 pm -7am				
	29	T	7A-3P	11 pm -7am		3pm-11pm					Any Shift
	30	W	Any 2-1-3	11 pm -7am	7am-3pm	3pm-11pm					
	31	Th	Any 2-1-3	3, 1	7am-3pm	3pm-11pm	11 pm -7am				
Apr	1	F	NA		7am-3pm	3pm-11pm					
	2	Sa	NA		7am-3pm						
	3	Su	3P-11P		7am-3pm		no 1				
	4	M	Any 2-1-3	3		Any 2-3-1	Any 1-3-2				
	5	T	Any 2-1-3	3, 1		Any 2-3-1	Any 1-3-2				
	6	W	Any 2-1-3	3, 1		Any 2-3-1	Any 1-3-2				
	7	Th	Any 2-1-3	3, 1		Any 2-3-1	Any 1-3-2				
	8	F	Any 2-1-3	3, 1		Any 2-3-1	Any 1-3-2				
	9	Sa	3P-11P	3			7am-3pm				
	10	Su	NA	3	1		3pm-11pm				
	11	M	3P-11P	3, 1		Any 2-3-1					
	12	T	NA	3, 1		Any 2-3-1					
	13	W	Any 2-1-3	1		Any 2-3-1					
	14	Th	Any 2-1-3			Any 2-3-1					
	15	F	Any 2-1-3	3, 1		Any 2-3-1					
	16	Sa	Any 2-1-3		NA						

				1	2	3
Month	Date	Day		7am-3pm	3pm-11pm	11pm-7am
Mar	26	Sa		H, i	H,I	H, Q
	27	Su		H, q	H, M, q	H, Q
	28	M		b, H, i, m, q	B, M, q	b, H, I, m, Q
	29	T		b, H, m, q	B, H, M, q	b, H, m, I, Q
	30	W		b, H, i, m, q	B, H, M, q	b, H, I, m, Q
	31	Th		b, H, I, m, q	B, H, M, q	b, H, I, m, Q
Apr	1	F		b, H, Q	B, H, q	b, H
	2	Sa		H	H	H
	3	Su		H	H, M, Q	H, Q
	4	M		b, H, m, Q	B, H, M, q	b, H, I, m, q
	5	T		b, H, i, m, Q	B, H, M, q	b, H, I, m, q
	6	W		b, H, i, m, Q	B, H, M, q	b, H, I, m, q
	7	Th		b, H, i, m, Q	B, H, M, q	b, H, I, m, q
	8	F		b, H, i, m, Q	B, H, M, q	b, H, I, m, q
	9	Sa		H, I, Q	H, I, M	H, I
	10	Su		H, I, q	H, I, q	H, I, Q
	11	M		b, H, I, q	B, H, M, q	b, H, I, Q
	12	T		b, H, I, q	B, H, q	b, H, I, Q
	13	W		b, H, i, m, q	B, H, M, q	b, H, m, Q
	14	Th		b, H, m, q	B, H, M, q	b, H, m, Q
	15	F		b, H, i, m, q	B, H, M, q	b, H, I, m, Q

From: Anderson, Jeri L. (CDC/NIOSH/DSHEFS) <jva2@cdc.gov>
Sent: Wednesday, March 23, 2011 10:31 AM
To: Dixon, John E. (CDC/ONDIEH/NCEH); Keith, Sam (ATSDR/DTEM/ATB); 'Tupin.Edward@epamail.epa.gov'; Evans, Lynn (CDC/ONDIEH/NCEH); 'albert.wiley@orise.orau.gov'; Ansari, Armin (CDC/ONDIEH/NCEH); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Maher, Carmen T. (FDA/OC/OCS); Connell, Carol (ATSDR/DHAC/SRAB); Miller, Charles W. (CDC/ONDIEH/NCEH); 'Liles.Darrell@epamail.epa.gov'; Morrison, Ellen F. (FDA/OC/OCTC); 'Jablonowski.Eugene@epamail.epa.gov'; Hornsby-Myers, Jennifer (CDC/NIOSH/OD); 'Ferris.John@dol.gov'; 'Brozowski.George@epamail.epa.gov'; Allen, George T. (FDA/ORA/NE-FO); 'gordon.s.cleveland@aphis.usda.gov'; Cherniack, James J. (FDA/ORA/NE-FO); Sincek, Jeffrey A. (FDA/ORA/CE-FO); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); 'john.jensen@dm.usda.gov'; 'John.Pavek@wdc.usda.gov'; Smallwood, Karen R. (FDA/ORA/SE-FO); 'Veal.Lee@epamail.epa.gov'; Brandon, Lou; Russo, Mark R. (FDA/OC/OCTC); Brooks, Michael (ATSDR/DHAC/SRAB); 'menarm@nv.doe.gov'; 'michael.noska@fda.hhs.gov'; 'olaughlin@nv.doe.gov'
Cc: 'Edwards.Jonathan@epamail.epa.gov'; 'Page.Steve@epamail.epa.gov'
Subject: RE: Advisory Team Product for CBP

I am also uncomfortable with the use of a multiples of background. Also, the DOT limit for non-fixed external radioactive contamination limits for packages is 220 dpm/cm2 (49 CFR 173.443).The 500 uR/h dose rate limit is not to be exceeded at each accessible surface. Based on my rough calculations, it is possible to exceed the removable contamination limits well below the 500 uR/h surface dose rate limit if measuring at 30-100 cm (or whatever the assumed distance the EPD is located from the object of interest). On the other hand, based on my calculations, it is unlikely that this would result in significant dose to workers or others if resuspension were to occur (millirem levels after hours of exposure).

It seems prudent to reduce the alarm dose rate by a factor of 5 or so, especially since such low levels of contamination are expected, and to perform a few periodic wipe tests. If not, it would be a good idea to emphasize stringent contamination control practices (i.e., wearing gloves, frequent hand washing, especially before eating and/or smoking, etc.).

From: Dixon, John E. (CDC/ONDIEH/NCEH)
Sent: Wednesday, March 23, 2011 9:13 AM
To: Keith, Sam (ATSDR/DTEM/ATB); 'Tupin.Edward@epamail.epa.gov'; Evans, Lynn (CDC/ONDIEH/NCEH); 'albert.wiley@orise.orau.gov'; Ansari, Armin (CDC/ONDIEH/NCEH); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Maher, Carmen T. (FDA/OC/OCS); Connell, Carol (ATSDR/DHAC/SRAB); Miller, Charles W. (CDC/ONDIEH/NCEH); 'Liles.Darrell@epamail.epa.gov'; Morrison, Ellen F. (FDA/OC/OCTC); 'Jablonowski.Eugene@epamail.epa.gov'; Hornsby-Myers, Jennifer (CDC/NIOSH/OD); 'Ferris.John@dol.gov'; 'Brozowski.George@epamail.epa.gov'; Allen, George T. (FDA/ORA/NE-FO); 'gordon.s.cleveland@aphis.usda.gov'; Cherniack, James J. (FDA/ORA/NE-FO); Sincek, Jeffrey A. (FDA/ORA/CE-FO); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); 'john.jensen@dm.usda.gov'; 'John.Pavek@wdc.usda.gov'; Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Smallwood, Karen R. (FDA/ORA/SE-FO); 'Veal.Lee@epamail.epa.gov'; 'lkb1@nrc.gov'; Russo, Mark R. (FDA/OC/OCTC); Brooks, Michael (ATSDR/DHAC/SRAB); 'menarm@nv.doe.gov'; 'michael.noska@fda.hhs.gov'; 'olaughlin@nv.doe.gov'
Cc: 'Edwards.Jonathan@epamail.epa.gov'; 'Page.Steve@epamail.epa.gov'
Subject: Re: Advisory Team Product for CBP

Good comments. I have reservations about using the concept of releasing anything based upon "background" levels. Background as compared to what? What instrument/probe is used? Is this determination done in the field or a certified lab? As I do not have access to a computer at the moment, how do these values compare to those used by DOT? DOT values are much higher than NRC, etc., and are used for public roads. These values are much less restrictive and (when

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considering the short lived isotopes like iodine) could allow access to equipment instead of restriction or disposal of the same equipment. We should consider such values (the higher ones) when characterizing things like aircraft.

Regards,
John

From: Keith, Sam (ATSDR/DTEM/ATB)
Sent: Wednesday, March 23, 2011 08:32 AM
To: Tupin.Edward@epamail.epa.gov <Tupin.Edward@epamail.epa.gov>; Evans, Lynn (CDC/ONDIEH/NCEH); Wiley, Albert (ORAU) <albert.wiley@orise.orau.gov>; Ansari, Armin (CDC/ONDIEH/NCEH); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Maher, Carmen T. (FDA/OC/OCS); Connell, Carol (ATSDR/DHAC/SRAB); Miller, Charles W. (CDC/ONDIEH/NCEH); Liles.Darrell@epamail.epa.gov <Liles.Darrell@epamail.epa.gov>; Morrison, Ellen F. (FDA/OC/OCTC); Jablonowski.Eugene@epamail.epa.gov <Jablonowski.Eugene@epamail.epa.gov>; Hornsby-Myers, Jennifer (CDC/NIOSH/OD); 'Ferris.John@dol.gov' <Ferris.John@dol.gov>; Brozowski.George@epamail.epa.gov <Brozowski.George@epamail.epa.gov>; Allen, George T. (FDA/ORA/NE-FO); Evans, Lynn (CDC/ONDIEH/NCEH); Cleveland, Gordon (USDA) <gordon.s.cleveland@aphis.usda.gov>; Dixon, John E. (CDC/ONDIEH/NCEH); Cherniack, James J. (FDA/ORA/NE-FO); Sincek, Jeffrey A. (FDA/ORA/CE-FO); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); Jensen, John (USDA) <john.jensen@dm.usda.gov>; Pavek, John (USDA) <john.pavek@wdc.usda.gov>; Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Smallwood, Karen R. (FDA/ORA/SE-FO); Veal.Lee@epamail.epa.gov <Veal.Lee@epamail.epa.gov>; Brandon, Lou (NRC) <lkb1@nrc.gov>; Russo, Mark R. (FDA/OC/OCTC); Brooks, Michael (ATSDR/DHAC/SRAB); Mena, RaJah (DOE/FRMAC) <menarm@nv.doe.gov>; Noska, Mike (FDA) <michael.noska@fda.hhs.gov>; O'Laughlin, Colleen (DOE/FRMAC) <olaughlin@nv.doe.gov>; Buzzell, Jennifer (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); Hansen, Patricia A. (FDA/CFSAN) <patricia.hansen@fda.hhs.gov>; Pemberton, Wendy (DOE/FRMAC) <pemberwj@nv.doe.gov>; Petch, Peter (USDA) <peter.a.petch@aphis.usda.gov>; Evans, Rachel T. (FDA/ORA/CE-FO); Funk, Renee (CDC/NIOSH/OD); Goodman.Roger@epamail.epa.gov <Goodman.Roger@epamail.epa.gov>; Graham, Ron (USDA) <ron.graham@fsis.usda.gov>; DeCair.Sara@epamail.epa.gov <DeCair.Sara@epamail.epa.gov>; Hargrave, Scotty L. (FDA/ORA/SW-FO); Lough, Scott (USDA) <Scott.Lough@ams.usda.gov>; Jones, Terri L. (FDA/ORA/P-FO); Radke, Vincent (CDC/ONDIEH/NCEH); Howard King, Vinetta M. (FDA/OC/OCTC); Lotz, William G. (Greg) (CDC/NIOSH/DART); Cunningham, William C. (FDA/CFSAN) <william.cunningham@fda.hhs.gov>; Rohde, Brian (b)(6) Regan, Sean P. (b)(6) Patrick.simmons@dhs.gov <Patrick.simmons@dhs.gov> (b)(6) (b)(6) ; Ferris.John@dol.gov <Ferris.John@dol.gov>
Cc: Edwards.Jonathan@epamail.epa.gov <Edwards.Jonathan@epamail.epa.gov>; Page.Steve@epamail.epa.gov <Page.Steve@epamail.epa.gov>; Veal.Lee@epamail.epa.gov <Veal.Lee@epamail.epa.gov>
Subject: RE: Advisory Team Product for CBP

Comments on draft proposal from Sam Keith:

- Baggage and Cargo – DHS requests that the departments with authority over radiation contamination (EPA, NRC, OSHA, etc.) provide standards/thresholds

-The value below which baggage and cargo can continue to destination is **50 times the natural background radiation rate as measured at the surface**

-It allows the continued use of the existing CBP radiation detection technologies and protocols to identify and adjudicate any potentially contaminated item (the recommended value correlates to a measurement of 6 or higher on the CBP personal radiation dosimeters

- It is further recommended that items at the upper end of the range be field decontaminated by simple methods such as removal and proper disposal of outer wrapping or wiping

-----Original Message-----
From: Tupin.Edward@epamail.epa.gov [mailto:Tupin.Edward@epamail.epa.gov]

Sent: Tuesday, March 22, 2011 8:58 PM
To: Evans, Lynn (CDC/ONDIEH/NCEH); Wiley, Albert (ORAU); Ansari, Armin (CDC/ONDIEH/NCEH); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Maher, Carmen T. (FDA/OC/OCS); Connell, Carol (ATSDR/DHAC/SRAB); Miller, Charles W. (CDC/ONDIEH/NCEH); Liles.Darrell@epamail.epa.gov; Morrison, Ellen F. (FDA/OC/OCTC); Jablonowski.Eugene@epamail.epa.gov; Hornsby-Myers, Jennifer (CDC/NIOSH/OD); 'Ferris.John@dol.gov'; Brozowski.George@epamail.epa.gov; Allen, George T. (FDA/ORA/NE-FO); Evans, Lynn (CDC/ONDIEH/NCEH); Cleveland, Gordon (USDA); Dixon, John E. (CDC/ONDIEH/NCEH); Cherniack, James J. (FDA/ORA/NE-FO); Sincek, Jeffrey A. (FDA/ORA/CE-FO); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); Jensen, John (USDA); Pavek, John (USDA); Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Smallwood, Karen R. (FDA/ORA/SE-FO); Keith, Sam (ATSDR/DTEM/ATB); Veal.Lee@epamail.epa.gov; Brandon, Lou (NRC); Russo, Mark R. (FDA/OC/OCTC); Brooks, Michael (ATSDR/DHAC/SRAB); Mena, RaJah (DOE/FRMAC); Noska, Mike (FDA); O'Laughlin, Colleen (DOE/FRMAC); Buzzell, Jennifer (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); Hansen, Patricia A. (FDA/CFSAN); Pemberton, Wendy (DOE/FRMAC); Petch, Peter (USDA); Evans, Rachel T. (FDA/ORA/CE-FO); Funk, Renee (CDC/NIOSH/OD); Goodman.Roger@epamail.epa.gov; Graham, Ron (USDA); DeCair.Sara@epamail.epa.gov; Hargrave, Scotty L. (FDA/ORA/SW-FO); Lough, Scott (USDA); Jones, Terri L. (FDA/ORA/P-FO); Radke, Vincent (CDC/ONDIEH/NCEH); Howard King, Vinetta M. (FDA/OC/OCTC); Lotz, William G. (Greg) (CDC/NIOSH/DART); Cunningham, William C. (FDA/CFSAN); Rohde, Brian; Regan, Sean P.; Patrick.simmons@dhs.gov;
(b)(6) Ferris.John@dol.gov
Cc: Edwards.Jonathan@epamail.epa.gov; Page.Steve@epamail.epa.gov; Veal.Lee@epamail.epa.gov
Subject: Advisory Team Product for CBP

Advisory Team,

We have redrafted the language for our reply to the Customs and Border Patrol request. We need final agency agreement at our call tomorrow.

Another part of the issue to think about: Is there a way to express the value as a comparative to something other than background? Put your thinking caps on.

Once Aragon thank you all for your assistance and input on this effort.

Call tomorrow at 1400 (2:00 PM) EDT. Usual call in numbers -

866-561-4509. PIN (b)(6)

(See attached file: Draft Proposal on CBP needs final 3-22-2011.docx)

Ed
Edward A. Tupin, MS, CHP
tupin.edward@epa.gov
Health Physicist
Center for Radiological Emergency Management US Environmental Protection Agency 6608J
Washington, DC 20460
office: (202) 343-9383
cell: (b)(6)
Office Location
1310 L. ST, NW
Washington, DC 20005
****

From: Dixon, John E. (CDC/ONDIEH/NCEH) <gyf7@cdc.gov>
Sent: Wednesday, March 23, 2011 10:50 AM
To: Smallwood, Karen R. (FDA/ORA/SE-FO); Keith, Sam (ATSDR/DTEM/ATB); 'Tupin.Edward@epamail.epa.gov'; Evans, Lynn (CDC/ONDIEH/NCEH); 'albert.wiley@orise.orau.gov'; Ansari, Armin (CDC/ONDIEH/NCEH); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Maher, Carmen T. (FDA/OC/OCS); Connell, Carol (ATSDR/DHAC/SRAB); Miller, Charles W. (CDC/ONDIEH/NCEH); 'Liles.Darrell@epamail.epa.gov'; 'Ellen.Morrison@fda.hhs.gov'; 'Jablonowski.Eugene@epamail.epa.gov'; Hornsby-Myers, Jennifer (CDC/NIOSH/OD); 'Ferris.John@dol.gov'; 'Brozowski.George@epamail.epa.gov'; Allen, George T. (FDA/ORA/NE-FO); 'gordon.s.cleveland@aphis.usda.gov'; Cherniack, James J. (FDA/ORA/NE-FO); Sincek, Jeffrey A. (FDA/ORA/CE-FO); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); 'john.jensen@dm.usda.gov'; 'John.Pavek@wdc.usda.gov'; Anderson, Jeri L. (CDC/NIOSH/DSHEFS); 'Veal.Lee@epamail.epa.gov'; Brandon, Lou; Russo, Mark R. (FDA/OC/OCTC); Brooks, Michael (ATSDR/DHAC/SRAB); 'menarm@nv.doe.gov'; 'michael.noska@fda.hhs.gov'; 'olaughlin@nv.doe.gov'
Cc: 'Edwards.Jonathan@epamail.epa.gov'; 'Page.Steve@epamail.epa.gov'
Subject: Re: Advisory Team Product for CBP

Karen,
It is my understanding that the draft monitoring plan uses multiples of background based upon the type of instruments used by CBP up to a certain level. Beyond that level, the state hazmat folks take over. The CRCPD is very involved with the States on this. Perhaps a sharing of this information (CBP, State, CRCPD) should be done with the whole Advisory Team ? This could help our situational awareness.

Regards,
John

From: Smallwood, Karen R. (FDA/ORA/SE-FO)
Sent: Wednesday, March 23, 2011 10:35 AM
To: Dixon, John E. (CDC/ONDIEH/NCEH); Keith, Sam (ATSDR/DTEM/ATB); 'Tupin.Edward@epamail.epa.gov' <Tupin.Edward@epamail.epa.gov>; Evans, Lynn (CDC/ONDIEH/NCEH); 'albert.wiley@orise.orau.gov' <albert.wiley@orise.orau.gov>; Ansari, Armin (CDC/ONDIEH/NCEH); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Maher, Carmen T. (FDA/OC/OCS); Connell, Carol (ATSDR/DHAC/SRAB); Miller, Charles W. (CDC/ONDIEH/NCEH); 'Liles.Darrell@epamail.epa.gov' <Liles.Darrell@epamail.epa.gov>; Morrison, Ellen F <Ellen.Morrison@fda.hhs.gov>; 'Jablonowski.Eugene@epamail.epa.gov' <Jablonowski.Eugene@epamail.epa.gov>; Hornsby-Myers, Jennifer (CDC/NIOSH/OD); 'Ferris.John@dol.gov' <Ferris.John@dol.gov>; 'Brozowski.George@epamail.epa.gov' <Brozowski.George@epamail.epa.gov>; Allen, George T. (FDA/ORA/NE-FO); 'gordon.s.cleveland@aphis.usda.gov' <gordon.s.cleveland@aphis.usda.gov>; Cherniack, James J. (FDA/ORA/NE-FO); Sincek, Jeffrey A. (FDA/ORA/CE-FO); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); 'john.jensen@dm.usda.gov' <john.jensen@dm.usda.gov>; 'John.Pavek@wdc.usda.gov' <John.Pavek@wdc.usda.gov>; Anderson, Jeri L. (CDC/NIOSH/DSHEFS); 'Veal.Lee@epamail.epa.gov' <Veal.Lee@epamail.epa.gov>; 'lkb1@nrc.gov' <lkb1@nrc.gov>; Russo, Mark R. (FDA/OC/OCTC); Brooks, Michael (ATSDR/DHAC/SRAB); 'menarm@nv.doe.gov' <menarm@nv.doe.gov>; Noska, Michael A <Michael.Noska@fda.hhs.gov>; 'olaughlin@nv.doe.gov' <olaughlin@nv.doe.gov>
Cc: 'Edwards.Jonathan@epamail.epa.gov' <Edwards.Jonathan@epamail.epa.gov>; 'Page.Steve@epamail.epa.gov' <Page.Steve@epamail.epa.gov>
Subject: RE: Advisory Team Product for CBP

Thank you John. I have expressed reservations concerning the measurement devices and lack of sensitivity data. We are drawing from broad assumptions. But, currently we have no idea as to how many individuals utilizing the equipment

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have received training or user manuals. We also have no idea about calibration and maintenance, or if they have the same equipment at all sites. Should this be of concern, or has this been covered by someone somewhere and it got past me? Have everyone read the CBP policy for screening for potential contamination?

From: Dixon, John E. (CDC/ONDIEH/NCEH) [mailto:gyf7@cdc.gov]
Sent: Wednesday, March 23, 2011 8:13 AM
To: Keith, Sam (ATSDR); 'Tupin.Edward@epamail.epa.gov'; Evans, Donna L. (CDC); 'albert.wiley@orise.orau.gov'; Ansari, Armin J. (CDC); Whitcomb, Robert (CDC); Maher, Carmen; Connell, Carol (ATSDR); Miller, Charles W. (CDC); 'Liles.Darrell@epamail.epa.gov'; Morrison, Ellen F; 'Jablonowski.Eugene@epamail.epa.gov'; Hornsby-Myers, Jennifer L. (CDC); 'Ferris.John@dol.gov'; 'Brozowski.George@epamail.epa.gov'; Allen Jr, George T; 'gordon.s.cleveland@aphis.usda.gov'; Cherniack, James; Sincek, Jeffrey; Nemhauser, Jeffrey B. (CDC); 'john.jensen@dm.usda.gov'; 'John.Pavek@wdc.usda.gov'; Anderson, Jeri L. (CDC); Smallwood, Karen R; 'Veal.Lee@epamail.epa.gov'; 'lkb1@nrc.gov'; Russo, Mark; Brooks, Michael D. (ATSDR); 'menarm@nv.doe.gov'; Noska, Michael A; 'olaughlin@nv.doe.gov'
Cc: 'Edwards.Jonathan@epamail.epa.gov'; 'Page.Steve@epamail.epa.gov'
Subject: Re: Advisory Team Product for CBP

Good comments. I have reservations about using the concept of releasing anything based upon "background" levels. Background as compared to what? What instrument/probe is used? Is this determination done in the field or a certified lab? As I do not have access to a computer at the moment, how do these values compare to those used by DOT? DOT values are much higher than NRC, etc., and are used for public roads. These values are much less restrictive and (when considering the short lived isotopes like iodine) could allow access to equipment instead of restriction or disposal of the same equipment. We should consider such values (the higher ones) when characterizing things like aircraft.

Regards,
John

From: Keith, Sam (ATSDR/DTEM/ATB)
Sent: Wednesday, March 23, 2011 08:32 AM
To: Tupin.Edward@epamail.epa.gov <Tupin.Edward@epamail.epa.gov>; Evans, Lynn (CDC/ONDIEH/NCEH); Wiley, Albert (ORAU) <albert.wiley@orise.orau.gov>; Ansari, Armin (CDC/ONDIEH/NCEH); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Maher, Carmen T. (FDA/OC/OCS); Connell, Carol (ATSDR/DHAC/SRAB); Miller, Charles W. (CDC/ONDIEH/NCEH); Liles.Darrell@epamail.epa.gov <Liles.Darrell@epamail.epa.gov>; Morrison, Ellen F. (FDA/OC/OCTC); Jablonowski.Eugene@epamail.epa.gov <Jablonowski.Eugene@epamail.epa.gov>; Hornsby-Myers, Jennifer (CDC/NIOSH/OD); 'Ferris.John@dol.gov' <Ferris.John@dol.gov>; Brozowski.George@epamail.epa.gov <Brozowski.George@epamail.epa.gov>; Allen, George T. (FDA/ORA/NE-FO); Evans, Lynn (CDC/ONDIEH/NCEH); Cleveland, Gordon (USDA) <gordon.s.cleveland@aphis.usda.gov>; Dixon, John E. (CDC/ONDIEH/NCEH); Cherniack, James J. (FDA/ORA/NE-FO); Sincek, Jeffrey A. (FDA/ORA/CE-FO); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); Jensen, John (USDA) <john.jensen@dm.usda.gov>; Pavek, John (USDA) <john.pavek@wdc.usda.gov>; Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Smallwood, Karen R. (FDA/ORA/SE-FO); Veal.Lee@epamail.epa.gov <Veal.Lee@epamail.epa.gov>; Brandon, Lou (NRC) <lkb1@nrc.gov>; Russo, Mark R. (FDA/OC/OCTC); Brooks, Michael (ATSDR/DHAC/SRAB); Mena, RaJah (DOE/FRMAC) <menarm@nv.doe.gov>; Noska, Mike (FDA) <michael.noska@fda.hhs.gov>; O'Laughlin, Colleen (DOE/FRMAC) <olaughlin@nv.doe.gov>; Buzzell, Jennifer (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); Hansen, Patricia A. (FDA/CFSAN) <patricia.hansen@fda.hhs.gov>; Pemberton, Wendy (DOE/FRMAC) <pemberwj@nv.doe.gov>; Petch, Peter (USDA) <peter.a.petch@aphis.usda.gov>; Evans, Rachel T. (FDA/ORA/CE-FO); Funk, Renee (CDC/NIOSH/OD); Goodman.Roger@epamail.epa.gov <Goodman.Roger@epamail.epa.gov>; Graham, Ron (USDA) <ron.graham@fsis.usda.gov>; DeCair.Sara@epamail.epa.gov <DeCair.Sara@epamail.epa.gov>; Hargrave, Scotty L. (FDA/ORA/SW-FO); Lough, Scott (USDA) <Scott.Lough@ams.usda.gov>; Jones, Terri L. (FDA/ORA/P-FO); Radke, Vincent (CDC/ONDIEH/NCEH); Howard King, Vinetta M. (FDA/OC/OCTC); Lotz, William G. (Greg) (CDC/NIOSH/DART); Cunningham, William C. (FDA/CFSAN) <william.cunningham@fda.hhs.gov>; Rohde, Brian
(b)(6) patrick.simmons@dhs.gov
(b)(6)
(b)(6) Ferris.John@dol.gov <Ferris.John@dol.gov>
Cc: Edwards.Jonathan@epamail.epa.gov <Edwards.Jonathan@epamail.epa.gov>; Page.Steve@epamail.epa.gov <Page.Steve@epamail.epa.gov>; Veal.Lee@epamail.epa.gov <Veal.Lee@epamail.epa.gov>

Subject: RE: Advisory Team Product for CBP

Comments on draft proposal from Sam Keith:

- Baggage and Cargo – DHS requests that the departments with authority over radiation contamination (EPA, NRC, OSHA, etc.) provide standards/thresholds

-The value below which baggage and cargo can continue to destination is **50 times the natural background radiation rate as measured at the surface**

-It allows the continued use of the existing CBP radiation detection technologies and protocols to identify and adjudicate any potentially contaminated item (the recommended value correlates to a measurement of 6 or higher on the CBP personal radiation dosimeters)

- It is further recommended that items at the upper end of the range be field decontaminated by simple methods such as removal and proper disposal of outer wrapping or wiping,

-----Original Message-----
From: Tupin.Edward@epamail.epa.gov [mailto:Tupin.Edward@epamail.epa.gov]
Sent: Tuesday, March 22, 2011 8:58 PM
To: Evans, Lynn (CDC/ONDIEH/NCEH); Wiley, Albert (ORAU); Ansari, Armin (CDC/ONDIEH/NCEH); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Maher, Carmen T. (FDA/OC/OCS); Connell, Carol (ATSDR/DHAC/SRAB); Miller, Charles W. (CDC/ONDIEH/NCEH); Liles.Darrell@epamail.epa.gov; Morrison, Ellen F. (FDA/OC/OCTC); Jablonowski.Eugene@epamail.epa.gov; Hornsby-Myers, Jennifer (CDC/NIOSH/OD); 'Ferris.John@dol.gov'; Brozowski.George@epamail.epa.gov; Allen, George T. (FDA/ORA/NE-FO); Evans, Lynn (CDC/ONDIEH/NCEH); Cleveland, Gordon (USDA); Dixon, John E. (CDC/ONDIEH/NCEH); Cherniack, James J. (FDA/ORA/NE-FO); Sincek, Jeffrey A. (FDA/ORA/CE-FO); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); Jensen, John (USDA); Pavek, John (USDA); Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Smallwood, Karen R. (FDA/ORA/SE-FO); Keith, Sam (ATSDR/DTEM/ATB); Veal.Lee@epamail.epa.gov; Brandon, Lou (NRC); Russo, Mark R. (FDA/OC/OCTC); Brooks, Michael (ATSDR/DHAC/SRAB); Mena, RaJah (DOE/FRMAC); Noska, Mike (FDA); O'Laughlin, Colleen (DOE/FRMAC); Buzzell, Jennifer (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); Hansen, Patricia A. (FDA/CFSAN); Pemberton, Wendy (DOE/FRMAC); Petch, Peter (USDA); Evans, Rachel T. (FDA/ORA/CE-FO); Funk, Renee (CDC/NIOSH/OD); Goodman.Roger@epamail.epa.gov; Graham, Ron (USDA); DeCair.Sara@epamail.epa.gov; Hargrave, Scotty L. (FDA/ORA/SW-FO); Lough, Scott (USDA); Jones, Terri L. (FDA/ORA/P-FO); Radke, Vincent (CDC/ONDIEH/NCEH); Howard King, Vinetta M. (FDA/OC/OCTC); Lotz, William G. (Greg) (CDC/NIOSH/DART); Cunningham, William C. (FDA/CFSAN); Rohde, Brian; Regan, Sean P.; Patrick.simmons@dhs.gov;
(b)(6) Ferris.John@dol.gov
Cc: Edwards.Jonathan@epamail.epa.gov; Page.Steve@epamail.epa.gov; Veal.Lee@epamail.epa.gov
Subject: Advisory Team Product for CBP

Advisory Team,

We have redrafted the language for our reply to the Customs and Border Patrol request. We need final agency agreement at our call tomorrow.

Another part of the issue to think about: Is there a way to express the value as a comparative to something other than background? Put your thinking caps on.

Once Aragon thank you all for your assistance and input on this effort.

Call tomorrow at 1400 (2:00 PM) EDT. Usual call in numbers -

866-561-4509. PIN (b)(6)

(See attached file: Draft Proposal on CBP needs final 3-22-2011.docx)

Ed
Edward A. Tupin, MS, CHP
tupin.edward@epa.gov
Health Physicist
Center for Radiological Emergency Management US Environmental Protection Agency 6608J
Washington, DC 20460
office: (202) 343-9383
cell: (b)(6)
Office Location
1310 L. ST, NW
Washington, DC 20005
****

From: LIA01 Hoc
Sent: Wednesday, March 23, 2011 1:52 PM
To: PMT01 Hoc; LIA02 Hoc
Cc: Harvey, Brad; Quinlan, Kevin; Brown, David; Galletta, Thomas; Imboden, Andy; Brandon, Lou; Hoc, PMT12
Subject: RE: Request to Japan Meteorological Agency Thru the Japan Embassy Task Force

One source may be the HHS Operations Center
202-619-7800, emops@ora.fda.gov

From: PMT01 Hoc
Sent: Wednesday, March 23, 2011 1:45 PM
To: LIA01 Hoc; LIA02 Hoc
Cc: Harvey, Brad; Quinlan, Kevin; Brown, David; Galletta, Thomas; Imboden, Andy; Brandon, Lou; Hoc, PMT12
Subject: Request to Japan Meteorological Agency Thru the Japan Embassy Task Force

Folks:

This is to request your assistance thru the Japan Embassy Task Force to obtain available hourly meteorological measurement data from the Japan Meteorological Agency (JMA) for specific monitoring stations near the Fukushima Nuclear Power Plant. The Task Force has been very helpful in expediting previous requests from PMT-Meteorology and focusing the requests on to the appropriate agencies or organizations. The text below can be excerpted for this current request.

Thanks,

Mike Mazaika.
PMT – Meteorology

Over the course of responding to the incidents at the Fukushima Nuclear Power Plant which began March 11, 2011, we have been trying to build a data base of representative meteorological data for the site and surrounding area. We have identified a number of monitoring stations operated by the Japan Meteorological Agency (JMA) located at or near the coast to the north and south of the facility.

Hourly measurements that are readily retrievable from the JMA website appear only to be available for the current and preceding day and must be queried on a regular basis. We do not have a complete set of hourly measurements for the identified stations and would like to obtain data for the parameters measured at these stations and for the dates indicate below. We realize that because of the devastating effects of the tsunami, several stations went out of service. In those cases, we would appreciate confirmation of the operating status thru the indicated time periods and in the case of all stations the provision of any available data during these time periods.

Prefecture	Station	Dates Needed	Current Operating Status
Fukushima	Soma	March 11 – 17	Operating
Fukushima	Haramachi	March 11 – 17	Operating

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Fukushima	Namie	March 11 – 18	Not in Service
Fukushima	Tomioka	March 11 – 18	Not in Service
Fukushima	Hirono	March 11 – 18	Not in Service
Fukushima	Taira	March 11 – 18	Operating
Fukushima	Onahama	March 11 – 13, 15 – 18	Operating
Fukushima	Tamakawa (Fukushima Arpt)	March 11 – 13, 15 – 18, 21	Operating
Miyagi	Watari	March 11 – 17	Operating
Miyagi	Natori	March 11 – 18	Not in Service
Miyagi	Sendai (Observatory)	March 11 – 13, 17	Operating
Miyagi	Shiogama	March 11 – 17	Operating
Miyagi	Marumori	March 11 – 21	Operating

We are grateful for your assistance.

Thank you,

Mike Mazaika.
NRC
PMT – Meteorology

From: Norris, Michael
Sent: Thursday, March 24, 2011 10:36 PM
To: Brandon, Lou
Subject: RE: PMT support

OK. Whatever we need to do to support the cause.

From: Brandon, Lou
Sent: Thursday, March 24, 2011 5:10 PM
To: Norris, Michael
Subject: RE: PMT support

Mike,

You're the Coordinator tonight and tomorrow night. It's better that I take Friday, since you're coming on Sat, Sun, Mon, and Tues, as RAAD during the 11-7 shift. We need individuals competent to be RAADs to fill in for those already working a lot of shifts (like you). If you want Saturday night off, we can try to recruit either Eric Benner of Larry Camper, who can probably do a fine job (if available). Call me tonight when you come on or before (or I'll try you through the PMT) to work out the details.

Lou
(b)(6)

From: Norris, Michael
Sent: Wednesday, March 23, 2011 7:39 AM
To: Brandon, Lou
Subject: PMT support

I see that I was replaced by you as the coordinator for this Fri/Sat, 2300-0700 and was assigned as the RAAD for Sat/Sun 2300-0700. I would prefer to work Friday night in lieu of Saturday night. Let's talk.

Michael B. Norris
Team Leader
Division of Preparedness and Response
Office of Nuclear Security and Incident Response
U.S. Nuclear Regulatory Commission

DJ/208

From: Roach, Edward
Sent: Friday, March 25, 2011 2:03 PM
To: Brandon, Lou
Subject: RE: Op Center Coverage - PMT Dose Analysts

Lou,
I can be reached on my blackberry, Cell or Home phone- Op Center has them all.
But BB: (b)(6)
Cell:
Home:
Ed

From: Brandon, Lou
Sent: Friday, March 25, 2011 2:00 PM
To: Roach, Edward
Cc: OST02 HOC
Subject: RE: Op Center Coverage - PMT Dose Analysts

Ed, thanks for the offer. I'm not in today until 11PM. Let's check with OST (copied) and see if they still need someone. If we don't hear back, I'll follow up tonight to see where we're at.

Lou

From: Roach, Edward
Sent: Friday, March 25, 2011 7:10 AM
To: Brandon, Lou
Subject: RE: Op Center Coverage - PMT Dose Analysts

Do you need someone to cover Saturday 3pm -11pm also?
I just need to leave by 11:15pm to pick my daughter up at National Airport.
She is arriving at 12:25am on Sunday morning.
So I could support Saturday night too!
ED

From: Brandon, Lou
Sent: Thursday, March 24, 2011 4:13 PM
To: Roach, Edward
Cc: Shuaibi, Mohammed; Hinson, Charles; LaVera, Ronald; Tappert, John; Dudes, Laura; Yin, Xiaosong; Gray, Anita; OST02 HOC
Subject: RE: Op Center Coverage - PMT Dose Analysts

Ed, Thanks for taking the Sunday, March 27, PMT Dose Assessment slot from 3pm-11pm. You'll be working with Casper Sun who can orient you around RASCAL, and if you're in on Friday and can join the assessors, they can also help orient you in advance.

The attached PDF file contains a link to download the RASCAL program and a workbook file that has lots of RASCAL examples.

Charles, Ron,

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If interested, I have three other slots that need a 2nd dose assessor this weekend.

Sat, March 26, 7am-3pm, with Tony Huffert
Sat, March 26, 3pm-11pm, with Leroy Hardin (dose assessment not his usual position)
Sat, March 26-27, 11pm-7am Sunday, with John Parillo (I will be also on this shift and know RASCAL very well).

Anita, Xiaosong, I'm also copying you, as I couldn't reach you by telephone. If you're available, that's great.

Please let me know if you can support any of these slots and inform OST02.hoc@nrc.gov if available.

Thanks.

Lou

From: Roach, Edward
Sent: Wednesday, March 23, 2011 12:55 PM
To: Brandon, Lou
Cc: Shuaibi, Mohammed; Hinson, Charles; LaVera, Ronald; Tappert, John; Dudes, Laura
Subject: FW: Op Center Coverage
Importance: High

After discussion with our Division management, several NRO Health Physics Branch folks (highlighted below) would be supportive of training and qualifying on Dose Assessment to help share the burden on the currently assigned PMT staff.
Others are available also to fill communicator positions if necessary.
Our understanding is that the HOC may be staffed until Mid April 2011.

Please let me know if we can assist.
Regards,
ED

From: Roach, Edward
Sent: Thursday, March 17, 2011 1:05 PM
To: Shuaibi, Mohammed; Beardsley, James; Kowal, Mark; Frye, Timothy; Peralta, Juan; Rasmussen, Richard; Junge, Michael
Cc: Tappert, John; Rivera-Varona, Aida; Dudes, Laura; Hinson, Charles; Cicotte, George; LaVera, Ronald
Subject: RE: Op Center Coverage

After reviewing the staff assigned to CHPB,
The following staff could support the Ops Center in a longer term deployment.

Positions for the Operations Center

Liaison Team
N/A
Protective Measures Team
Charles Hinson- 35 years of NRC Health Physics experience-reviewer for ABWR/ESBWR occupational
Ed Roach-(currently HPN Communicator) 25 + years industry experience on PWR/emergency response/health physics (familiar with RASCAL-formerly qualified in Radiological Assessment)
Ron LaVera-25 + years industry experience, Certified Health Physicist
George CiCotte- 25 + years regulatory experience, previously qualified HP inspector in NRC and Agreement State.

Reactor Safety Team

RST Director:
N/A
RST Coordinator:
N/A
Severe Accident / PRA:
N/A

BWR Expert
Charles Hinson

RST Comm / ERDS Operator
Ed Roach has some experience on the plant side of ERDS.

RST Support (Seismology Q&A)
N/A

Regards,
ED

From: Shuaibi, Mohammed
Sent: Thursday, March 17, 2011 10:03 AM
To: Beardsley, James; Kowal, Mark; Frye, Timothy; Roach, Edward; Peralta, Juan; Rasmussen, Richard; Junge, Michael
Cc: Tappert, John; Rivera-Varona, Aida; Dudes, Laura
Subject: FW: Op Center Coverage

See request below. Please provide names of people you'd recommend for this task by 2:00 today.

Please let me know what position you'd recommend them for, what their expertise is, and whether they're already involved in the response.

Thanks and sorry for the short notice and limited info.
Mohammed

From: Holahan, Gary
Sent: Wednesday, March 16, 2011 6:52 PM
To: NRO_SES Distribution
Cc: Williams, Donna; Rosales-Cooper, Cindy; Schum, Constance
Subject: Op Center Coverage

All,

We (NRO) have been asked to help staff the Op Center for the next month ... 4 days on 4 days off with three shifts per day

I have filled in some suggested names (see attached) for the areas that the Op Center needs. Please review, add or subtract, check availability for this very high priority activity ... by COB Thursday

Gary.

From: Athey Consulting <atheyconsulting@frontiernet.net>
Sent: Friday, March 25, 2011 3:57 PM
To: Brandon, Lou
Subject: RASCAL STDose patch
Attachments: STDose EXE Patched Mar2011.zip

Lou –

Just wanted to make sure you had a copy of the "patched" version of the STDose user interface program. Attached is a zipped file containing the new executable. The file, STDose_NRC.exe, gets copied into the main RASCAL folder (usually C:\Program Files\RASCAL4) replacing the existing file. You can tell the files apart by their dates. The original file from RASCAL 4.1 is dated "1/21/11". The patched files is dated "3/15/11".

I installed this file to the following computers on March 16: PMT05, PMT11, PMT01 (Met), and PMT02 (Dose). I believe there is a copy of the patched file on the M drive as an archive. Although I coordinated the copying in of the new file with Matt I did not provide him with a copy. I also have not provided the patched file to anyone else. I assume that after things settle down we will assess what fixes and changes should go into another update of RASCAL to be fully distributed. I am still working with Van to look into some of the issues that have arisen.

Are you still working the night shift?

Have a good weekend. Hope you get some time off.

George

Athey Consulting
(304) 725-8834
atheyconsulting@frontiernet.net

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Attachment STDose EXE Patched Mar2011.zip(1018409 bytes) cannot be converted to PDF format.

From: Brandon, Lou
Sent: Saturday, March 26, 2011 4:20 AM
To: Charp, Paul (ATSDR/DHAC/SRAB)
Subject: RE: Japan and reprocessed fuel

Paul, I'm just getting to these old emails. Last I heard there were 32 MOX of 548 bundles in unit 3. Just tonight I saw some high levels of Cl-38 noted as you suspected. There is still uncertainty about the containments of units 2 and 3, I think. Those considerations are going on over on the Reactor Safety Team side.

Lou

-----Original Message-----
From: Charp, Paul (ATSDR/DHAC/SRAB) [mailto:pac4@cdc.gov]
Sent: Monday, March 14, 2011 6:27 PM
To: Brandon, Lou
Subject: Japan and reprocessed fuel

Hi Lou

I was wondering if the NRC has considered if there would be any issues with MOX since japan reprocesses their fuel? I would think there could be some modifications in the power curves and fission yields depending on how pure the fuel. Also since seawater is being used as a coolant there would be some interesting activation products formed.

Thanks

Paul Charp

DJ/211

From: Brandon, Lou
Sent: Saturday, March 26, 2011 4:31 AM
To: Chacko, Betsie
Cc: ValentineDavis, Victor; Green, Stephen W; Ferris, George
Subject: RE: Japan - Modeling NRC

Betsie, while my attention has been in the Operations Center, my email has flooded. Sorry, I'm just getting to most of them. We've provided a number of RASCAL based source terms to NARAC and the NARAC products (mostly hypothetical) are available for limited distribution via the DOE NIT. Hopefully, you already know that.

Lou

-----Original Message-----
From: Chacko, Betsie [mailto:Betsie.Chacko1@dhs.gov]
Sent: Tuesday, March 15, 2011 7:16 AM
To: Brandon, Lou
Cc: ValentineDavis, Victor; Green, Stephen W; Ferris, George; Chacko, Betsie
Subject: Japan - Modeling NRC
Importance: High

Hi Lou,

Per the DHS leadership brief, it was stated that Japan has requested modeling support. Is the NRC providing this? If so, could we please get copies of these products?

Thank you,

Betsie Chacko
Sent from BlackBerry Wireless Device
Current Operations | Office of Operations Coordination & Planning Department of Homeland Security 202-731-5968 | betsie.chacko@hq.dhs.gov

DJ/212

From: OST02 HOC
Sent: Saturday, March 26, 2011 9:44 AM
To: Brandon, Lou
Cc: Wheeler, Larry
Subject: RE: Ops center support

Good morning,

I contacted Larry Wheeler just now and confirmed that he will be able to fill in tomorrow SU 3/27/11 7am-3pm.

Thank you, Larry.

Tonya Russell
OST02 Operations Center
301-816-5100

From: Brandon, Lou
Sent: Saturday, March 26, 2011 8:15 AM
To: OST02 HOC; OST01 HOC
Subject: FW: Ops center support

FYI, Larry could work as a PMT dose analyst, if needed (Sunday 7am-3pm slot needs someone).

From: Wheeler, Larry
Sent: Friday, March 25, 2011 2:25 PM
To: Brandon, Lou
Subject: Ops center support

Lou:

If you need me to come in this weekend, give me a call.

(b)(6)

I would prefer to work 3-4 days in a row, the same shift, if possible.

Thanks

Larry Wheeler
US Nuclear Regulatory Commission (NRC)
Office of New Reactors (NRO)
Division of Safety Systems and Risk Assessment (DSRA)
Balance of Plant
Reactor Systems Engineer
301-415-1278

DJ/213

From: Tupin.Edward@epamail.epa.gov
Sent: Saturday, March 26, 2011 12:19 PM
To: Charp, Paul (ATSDR/DHAC/SRAB)
Cc: 'albert.wiley@orise.orau.gov'; Ansari, Armin (CDC/ONDIEH/NCEH); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Maher, Carmen T. (FDA/OC/OCS); Connell, Carol (ATSDR/DHAC/SRAB); Miller, Charles W. (CDC/ONDIEH/NCEH); Liles.Darrell@epamail.epa.gov; Morrison, Ellen F. (FDA/OC/OCTC); EOC_Environmental_Unit@epamail.epa.gov; Jablonowski.Eugene@epamail.epa.gov; Hornsby-Myers, Jennifer (CDC/NIOSH/OD); 'Ferris.John@dol.gov'; Brozowski.George@epamail.epa.gov; Allen, George T. (FDA/ORA/NE-FO); Evans, Lynn (CDC/ONDIEH/NCEH); 'gordon.s.cleveland@aphis.usda.gov'; Dixon, John E. (CDC/ONDIEH/NCEH); Cherniack, James J. (FDA/ORA/NE-FO); Sincek, Jeffrey A. (FDA/ORA/CE-FO); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); 'john.jensen@dm.usda.gov'; 'john.pavek@wdc.usda.gov'; Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Smallwood, Karen R. (FDA/ORA/SE-FO); Keith, Sam (ATSDR/DTEM/ATB); Veal.Lee@epamail.epa.gov; Brandon, Lou; Russo, Mark R. (FDA/OC/OCTC); Brooks, Michael (ATSDR/DHAC/SRAB); 'menarm@nv.doe.gov'; 'michael.noska@fda.hhs.gov'; 'olaughlin@nv.doe.gov'; Buzzell, Jennifer (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); 'patricia.hansen@fda.hhs.gov'; 'pemberwj@nv.doe.gov'; 'peter.a.petch@aphis.usda.gov'; Evans, Rachel T. (FDA/ORA/CE-FO); Funk, Renee (CDC/NIOSH/OD); Goodman.Roger@epamail.epa.gov; 'ron.graham@fsis.usda.gov'; DeCair.Sara@epamail.epa.gov; Hargrave, Scotty L. (FDA/ORA/SW-FO); 'Scott.Lough@ams.usda.gov'; Jones, Terri L. (FDA/ORA/P-FO); Radke, Vincent (CDC/ONDIEH/NCEH); Howard King, Vinetta M. (FDA/OC/OCTC); Lotz, William G. (Greg) (CDC/NIOSH/DART); 'william.cunningham@fda.hhs.gov'
Subject: Re: CBP calculations from Sam Keith regarding CBP pagers and other detectors.

All,

The draft that Paul sent out of Sam Keith's calculations needs to be further scrubbed to remove the DOT references, which I thought was already done, but has not been.

Please chew on the technical aspects of the document. Send me comments and to the EPA EOC Environmental unit.

eoc_environmental_unit@epa.gov

There is significant political sensitivity at EPA to this issue. EPA Senior management is engaged on the political side. EPA will not approve until the political issues are further worked.

Ed
Edward A. Tupin, MS, CHP
tupin.edward@epa.gov
Health Physicist
Center for Radiological Emergency Management US Environmental Protection Agency 6608J Washington, DC 20460
office: (202) 343-9383
cell: (b)(6)
Office Location
1310 L. ST, NW

DJ/214

Washington, DC 20005
****

From: "Charp, Paul (ATSDR/DHAC/SRAB)" <pac4@cdc.gov>
To: George Brozowski/R6/USEPA/US@EPA, Sara DeCair/DC/USEPA/US@EPA, Roger Goodman/LV/USEPA/US@EPA, EUGENE JABLONOWSKI/R5/USEPA/US@EPA, Darrell Liles/DC/USEPA/US@EPA, Edward Tupin/DC/USEPA/US@EPA, Lee Veal/DC/USEPA/US@EPA, "Evans, Lynn (CDC/ONDIEH/NCEH)" <gfn6@cdc.gov>, "'Ferris.John@dol.gov'" <Ferris.John@dol.gov>, "Radke, Vincent (CDC/ONDIEH/NCEH)" <ver2@cdc.gov>, "Allen, George T. (FDA/ORA/NE-FO)" <george.allen@fda.hhs.gov>, "Anderson, Jeri L. (CDC/NIOSH/DSHEFS)" <jva2@cdc.gov>, "Ansari, Armin (CDC/ONDIEH/NCEH)" <asa4@cdc.gov>, "'lkb1@nrc.gov'" <lkb1@nrc.gov>, "Brooks, Michael (ATSDR/DHAC/SRAB)" <mdb7@cdc.gov>, "Buzzell, Jennifer (CDC/ONDIEH/NCEH)" <ozl6@cdc.gov>, "Charp, Paul (ATSDR/DHAC/SRAB)" <pac4@cdc.gov>, "Cherniack, James J. (FDA/ORA/NE-FO)" <james.cherniack@fda.hhs.gov>, "'gordon.s.cleveland@aphis.usda.gov'" <gordon.s.cleveland@aphis.usda.gov>, "Connell, Carol (ATSDR/DHAC/SRAB)" <ccc8@cdc.gov>, "'william.cunningham@fda.hhs.gov'" <william.cunningham@fda.hhs.gov>, "Dixon, John E. (CDC/ONDIEH/NCEH)" <gyf7@cdc.gov>, "Evans, Rachel T. (FDA/ORA/CE-FO)" <rachel.evans@fda.hhs.gov>, "Funk, Renee (CDC/NIOSH/OD)" <rjf8@cdc.gov>, "'ron.graham@fsis.usda.gov'" <ron.graham@fsis.usda.gov>, "'patricia.hansen@fda.hhs.gov'" <patricia.hansen@fda.hhs.gov>, "Hargrave, Scotty L. (FDA/ORA/SW-FO)" <scotty.hargrave@fda.hhs.gov>, "Hornsby-Myers, Jennifer (CDC/NIOSH/OD)" <ezh7@cdc.gov>, "Howard King, Vinetta M. (FDA/OC/OCTC)" <vinetta.howardking@fda.hhs.gov>, "'john.jensen@dm.usda.gov'" <john.jensen@dm.usda.gov>, "Jones, Terri L. (FDA/ORA/P-FO)" <terri.jones@fda.hhs.gov>, "Keith, Sam (ATSDR/DTEM/ATB)" <ldk4@cdc.gov>, "Lotz, William G. (Greg) (CDC/NIOSH/DART)" <wgl0@cdc.gov>, "'Scott.Lough@ams.usda.gov'" <Scott.Lough@ams.usda.gov>, "Maher, Carmen T. (FDA/OC/OCS)" <carmen.maher@fda.hhs.gov>, "'menarm@nv.doe.gov'" <menarm@nv.doe.gov>, "Miller, Charles W. (CDC/ONDIEH/NCEH)" <cym3@cdc.gov>, "Morrison, Ellen F. (FDA/OC/OCTC)" <emorriso@ora.fda.gov>, "Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH)" <jfn1@cdc.gov>, "'michael.noska@fda.hhs.gov'" <michael.noska@fda.hhs.gov>, "'olaughlin@nv.doe.gov'" <olaughlin@nv.doe.gov>, "'john.pavek@wdc.usda.gov'" <john.pavek@wdc.usda.gov>, "'pemberwj@nv.doe.gov'" <pemberwj@nv.doe.gov>, "'peter.a.petch@aphis.usda.gov'"

<peter.a.petch@aphis.usda.gov>, "Russo, Mark R. (FDA/OC/OCTC)" <mark.russo@fda.hhs.gov>, "Sincek, Jeffrey A. (FDA/ORA/CE-FO)" <jeffrey.sincek@fda.hhs.gov>, "Smallwood, Karen R. (FDA/ORA/SE-FO)" <karen.smallwood@fda.hhs.gov>, "Whitcomb, Robert C. (CDC/ONDIEH/NCEH)" <byw3@cdc.gov>, "'albert.wiley@orise.orau.gov'" <albert.wiley@orise.orau.gov>, EOC Environmental Unit@EPA
Date: 03/26/2011 12:07 PM
Subject:CBP calculations from Sam Keith regarding CBP pagers and other detectors.

----- Message from "Keith, Sam (ATSDR/DTEM/ATB)" <ldk4@cdc.gov> on Sat, 26 Mar 2011 02:23:17 +0000 -----

To: "Brooks, Michael (ATSDR/DHAC/SRAB)" <mdb7@cdc.gov>, "Charp, Paul (ATSDR/DHAC/SRAB)" <pac4@cdc.gov>, "Connell, Carol (ATSDR/DHAC/SRAB)" <ccc8@cdc.gov>, "Ansari, Armin (CDC/ONDIEH/NCEH)" <asa4@cdc.gov>, "Buzzell, Jennifer (CDC/ONDIEH/NCEH)" <ozl6@cdc.gov>, "Dixon, John E. (CDC/ONDIEH/NCEH)" <gyf7@cdc.gov>, "Donnelly, Elizabeth (CDC/ONDIEH/NCEH)" <ehd0@cdc.gov>, "Evans, Lynn (CDC/ONDIEH/NCEH)" <gfn6@cdc.gov>, "Friday, Natasha (CDC/ONDIEH/NCEH)" <ncf5@cdc.gov>, "Miller, Charles W. (CDC/ONDIEH/NCEH)" <cym3@cdc.gov>, "Whitcomb, Robert C. (CDC/ONDIEH/NCEH)" <byw3@cdc.gov>

cc: "'Michelle_Tiburcio@sra.com'" <Michelle_Tiburcio@sra.com>, "Anderson, Jeri L. (CDC/NIOSH/DSHEFS)" <jva2@cdc.gov>, "'tupin.edward@epa.gov'" <tupin.edward@epa.gov>, "'liles.darrell@epa.gov'" <liles.darrell@epa.gov>, "'ira.s.reese@cbp.dhs.gov'" <ira.s.reese@cbp.dhs.gov>, "'ira.reese@dhs.gov'" <ira.reese@dhs.gov>, "'patrick.simmons@dhs.gov'" <patrick.simmons@dhs.gov>, "'Cardarelli.John@epamail.epa.gov'" <Cardarelli.John@epamail.epa.gov>, "'boyd.mike@epa.gov'" <boyd.mike@epa.gov>

Subject: Re: Call Today at 4:30 EDT to discuss CBP proposal calculation

Folks, as you review the attachments in the previous message, bear in mind that there are factors of item size and source geometry that could push the PRD "3" factor. The WG gave serious consideration to recommending a value of "2" and CBP indicated they could work with that.
Also, they said they are getting quite a number of alarms on the 1 and 2 positions. With a significant portion of current activity due to I-131, a 3 would appear to be a good choice. After a couple more weeks and assuming most of the I-131 is gone and Cs-137 is the primary isotope, a possible shift to a 2 is worth considering. This is an evolution to stay connected with.

Your best thoughts will be appreciated.

Thanks,
Sam

From: Keith, Sam (ATSDR/DTEM/ATB)
Sent: Friday, March 25, 2011 06:58 PM
To: Brooks, Michael (ATSDR/DHAC/SRAB); Charp, Paul (ATSDR/DHAC/SRAB); Connell, Carol (ATSDR/DHAC/SRAB); Ansari, Armin (CDC/ONDIEH/NCEH); Buzzell, Jennifer (CDC/ONDIEH/NCEH); Dixon, John E. (CDC/ONDIEH/NCEH); Donnelly, Elizabeth (CDC/ONDIEH/NCEH); Evans, Lynn (CDC/ONDIEH/NCEH); Friday, Natasha (CDC/ONDIEH/NCEH); Miller, Charles W. (CDC/ONDIEH/NCEH); Whitcomb, Robert C. (CDC/ONDIEH/NCEH)
Cc: Tiburcio, Michelle <Michelle_Tiburcio@sra.com>; Anderson, Jeri L. (CDC/NIOSH/DSHEFS); tupin.edward@epa.gov <tupin.edward@epa.gov>; liles.darrell@epa.gov <liles.darrell@epa.gov>; ira.s.reese@cbp.dhs.gov <ira.s.reese@cbp.dhs.gov>; ira.reese@dhs.gov <ira.reese@dhs.gov>; patrick.simmons@dhs.gov <patrick.simmons@dhs.gov>; Cardarelli.John@epamail.epa.gov <Cardarelli.John@epamail.epa.gov>;
'boyd.mike@epa.gov' <boyd.mike@epa.gov>
Subject: RE: Call Today at 4:30 EDT to discuss CBP proposal calculation

Lynn and Paul, the surface contamination workgroup met and developed the attached updated proposal for the use of CBP instruments to survey for
Cs-137 and I-131 surface contamination on objects. Also attached is
the manual for the PRD instrument used by CBP.

Please distribute as appropriate to the A-Team for quick review and comment. I could not change the uRem entries in Table 1 to uR, but that should be done using the original spreadsheet.

Thanks,
Sam

From: Keith, Sam (ATSDR/DTEM/ATB)
Sent: Friday, March 25, 2011 4:27 PM
To: 'Tiburcio, Michelle'; Anderson, Jeri L. (CDC/NIOSH/DSHEFS); tupin.edward@epa.gov; liles.darrell@epa.gov; ira.s.reese@cbp.dhs.gov; patrick.simmons@dhs.gov; Cardarelli.John@epamail.epa.gov
Subject: RE: Call Today at 4:30 EDT to discuss CBP proposal calculation

Folks,

I have taken the spreadsheet in the attached A-Team draft (Technical Basis for Proposal...), expanded it to address radiation levels from surface contamination (see Eval of PRD for contam on ctrns), and included the 10 PRD settings (Survey meter PRD ...).

The I-131 values for uR/hr per DPM are slightly more limiting than those for Cs-137. One approach is to based the recommendation on I-131 values since it would apply to I-131, Cs-137, or any combination.

The "Total DPM Equivalent to PRD Settings" line gives the total point source activity needed to reach that level.

The "Total Area (cm2) at 240 DPM/cm2 = PRD Settings-->" line gives the # of cm2 contaminated at 240 CPM/cm2 that would contain the same point source activity.

If we take the size of a carry-on tote (max 22"x18" = 56cm x 45 cm =
2520 cm2), then a setting of 2 would appear to catch a contaminated item.

Let's discuss this and other of your ideas.

Thanks,

Sam Keith
770-488-3322 W ß best # today
404-277-0016 cell

From: Tiburcio, Michelle [mailto:Michelle_Tiburcio@sra.com]
Sent: Friday, March 25, 2011 3:56 PM
To: Keith, Sam (ATSDR/DTEM/ATB); Anderson, Jeri L. (CDC/NIOSH/DSHEFS); tupin.edward@epa.gov; liles.darrell@epa.gov; ira.s.reese@cbp.dhs.gov; patrick.simmons@dhs.gov; Cardarelli.John@epamail.epa.gov
Subject: Call Today at 4:30 EDT to discuss CBP proposal calculation
Importance: High

Please use the following call-in numbers:

Phone number: 866-561-4509
Pass code: (b)(6)
Thanks,

Michelle A. Tiburcio

SRA International, Inc.
3434 Washington Blvd., 2185
Arlington, VA 22201
(703) 284-6094
----- Message from "Keith, Sam (ATSDR/DTEM/ATB)" <ldk4@cdc.gov> on Fri, 25 Mar 2011 22:58:59 +0000 -----

To: "Brooks, Michael (ATSDR/DHAC/SRAB)" <mdb7@cdc.gov>, "Charp, Paul (ATSDR/DHAC/SRAB)" <pac4@cdc.gov>, "Connell, Carol (ATSDR/DHAC/SRAB)" <ccc8@cdc.gov>, "Ansari, Armin (CDC/ONDIEH/NCEH)" <asa4@cdc.gov>, "Buzzell, Jennifer (CDC/ONDIEH/NCEH)" <ozl6@cdc.gov>, "Dixon, John E. (CDC/ONDIEH/NCEH)" <gyf7@cdc.gov>, "Donnelly, Elizabeth (CDC/ONDIEH/NCEH)" <ehd0@cdc.gov>, "Evans, Lynn (CDC/ONDIEH/NCEH)" <gfn6@cdc.gov>, "Friday, Natasha (CDC/ONDIEH/NCEH)" <ncf5@cdc.gov>, "Miller, Charles W. (CDC/ONDIEH/NCEH)" <cym3@cdc.gov>, "Whitcomb, Robert C. (CDC/ONDIEH/NCEH)" <byw3@cdc.gov>

cc: "Tiburcio, Michelle" <Michelle_Tiburcio@sra.com>, "Anderson, Jeri L. (CDC/NIOSH/DSHEFS)" <jva2@cdc.gov>, "tupin.edward@epa.gov" <tupin.edward@epa.gov>, "liles.darrell@epa.gov" <liles.darrell@epa.gov>, "ira.s.reese@cbp.dhs.gov" <ira.s.reese@cbp.dhs.gov>, "ira.reese@dhs.gov" <ira.reese@dhs.gov>, "patrick.simmons@dhs.gov" <patrick.simmons@dhs.gov>, "Cardarelli.John@epamail.epa.gov" <Cardarelli.John@epamail.epa.gov>, "'boyd.mike@epa.gov'" <boyd.mike@epa.gov>

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From: Keith, Sam (ATSDR/DTEM/ATB)
Sent: Friday, March 25, 2011 4:27 PM
To: 'Tiburcio, Michelle'; Anderson, Jeri L. (CDC/NIOSH/DSHEFS); tupin.edward@epa.gov; liles.darrell@epa.gov; ira.s.reese@cbp.dhs.gov; patrick.simmons@dhs.gov; Cardarelli.John@epamail.epa.gov
Subject: RE: Call Today at 4:30 EDT to discuss CBP proposal calculation

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Sam Keith
770-488-3322 W ß best # today
(b)(6) cell

From: Tiburcio, Michelle [mailto:Michelle_Tiburcio@sra.com]
Sent: Friday, March 25, 2011 3:56 PM
To: Keith, Sam (ATSDR/DTEM/ATB); Anderson, Jeri L. (CDC/NIOSH/DSHEFS); tupin.edward@epa.gov; liles.darrell@epa.gov; ira.s.reese@cbp.dhs.gov; patrick.simmons@dhs.gov; Cardarelli.John@epamail.epa.gov
Subject: Call Today at 4:30 EDT to discuss CBP proposal calculation
Importance: High

Please use the following call-in numbers:

Phone number: 866-561-4509
Pass code: (b)(6)
Thanks,

Michelle A. Tiburcio

SRA International, Inc.
3434 Washington Blvd., 2185
Arlington, VA 22201
(703) 284-6094[attachment "Technical Basis for Proposal to release items 3-24-2011 ver 5 2011-03-25 1900.docx" deleted by Edward Tupin/DC/USEPA/US] [attachment "Survey meter PRD Radation Pager Manual REV C.pdf" deleted by Edward Tupin/DC/USEPA/US]

From: Veal.Lee@epamail.epa.gov
Sent: Sunday, March 27, 2011 8:09 PM
To: Tupin.Edward@epamail.epa.gov; Bentz Julie A.
Cc: albert.wiley@orise.orau.gov; asa4@cdc.gov; (b)(6) bvw3@cdc.gov; carmen.maher@fda.hhs.gov; ccc8@cdc.gov; (b)(6) Liles.Darrell@epamail.epa.gov; Jablonowski.Eugene@epamail.epa.gov; Brozowski.George@epamail.epa.gov; Goodman.Roger@epamail.epa.gov; DeCair.Sara@epamail.epa.gov; Page.Steve@epamail.epa.gov; cym3@cdc.gov; emorriso@ora.fda.gov; (b)(6) ezh7@cdc.gov; Ferris.John@dol.gov; george.allen@fda.hhs.gov; gfn6@cdc.gov; gordon.s.cleveland@aphis.usda.gov; gyf7@cdc.gov; james.cherniack@fda.hhs.gov; jeffrey.sincek@fda.hhs.gov; jfn1@cdc.gov; john.jensen@dm.usda.gov; john.pavek@wdc.usda.gov; Edwards.Jonathan@epamail.epa.gov; jva2@cdc.gov; karen.smallwood@fda.hhs.gov; ldk4@cdc.gov; Brandon, Lou; mark.russo@fda.hhs.gov; mdb7@cdc.gov; menarm@nv.doe.gov; michael.noska@fda.hhs.gov; olaughlin@nv.doe.gov; ozl6@cdc.gov; pac4@cdc.gov; patricia.hansen@fda.hhs.gov; Patrick.simmons@dhs.gov; pemberwj@nv.doe.gov; peter.a.petch@aphis.usda.gov; rachel.evans@fda.hhs.gov; rjf8@cdc.gov; ron.graham@fsis.usda.gov; Scott.Lough@ams.usda.gov; scotty.hargrave@fda.hhs.gov; (b)(6) (b)(6) terri.jones@fda.hhs.gov; ver2@cdc.gov; vinetta.howardking@fda.hhs.gov; wgl0@cdc.gov; william.cunningham@fda.hhs.gov
Subject: Advisory Team Product for CBP
Attachments: 3 27 11 Cargo Screening Guidance - EPA Final.docx

Ed and Julie,

EPA has reviewed and concurs with the attached Cargo Screening Guidance approach with two (2) comment. This has passed through our senior leadership.

Our comments are:
1. EPA concurs with the draft Advisory Team cargo screening guidance. However, EPA recommends that this guidance be revisited if Cesium 137 becomes the primary contaminant of concern.

2. EPA recognizes that there may be significant implementation considerations for both CBP and DOT for executing this recommendation. The magnitude of the potential backlog of potentially contaminated cargo is unknown.

Lee

Lee B. Veal
Director, Center for Radiological Emergency Management
Radiation Protection Division
Office of Radiation and Indoor Air
Environmental Protection Agency
1310 L Street, NW
Washington DC, 20005
Mail Code: 6608J
202-343-9448
cell (b)(6)

DJ/215

-----Edward Tupin/DC/USEPA/US wrote: -----

To: "Evans, Lynn (CDC/ONDIEH/NCEH)" <gfn6@cdc.gov>, "Wiley, Albert (ORAU)" <albert.wiley@orise.orau.gov>, "Ansari, Armin (CDC/ONDIEH/NCEH)" <asa4@cdc.gov>, "Whitcomb, Robert C. (CDC/ONDIEH/NCEH)" <byw3@cdc.gov>, "Maher, Carmen T. (FDA/OC/OCS)" <carmen.maher@fda.hhs.gov>, "Connell, Carol (ATSDR/DHAC/SRAB)" <ccc8@cdc.gov>, "Miller, Charles W. (CDC/ONDIEH/NCEH)" <cym3@cdc.gov>, Darrell Liles/DC/USEPA/US@EPA, "Morrison, Ellen F. (FDA/OC/OCTC)" <emorriso@ora.fda.gov>, EUGENE JABLONOWSKI/R5/USEPA/US@EPA, "Hornsby-Myers, Jennifer (CDC/NIOSH/OD)" <ezh7@cdc.gov>, "'Ferris.John@dol.gov'" <Ferris.John@dol.gov>, George Brozowski/R6/USEPA/US@EPA, "Allen, George T. (FDA/ORA/NE-FO)" <george.allen@fda.hhs.gov>, "Evans, Lynn (CDC/ONDIEH/NCEH)" <gfn6@cdc.gov>, "Cleveland, Gordon (USDA)" <gordon.s.cleveland@aphis.usda.gov>, "Dixon, John E. (CDC/ONDIEH/NCEH)" <gyf7@cdc.gov>, "Cherniack, James J. (FDA/ORA/NE-FO)" <james.cherniack@fda.hhs.gov>, "Sincek, Jeffrey A. (FDA/ORA/CE-FO)" <jeffrey.sincek@fda.hhs.gov>, "Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH)" <jfn1@cdc.gov>, "Jensen, John (USDA)" <john.jensen@dm.usda.gov>, "Pavek, John (USDA)" <john.pavek@wdc.usda.gov>, "Anderson, Jeri L. (CDC/NIOSH/DSHEFS)" <jva2@cdc.gov>, "Smallwood, Karen R. (FDA/ORA/SE-FO)" <karen.smallwood@fda.hhs.gov>, "Keith, Sam (ATSDR/DTEM/ATB)" <ldk4@cdc.gov>, Lee Veal/DC/USEPA/US@EPA, "Brandon, Lou (NRC)" <lkb1@nrc.gov>, "Russo, Mark R. (FDA/OC/OCTC)" <mark.russo@fda.hhs.gov>, "Brooks, Michael (ATSDR/DHAC/SRAB)" <mdb7@cdc.gov>, "Mena, RaJah (DOE/FRMAC)" <menarm@nv.doe.gov>, "Noska, Mike (FDA)" <michael.noska@fda.hhs.gov>, "O'Laughlin, Colleen (DOE/FRMAC)" <olaughlin@nv.doe.gov>, "Buzzell, Jennifer (CDC/ONDIEH/NCEH)" <ozl6@cdc.gov>, "Charp, Paul (ATSDR/DHAC/SRAB)" <pac4@cdc.gov>, "Hansen, Patricia A. (FDA/CFSAN)" <patricia.hansen@fda.hhs.gov>, "Pemberton, Wendy (DOE/FRMAC)" <pemberwj@nv.doe.gov>, "Petch, Peter (USDA)" <peter.a.petch@aphis.usda.gov>, "Evans, Rachel T. (FDA/ORA/CE-FO)" <rachel.evans@fda.hhs.gov>, "Funk, Renee (CDC/NIOSH/OD)" <rjf8@cdc.gov>, Roger Goodman/LV/USEPA/US@EPA, "Graham, Ron (USDA)" <ron.graham@fsis.usda.gov>, Sara DeCair/DC/USEPA/US@EPA, "Hargrave, Scotty L. (FDA/ORA/SW-FO)" <scotty.hargrave@fda.hhs.gov>, "Lough, Scott (USDA)" <Scott.Lough@ams.usda.gov>, "Jones, Terri L. (FDA/ORA/P-FO)" <terri.jones@fda.hhs.gov>, "Radke, Vincent (CDC/ONDIEH/NCEH)" <ver2@cdc.gov>, "Howard King, Vinetta M. (FDA/OC/OCTC)" <vinetta.howardking@fda.hhs.gov>, "Lotz, William G. (Greg) (CDC/NIOSH/DART)" <wgl0@cdc.gov>, "Cunningham, William C. (FDA/CFSAN)" <william.cunningham@fda.hhs.gov>, "Rohde, Brian" <(b)(6) "Regan, Sean P." (b)(6) Patrick.simmons@dhs.gov, (b)(6) (b)(6) (b)(6) (b)(6) "Ferris.John@dol.gov" <Ferris.John@dol.gov>
From: Edward Tupin/DC/USEPA/US
Date: 03/22/2011 08:58PM
Cc: Jonathan Edwards/DC/USEPA/US@EPA, Steve Page/RTP/USEPA/US@EPA, Lee Veal/DC/USEPA/US@EPA
Subject: Advisory Team Product for CBP

Advisory Team,

We have redrafted the language for our reply to the Customs and Border Patrol request. We need final agency agreement at our call tomorrow.

Another part of the issue to think about: Is there a way to express the value as a comparative to something other than background? Put your thinking caps on.

Once Aragon thank you all for your assistance and input on this effort.

Call tomorrow at 1400 (2:00 PM) EDT. Usual call in numbers -

866-561-4509. PIN (b)(6)

(See attached file: Draft Proposal on CBP needs final 3-22-2011.docx)

Ed
Edward A. Tupin, MS, CHP
tupin.edward@epa.gov
Health Physicist
Center for Radiological Emergency Management
US Environmental Protection Agency 6608J
Washington, DC 20460
office: (202) 343-9383
cell: (b)(6)
Office Location
1310 L. ST, NW
Washington, DC 20005
****

[attachment "Draft Proposal on CBP needs final 3-22-2011.docx" removed by Lee Veal/DC/USEPA/US]

Technical Basis for the initial A-Team proposal to release lightly contaminated items entering the US from Japan.

Key Objectives

1. Maintain Public Health
    a. Minimize public exposures
    b. Minimize occupational exposures
2. Use existing CBP infrastructure in field implementation / operations
    a. Detection instruments (PRD, RIID)
    b. Training,
    c. Screening protocols (isotopic identification),
    d. Adjudication process
3. Minimize impact on commerce
4. Make use of sampling data where available
    a. USS George Washington

Basis For Recommendations

ANSI N13.12, Surface and Volume Radioactivity Standards For Clearance, provides screening levels for radionuclides. ANS N13.12 is based on 1 mrem/year.

Implementation

CBP personnel routinely use Personal Radiation Dosimeters (PRD) to screen incoming cargo, luggage, and miscellaneous items, as well as conveyances (ships and planes). These devices are extremely sensitive to minor changes in radiation levels and can detect radiation levels near natural background levels. There is an existing procedure for processing "positive" readings, which should continue to be followed.

The PRD detector readings are digital from 0 to 9. These values correlate to exposure rate readings ranging from 7 μR/h to >3,800 μR/h. Also, they correlate to point sources of radioactive material ranging approximately from 60,000-30,000,000 DPM of Cs-137 and 80,000-40,000,000 DPM of I-131.

The recommended guidance to **CBP personnel is to obtain measurements at the surface of the miscellaneous items, luggage or cargo when screening for radiation levels and surface contamination. If an alarm occurs on a PRD setting of 1 or higher, further investigation is warranted. This can involve quarantining the item, decontaminating the surface of the item, or using a more sensitive instrument (such as a RIID, or radio-isotope identifier device) to obtain radiation levels and spectra for transmittal to reachback support.**

The ANSI recommended screening levels and our technical assessment calculations are provided in Tables 1 and 2. The spreadsheet (Table 2) uses dose-to-activity conversion factors for Cs-137 and I-131 for a point source to correlate the PRD readings of "0" to "9" (and the corresponding dose rates in μR/hr) to an actual level of contamination for that isotope.

Table 1 ANSI N13.12

Radionuclide Groups	Surface Screening Conventional Units (dpm/100 cm^2)
Group 1 (radium, thorium, and transuranics)	600
Group 2 Uranium and Selected High Dose Beta-Gamma Emitters (Cs-137)	6,000
Group 3 General Beta-Gamma Emitters (I-131)	60,000
Group 4 Other Beta-Gamma Emitters	600,000

Table 2

		PRD Settings (0-9) and Corresponding Radiation Levels (7-3800 μR/hr)						
		9	5	4	3	2	1	0
Isotope	μR/hr per DPM	3800	240	120	60	30	15	7
Cs-137	1.20E-04							
Total DPM Equivalent to PRD Settings		3.17E+07	2,000,000	1,000,000	500,000	250,000	125,000	58,333
I-131	8.49E-05							
Total DPM Equivalent to PRD Settings		44,758,539	2,826,855	1,413,428	706,714	353,357	176,678	82450

It is further recommended that CBP radiation support staff take RIID readings and evaluate wipe samples from cargo with screening results of "1" or higher on the PRDs occasionally to verify that the isotopes in the contamination continue to be the same.

Better guidance can be provided if field measurements are taken to correlate activity levels to PRD readings. The measurements should be taken with ½" of the surface.

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Requesting Agency: DHS / US Customs and Border Protection
Date Received: March 21, 2011

Question:

1. Travelers – "We have reviewed and offered comments on the draft guidance from HHS/CDC and request that this guidance be issued in final format as soon as possible so that we can operationalize. As part of this process, the information sharing protocols and the federal level protocols, if mandatory decontamination is required, need to be more fully articulated."

A-Team response: [CDC guidance has been prepared and is in the clearance process.]

2. Baggage and Cargo – DHS requests that the departments with authority over radiation contamination (EPA, NRC, OSHA, etc.) provide standards/thresholds for:
   a. Threshold below which baggage and cargo can continue to destination;
   b. When cargo needs to be held and decontaminated;
   c. Authorities, procedures, and agency responsibility. [Outside Advisory Team purview].

A-Team Response: The advisory team proposes interim guidance related to potentially contaminated baggage and cargo arriving in the United States from Japan. This guidance is provided to assist the Laboratories and Scientific Services Teleforensics Center (LSS) in adjudicating spectra that show radionuclides associated with the release from nuclear power plants.

- The value below which baggage and cargo can continue to destination is **50 times the natural background radiation rate as measured at the surface.**

- The basis for this interim guidance is:
  - The radionuclides identified as associated with the reactor release are primarily those with short half lives, which means they will decay away quickly.
  - It uses conservative assumptions that resulted in annual dose estimates that fall below the limits for the public recommended by the National Council on Radiation Protection and Measurement.
  - It will not present a substantial radiation risk to the CBP personnel, cargo handlers or the public.

- Operational considerations associated with the recommendation:
  - It allows the continued use of the existing CBP radiation detection

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technologies and protocols to identify and adjudicate any potentially contaminated item (the recommended value correlates to a measurement of 6 or higher on the CBP personal radiation dosimeters).

- It will not adversely impact the flow of commerce.

- It is further recommended that items at the upper end of the range be field decontaminated by simple methods such as removal and proper disposal of outer wrapping or wiping, as part of generally accepted radiological safety practice of "As Low ~~as~~ As Reasonably Achievable."
- The A-team reserves the right to revise this interim guidance if conditions in Japan change or additional protective measures are warranted.

3. Food – "DHS, at the CBP Laboratories and Scientific Services Teleforensics Center, maintains guidance from FDA and USDA on levels of contamination in food. CBP will implement any updates to this guidance in light of the situation in Japan as they are received."

   A-Team Response: We concur.

4. Conveyances – DHS requests an interagency recommendation on thresholds and procedures for conveyances that may be contaminated by radiation. For example, when CBP detects radiation on a traveler or their personal effects, it will scan the cabin of the aircraft and the area around the passenger's seat for cross contamination. What are the procedures and recommendations if contamination is discovered? What agencies regulations and authorities govern decontamination, and at what threshold? EPA, FAA, State Authorities? These same questions will apply in the maritime environment.

   A-Team response: The Advisory Team recommends that DHS/CBP refer to a document published by the Association of European Airlines (http://files.aea.be/Downloads/2002-042.pdf) which describes how to address radioactive contamination of aircraft and engines. The Advisory Team would like further discussions with FAA personnel to insure that these recommendations meet FAA needs.

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PROJ: Assess surface contamination levels of concern to workers and public									
ISOTOPE	NRC DAC uCi/ml air	DAC uCi/m3 air	Resusp (Air/ground) (uCi/m3/uCi/m2)	Comparable Surface Contam (uCi/m2)	Surf Contam for Workers (uCi/100 cm2	Surf Contam for Public (uCi/100cm2)	Surf Contam for Public (pCi/100cm2)	NOTE: Multiply I-131 values by 19 if no production	Sv/Bq
DAC (I-131)	2.00E-08	2.00E-02	1.00E-06	2.00E+04	2.00E+00	4.00E-02	4.00E+04		2.92E-07
DAC (Cs-137)	5.00E-05	5.00E+01	1.00E-06	5.00E+07	5.00E+03	1.00E+02	1.00E+08		8.63E-09
DAC for I-1312 is at http://www.nrc.gov/reading-rm/doc-collections/cfr/part020/appb/Iodine-131.html									
DAC for Cs-137 is at http://www.nrc.gov/reading-rm/doc-collections/cfr/part020/appb/Cerium-137.html									
NOTE: These concentrations assume continuous exposure at that level throughout the year. Since I-131 decays, the value increases x19.									
The x19 factor is based on 1 uCi exposure for 365d=365uCi-d. Ave life=2.2xhalf-life. For 8.5d half-life, avg life = 2.2x8.5=19									
NOTE: Resuspension of 1E-6 is for building or vessel occupancy. For handling containers, increase to 1E-4 for portion of all handling days.									
NOTE: Both I and Cs bond tightly to metals and concrete. This lowers resuspension.									
NUREG 1720 Section 6.3 and Table 5: Parameters for Normal and Lognormal "Maximum Likelihood" Models of RF									
" the nominal 90th percentile of the lognormal fit for RF , (i.e. 9.6 x 10-7 m-1), may be used" for building occupancy									
http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1720/1720.pdf									

From: OST02 HOC
Sent: Sunday, March 27, 2011 8:18 PM
To: Gambone, Kimberly
Cc: Brandon, Lou
Subject: RE: PMTR Dose Assessment (RASCAL) schedule through 4/9/11 as of SU 3/27/11 1:27pm

Kimberly, per your request you have been added to April 3 and 7th from 3 – 11pm.

PMTR Dose Assessment (RASCAL) - Need 2 people/day			
Sat-Sun	4/2-4/3	11pm - 7am	John Parillo/?
Sun	3-Apr	7am - 3pm	?
Sun	3-Apr	3pm-11pm	Casper Sun/Kimberly (Rapon) Gambone
Sun-Mon	4/3-4/4	11pm - 7am	John Parillo/?
Mon	4-Apr	7am - 3pm	Tony Huffert/Rich Clement
Mon	4-Apr	3pm-11pm	
Mon-Tue	4/4-4/5	11pm - 7am	John Parillo/?
Tue	5-Apr	7am - 3pm	Tony Huffert/Rich Clement
Tue	5-Apr	3pm-11pm	Casper Sun/?
Tue-Wed	4/5-4/6	11pm - 7am	?
Wed	6-Apr	7am - 3pm	Tony Huffert/Rich Clement
Wed	6-Apr	3pm-11pm	Casper Sun/?
Wed-Thur	4/6-4/7	11pm - 7am	?
Thur	7-Apr	7am - 3pm	Tony Huffert/Rich Clement
Thur	7-Apr	3pm-11pm	Casper Sun/Kimberly (Rapon) Gambone
Thur-Fri	4/7-4/8	11pm - 7am	?
Fri	8-Apr	7am - 3pm	Tony Huffert/Rich Clement
Fri	8-Apr	3pm-11pm	Casper Sun/?
Fri-Sat	4/8-4/9	11pm-7am	?
Sat	9-Apr	7am - 3pm	Tony Huffert/?
Sat	9-Apr	3pm-11pm	Casper Sun/?
Sat-Sun	4/9-4/10	11pm - 7am	?

See below week April 10 – 16th below, you are scheduled for April 13th from 3-11pm, if you have any additional requests, please email OST02HOC@nrc.gov

DJ/216

Thanks

PMTR Dose Assessment (RASCAL) - Need 2	

Sat-Sun	4/9-4/10	11pm - 7am	
Sun	10-Apr	7am - 3pm	Tony Huffert
Sun	10-Apr	3pm-11pm	
Sun-Mon	4/10-4/11	11pm - 7am	
Mon	11-Apr	7am - 3pm	Tony Huffert
Mon	11-Apr	3pm-11pm	
Mon-Tue	4/11-12/5	11pm - 7am	
Tue	12-Apr	7am - 3pm	Tony Huffert
Tue	12-Apr	3pm-11pm	
Tue-Wed	4/12-13/6	11pm - 7am	
Wed	13-Apr	7am - 3pm	Tony Huffert
Wed	13-Apr	3pm-11pm	Kimberly (Rapone)Gambone
Wed-Thur	4/13-4/14	11pm - 7am	
Thur	14-Apr	7am - 3pm	Tony Huffert
Thur	14-Apr	3pm-11pm	
Thur-Fri	4/14-4/15	11pm - 7am	
Fri	15-Apr	7am - 3pm	

From: Gambone, Kimberly
Sent: Sunday, March 27, 2011 7:42 PM
To: OST02 HOC
Cc: Brandon, Lou
Subject: RE: PMTR Dose Assessment (RASCAL) schedule through 4/9/11 as of SU 3/27/11 1:27pm

With my U.S. Army and single parent commitments, I can fill in only the following slots:

Sunday April 3, 3-11pm
Thursday April 7, 23-11pm

If staffing continues into the week of April 11, I will be able to do swing and/or night shifts April 13th -17th

V/r,

Kimberly (Ropon) Gambone

From: OST02 HOC
Sent: Sunday, March 27, 2011 1:28 PM
To: Gambone, Kimberly
Cc: Brandon, Lou
Subject: PMTR Dose Assessment (RASCAL) schedule through 4/9/11 as of SU 3/27/11 1:27pm

Provided FYI. Yellow highlighted boxes are vacant to be filled.

PMTR Dose Assessment (RASCAL) - Need 2 people per day			
Sat-Sun	3/26-3/27	11pm - 7am	John Parillo/Ron LaVera
Sun	27-Mar	7am - 3pm	Tony Huffert/Larry Wheeler
Sun	27-Mar	3pm-11pm	Casper Sun/Ed Roach
Sun-Mon	3/27-3/28	11pm - 7am	Margaret Cervera/John Parillo
Mon	28-Mar	7am - 3pm	Rich Clement/Tony Huffert
Mon	28-Mar	3pm-11pm	Bernie White/Casper Sun
Mon-Tue	3/28-3/29	11pm - 7am	Margaret Cervera/John Parillo
Tue	29-Mar	7am - 3pm	Tony Huffert/Rich Clement
Tue	29-Mar	3pm-11pm	Casper Sun/?
Tue-Wed	3/29-3/30	11pm - 7am	Margaret Cervera/Bernie White
Wed	30-Mar	7am - 3pm	Tony Huffert/Rich Clement
Wed	30-Mar	3pm-11pm	Casper Sun/?
Wed-Thur	3/30-3/31	11pm - 7am	Margaret Cervera/John Parillo
Thur	31-Mar	7am - 3pm	Rich Clement/Joe DeCicco
Thur	31-Mar	3pm-11pm	Bernie White (Maybe)/Casper Sun
Thur-Fri	3/31-4/1	11pm - 7am	John Parillo/Leroy Hardin
Fri	1-Apr	7am - 3pm	Tony Huffert/Rich Clement
Fri	1-Apr	3pm-11pm	Casper Sun/?
Fri-Sat	4/1-4/2	11pm-7am	John Parillo/?
Sat	2-Apr	7am - 3pm	Tony Huffert/?
Sat	2-Apr	3pm-11pm	Casper Sun/Leroy Hardin
Sat-Sun	4/2-4/3	11pm - 7am	John Parillo

PMTR Dose Assessment (RASCAL) - Need 2 people/day			
Sat-Sun	4/2-4/3	11pm - 7am	John Parillo/?
Sun	3-Apr	7am - 3pm	?
Sun	3-Apr	3pm-11pm	Casper Sun/?
Sun-Mon	4/3-4/4	11pm - 7am	John Parillo/?

Mon	4-Apr	7am - 3pm	Tony Huffert/Rich Clement
Mon	4-Apr	3pm-11pm	~~Casper Sun~~ ?
Mon-Tue	4/4-4/5	11pm - 7am	John Parillo/?
Tue	5-Apr	7am - 3pm	Tony Huffert/Rich Clement
Tue	5-Apr	3pm-11pm	Casper Sun/?
Tue-Wed	4/5-4/6	11pm - 7am	?
Wed	6-Apr	7am - 3pm	Tony Huffert/Rich Clement
Wed	6-Apr	3pm-11pm	Casper Sun/?
Wed-Thur	4/6-4/7	11pm - 7am	?
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Thur	7-Apr	3pm-11pm	Casper Sun/?
Thur-Fri	4/7-4/8	11pm - 7am	?
Fri	8-Apr	7am - 3pm	Tony Huffert/Rich Clement
Fri	8-Apr	3pm-11pm	Casper Sun/?
Fri-Sat	4/8-4/9	11pm-7am	?
Sat	9-Apr	7am - 3pm	Tony Huffert/?
Sat	9-Apr	3pm-11pm	Casper Sun/?
Sat-Sun	4/9-4/10	11pm - 7am	?

EST Admin Support
NRC Operations Center
eMail: OST02.HOC@nrc.gov

From: Brandon, Lou
Sent: Sunday, March 27, 2011 5:55 AM
To: Gambone, Kimberly
Cc: OST01 HOC; OST02 HOC
Subject: RE: JAPANESE EARTHQUAKE ERO STAFFING MARCH 27 - APRIL 2 (PAYPERIOD 8, WEEK 1)

Kim,

I'm not sure how the file you refer to was processed. (b)(5)
(b)(5)
(b)(5) suggested that he shouldn't feel any about taking premium shifts. These are the two guys on the roster for the times that you were interested in. There are shifts available for dose assessors on the afternoon and evening shifts, (upcoming Tues, Wed, Friday afternoons, Friday night, Saturday morning) if you can support the PMT. You've been doing a wonderful job.

Lou

From: Gambone, Kimberly
Sent: Saturday, March 26, 2011 2:11 PM
To: OST02 HOC
Cc: Brandon, Lou
Subject: RE: JAPANESE EARTHQUAKE ERO STAFFING MARCH 27 - APRIL 2 (PAYPERIOD 8, WEEK 1)

There was a hard copy sign up sheet that went around. (I believe it is hanging on the file cabinet above PMT02 work station.) I had signed up for the 7am-3pm shift on March 28, 29, and 30. I am unavailable the rest of the week and weekend. On the sheet attached in email, I see that I (Kimberly Gambone) am not on the list. Did I get bumped? Overlooked? Any which way, unless I hear back otherwise, I will assume that I am no longer needed. If staffing is to continue further into April and staff is needed, let me know.

V/r,

Kimberly (Ropon) Gambone

From: OST02 HOC
Sent: Friday, March 25, 2011 6:17 PM
Subject: JAPANESE EARTHQUAKE ERO STAFFING MARCH 27 - APRIL 2 (PAYPERIOD 8, WEEK 1)

Attached is the OPS Center Watchbill for Sunday, March 27 – Saturday, April 2. All positions except the PMTR RAAD, Sunday, 3pm – 11pm, are filled through Monday days (7:00am-3:00pm). Please contact the various Team Coordinators and OST02.HOC@nrc.gov if you would like to work any open slots.

If you need to change the schedule please send an email to OST02.HOC@nrc.gov and your teams coordinator

EST Admin Support
NRC Operations Center
301-816-5100 x5600

From: Brandon, Lou
Sent: Monday, March 28, 2011 6:26 AM
To: Hoc, PMT12
Subject: FW: [REP Planners] Chairman Jaczko's statements this afternoon

fyi

From: REP_Planners@yahoogroups.com [mailto:REP_Planners@yahoogroups.com] **On Behalf Of** Jim Hardeman
Sent: Wednesday, March 16, 2011 7:18 PM
To: REP Planners Mailing List
Subject: [REP Planners] Chairman Jaczko's statements this afternoon

Folks --

This list has been surprisingly quiet, given the recent and current events in Japan. I'm sure that's because we're all under orders not to say anything publicly.

I trust that all of you have seen or heard NRC Chairman Jazcko's statements today. Just in case you haven't -- you can find them on the NRC website at http://www.nrc.gov/reading-rm/doc-collections/news/2011/11-050.pdf

Bottom line is that the Chairman has recommended that US citizens within 50 miles of the Fukushima Daiichi site evacuate, countermanding the official guidance provided by the Japanese government.

Those of you who have been following my posts on Facebook are aware that I disagree with the Chairman's assessment. I won't repeat my reasoning here -- if you're interested you can find me on Facebook. I also fully acknowledge that the Chairman has his own staff on the ground -- in Tokyo -- and that his data sources may be better than mine.

What's troubling here is the Chairman's challenging of official guidance provided by the Japanese government. Based on NRC's actions today, what confidence should I, as a state official responsible for making protective action recommendations to the Governor, have that in a similar circumstance in my jurisdiction, NRC wouldn't take similar actions and make public statements challenging and countermanding our guidance?

Didn't we learn anything from TMI?

Jim Hardeman, Manager
Environmental Radiation Program
Environmental Protection Division
Georgia Department of Natural Resources
4220 International Parkway, Suite 100
Atlanta, GA 30354
(404) 362-2675
Fax: (404) 362-2653
Personal fax: (b)(6)

DJ/217

E-mail: Jim.Hardeman@dnr.state.ga.us

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From: McKinley, Raymond
Sent: Monday, March 28, 2011 10:52 AM
To: Brandon, Lou
Subject: RE: Protective Action Press Release

Thanks for getting back Lou. I have been surfing WEB-EOC and CM-WEB (NARAC) and can see what you have been dealing with. The recommendation to get our people out of the way was a good call in my mind given the magnitude and ongoing nature of the event along with the fuzzy information that was available. Worst case was within the realm of plausibility at the time.

Hope you are holding up OK.

From: Brandon, Lou
Sent: Monday, March 28, 2011 5:05 AM
To: McKinley, Raymond; Marshall, Jane; Grant, Jeffery
Subject: RE: Protective Action Press Release

Ray,

I've been subject to heavy demand in the Op Center and am just getting to many emails that have piled up. Sorry for the delayed response.

We were having difficulty obtaining any technical data from Japan, as the tops were blowing on many of the Daiichi units. We were directed to run worst case scenarios, 100% core melt, 100% per hour release. These were very hypothetical runs, just providing perspective on potential impacts. It was the large number of reactors deteriorating and potential spent fuel issues that was the basis of the ET's decision to go to 50 miles. The RASCAL calculations were one source of justification for precautionary measures, even though they were not at the time representative of the situation.

Lou

From: McKinley, Raymond
Sent: Wednesday, March 16, 2011 3:19 PM
To: Brandon, Lou; Marshall, Jane; Grant, Jeffery
Subject: Protective Action Press Release
Importance: High

Jane, Lou, or Jeff,

Have you seen that new NRC press release related to recommended Protective Actions for U.S. Citizens near Fukushima?

http://www.nrc.gov/reading-rm/doc-collections/news/2011/11-050.pdf

Are we sure this is right? Note the embedded link to the calculations:

4 day ground shine @ 10 miles of 28 Rem?

4 day ground shine @ 50 miles of 6.7 Rem?

DJ/218

I am no Protective Measures Specialist, but all of those numbers sound awful high. Can you provide a sanity check?

I was also surprised that we put that kind of detailed technical info out there in a press release. There wasn't much there to explain what it all meant.

I tried to call, but could not reach you.

Ray

From:	Lewis, Robert
Sent:	Monday, March 28, 2011 10:59 AM
To:	Bush-Goddard, Stephanie; Reis, Terrence; Cool, Donald; Holahan, Vincent; Jones, Cynthia; Brock, Kathryn; Milligan, Patricia; Holahan, Patricia; Moore, Scott; Piccone, Josephine; MorganButler, Kimyata; Gibson, Kathy; Brock, Terry; McDermott, Brian; Brandon, Lou
Subject:	action (urgent) - discussion tool for today's EDO alignment meeting for 4/14 commission briefing,
Attachments:	032511 Status on Japan Scheduling Note (Rev 1) (3).docx; april 14 comm briefing.docx

I plan to use the attached at the 3 pm meeting with Borchardt, along with the draft scheduling note (2nd attached)

If anyone has comments, reply by noon, & I will try to incorporate.

Our goal today is alignment with the EDO, so a tool for discussion is more important than a polished/detailed outline

DD/219

Draft 3/25/11

SCHEDULING NOTE

Title: **BRIEFING ON THE STATUS OF EVENTS IN JAPAN AND DISCUSSION ON U.S. RADIATION PROTECTION STRATEGY IN EMERGENCY SITUATIONS (Public)**

Purpose: Provide the Commission an update of the Japanese nuclear event, discuss NRCs radiation protection strategies in emergency situations and hear a representative sample of external stakeholder viewpoints.

Scheduled: **April 14, 2011**
9:00am

Duration: Approx. 3 hours

Location: Commissioner's Hearing Room, 1st fl. OWFN

Participants:	**Presentation**
NRC Staff	**30 mins.***
Robert Lewis, Acting Director, Division of Materials Safety and State Agreements, FSME	30 mins.*
Topic: Opening Remarks and Status of the Japanese Event Overall Strategy of Radiation Protection in the United States -Normal and accident conditions -NRC's Response to a Radiological Event -Use of Models and source term determinations -Protective Action Strategies	
Commission Q & A	**50 mins.**
BREAK	**5 mins.**
Stakeholder Panel	**40 mins.***
Edward Maher, President, Health Physics Society Topic: U.S. Response from an HPS Perspective	10 mins.*
John Boice, Scientific Director of the International Epidemiology Institute Topic: Epidemiological Consequences of Emergency Situations	10 mins.*

Richard Toohey, Oak Ridge Associate Universities Topic: TBD	10 mins.
National Council on Radiation Protection and Measurements Topic: U.S. Response in Emergency Situations	10 mins.
Commission Q & A	**50 mins.**
Discussion – Wrap-up	**5 mins.**

*For presentation only and does not include time for Commission Q & A's

Documents:
- TBD
Staff background material due to SECY: March 31, 2011.
Slides due to SECY: April 7, 2011.

Briefing on the Status of Events in Japan and discussion on U.S. Radiation Protection Strategy in Emergency Situations

Introduction

- Our thoughts remain with the Japanese people as they mourn their losses and recover from the earthquake, tsunami, and the resulting damage to the Fukushima 1 power plant
- NRC staff remains dedicated to providing technical assistance -
  - To the Japanese Government to ensure that the accident at the plant does not further complicate recovery efforts
  - To the embassy, state and Federal government agencies, with respect to protection of Americans in Japan and any possible impacts within the US
- NRC operations center remains in monitoring mode 24-hrs a day.

Current Situation for Fukushima I Nuclear Power Plant

- Status of Units 1-4 (RPV, Containment, SNF Pool)
- Radiation levels on site (public info)
- Radiation levels off site (public info)
- Protective Actions that have been taken
- Perspective on detections in the U.S. by EPA, States, Utilities

Overall Strategy of Radiation Protection in the United States for Emergency Exposure Situations

- Normal and accident conditions
  - Roles and Responsibilities of licensees, State, and Federal Government
  - Roles of EPA, NRC, FEMA, DOE (RAPP, FRMAC, NARAC/IMAAC)
  - Requirements in Part 20 & Part 100, approach in NUREG/-CR-0800
  - Requirements for preparedness, exercises
- NRC's Response to a Radiological Event
  - Operation Center
  - PMT - potential consequences of an event, the status of protective actions underway, and any conditions that might impede necessary protective actions
    - Perform an independent assessment of the licensee's protective action recommendations.
    - Confirm that the State protective action decision(s) are adequate to protect public health and safety.
    - Ensure accuracy of public information
- Use of Models and source term determinations
  - Use of RASCAL
    - Source term determination (Assumptions that drive I-131 vs. Cs-137 and particulates' doses)
    - Meteorology
    - Comparison of plume modeling to PAGs

    - Other tools (FRMAC, NARAC modeling)
- Protective Actions: Early, Intermediate, and Late phases
    - Sheltering, Evacuations, Access controls
    - Administration of Stable iodine
    - Decontamination of persons, property
    - Interdiction of food and water - crops and dairy
    - Relocation
- Decisionmaking process for relaxation of protective actions

From: Holahan, Patricia
Sent: Monday, March 28, 2011 11:33 AM
To: Evans, Michele; Milligan, Patricia; Brandon, Lou
Cc: McDermott, Brian; Jones, Cynthia; Erlanger, Craig; Salus, Amy
Subject: Re: ACTION:: NSIR Support of 3:00pm Alignment Meeting TODAY for Apr 14 Comm. Briefing
Attachments: image001.gif

I can attend

From: Evans, Michele
To: Holahan, Patricia; Milligan, Patricia; Brandon, Lou
Cc: McDermott, Brian; Jones, Cynthia; Erlanger, Craig; Salus, Amy
Sent: Mon Mar 28 11:24:45 2011
Subject: ACTION:: NSIR Support of 3:00pm Alignment Meeting TODAY for Apr 14 Comm. Briefing

Trish, Trish and Lou,

There is an EDO alignment meeting at 3 pm today for a commission meeting being planned tentatively for April 14 entitled: Briefing on the Japan Nuclear Event: Radiological Consequences and Potential Health Effects.

It is not clear to me whether RES or FSME has the lead for this meeting. However, I am told by RES that the current scheduling note identifies Rob Lewis as the only speaker at the table.

In the email below, Rob has asked for support from several in NSIR including you. Cyndi is out sick today, and Brian is working 3 – 11. Please let me know if you can attend this alignment meeting at 3 pm.

Thanks

Michele

From: Reis, Terrence
Sent: Monday, March 28, 2011 10:50 AM
To: Evans, Michele
Cc: Lewis, Robert
Subject: NSIR Support of 3:00pm Alignment Meeting for Apr 14 Comm. Briefing

Michelle,

I received a question as to NSIR's representation at today's 3pm alignment meeting. Rob would like of the following who is available:

Trish Holahan
Trish Milligan
Cyndi Jones
Lou Brandon
Brian McDermott

Call if you need clarification.

Terry

DS\220

Terrence Reis
Deputy Director, Division of Materials Safety and State Agreements
Office of Federal and State Materials and Environmental Management Programs
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555
MS TWFN T8E24

(301)415-3340 main
(301) 415-5955 fax
(b)(6) cell

From: Evans, Lynn (CDC/ONDIEH/NCEH) <gfn6@cdc.gov>
Sent: Monday, March 28, 2011 5:42 PM
To: Zarate-Bermudez, Max A. (CDC/ONDIEH/NCEH); Allen, George T. (FDA/ORA/NE-FO); Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Ansari, Armin (CDC/ONDIEH/NCEH); Brandon, Lou; Brooks, Michael (ATSDR/DHAC/SRAB); Brozowski, George (EPA); Buzzell, Jennifer (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); Cherniack, James J. (FDA/ORA/NE-FO); Cleveland, Gordon (USDA); Connell, Carol (ATSDR/DHAC/SRAB); Cunningham, William C. (FDA/CFSAN); DeCair, Sara (EPA); Dixon, John E. (CDC/ONDIEH/NCEH); Evans, Lynn (CDC/ONDIEH/NCEH); Evans, Rachel T. (FDA/ORA/CE-FO); Funk, Renee (CDC/NIOSH/OD); Goodman, Roger (EPA); Graham, Ron (USDA); Hansen, Patricia A. (FDA/CFSAN); Hargrave, Scotty L. (FDA/ORA/SW-FO); Hornsby-Myers, Jennifer (CDC/NIOSH/OD); Howard King, Vinetta M. (FDA/OC/OCTC); Jablonowski, Gene (EPA); Jensen, John (USDA); Jones, Terri L. (FDA/ORA/P-FO); Keith, Sam (ATSDR/DTEM/ATB); Liles, Darrell (EPA); Lotz, William G. (Greg) (CDC/NIOSH/DART); Lough, Scott (USDA); Maher, Carmen T. (FDA/OC/OCS); Mena, RaJah (DOE/FRMAC); Miller, Charles W. (CDC/ONDIEH/NCEH); Morrison, Ellen F. (FDA/OC/OCTC); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); Noska, Mike (FDA); O'Laughlin, Colleen (DOE/FRMAC); Pavek, John (USDA); Pemberton, Wendy (DOE/FRMAC); Petch, Peter (USDA); Russo, Mark R. (FDA/OC/OCTC); Sincek, Jeffrey A. (FDA/ORA/CE-FO); Smallwood, Karen R. (FDA/ORA/SE-FO); Tupin, Ed (EPA); Veal, Lee (EPA); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Wiley, Albert (ORAU)
Subject: FW: Surge Protective/Reverse Patient Isolation Capacity for Radiation-exposed populations
Attachments: Protective Isolation Headboard White PaperIIIb.DOCX

FYI...information from NIOSH. Please forward to those who may benefit from this information.

From: Spahr, James S. (CDC/NIOSH/OD)
Sent: Monday, March 28, 2011 5:14 PM
To: Evans, Lynn (CDC/ONDIEH/NCEH)
Cc: Hornsby-Myers, Jennifer (CDC/NIOSH/OD); Mead, Kenneth R. (CDC/NIOSH/DART)
Subject: FW: Surge Protective/Reverse Patient Isolation Capacity for Radiation-exposed populations

Lynn, attached is some late breaking NIOSH research that may have benefit in Japan.
Perhaps the A-team might know best where to direct this type of novel technology.
Best Regards

JIM

James S. Spahr, RS, DAAS, MPH
CAPT, United States Public Health Service
Associate Director, Emergency Preparedness & Response
Office of the Director
National Institute for Occupational Safety and Health
jspahr@cdc.gov
Office: 404.498.6185
Cell: (b)(6)

From: Mead, Kenneth R. (CDC/NIOSH/DART)
Sent: Monday, March 28, 2011 3:08 PM

DJ/221

To: Hornsby-Myers, Jennifer (CDC/NIOSH/OD); Spahr, James S. (CDC/NIOSH/OD)
Cc: Gressel, Michael G. (CDC/NIOSH/DART); DeBord, Gayle (CDC/NIOSH/DART)
Subject: FW: Surge Protective/Reverse Patient Isolation Capacity for Radiation-exposed populations

Jen & Jim,

Looks like we now have approval to share the whitepaper (latest version attached) with EOC, NCEH, DHQP, etc Is that something you all handle through EPRO channels or do you need something from me? I cut-n-paste (below my signature block) the info I sent to Margaret Kitt when I first sent the paper to her. Thought it may be useful in introducing the paper to our colleagues.

Thanks,

Ken

Kenneth R. Mead, PhD, PE
CAPT, U.S. Public Health Service
Senior Research Engineer
National Institute for Occupational Safety and Health
Centers for Disease Control and Prevention
phone: 513-841-4385
email: kmead@cdc.gov

Explanation Info:

In past presentations or demonstrations of our expedient airborne infectious isolation (EAII) work, we've sometimes mentioned that one of the anticipated advantages of the ventilated headboard design was that we could reverse the flow direction of the fan/filter system in order to create a surge capacity in Protective Isolation (a.k.a. Reverse Isolation). Reverse Isolation may be medically prescribed for profoundly immunosuppressed patients, such as those who have experienced moderate to high acute radiation exposures. Reverse isolation rooms are not common. If a large number of people should experience these types of exposures, it could quickly overwhelm the engineered capacity for protective isolation rooms. While the reverse-the-flow comments were intuitively obvious, we had not yet tested the system in this manner as it fell somewhat outside of our worker-protection mandate. With news of the nuclear situation unfolding in Japan, we configured one of the hoods into Protective Isolation configuration and conducted some quick testing to quantitatively determine its effectiveness. The attached white paper describes the operation of the Protective Isolation Headboard and summarizes the data demonstrating its effectiveness.

The OSH link to this work isn't real strong. It is probably more of a patient care issue (Though one might say that it would be nuclear workers and emergency responders who were most likely to need benefit of such systems). Nevertheless, the R&D had already been done (for the EAII aspects) and given the evolving nuclear situation, it was pretty easy to set up and test in the protective isolation configuration. Now that we've done so (and it worked so well), it seems like we need an avenue by which we can get these relevant results out in a timely fashion. I'm not advocating anyone to start mass-producing these just yet, I just want the decision makers to know it is an affordable option if the situation requires it.

From: Kitt, Margaret (CDC/NIOSH/OD)
Sent: Saturday, March 26, 2011 12:57 PM
To: Mead, Kenneth R. (CDC/NIOSH/DART); Hornsby-Myers, Jennifer (CDC/NIOSH/OD)
Cc: Gressel, Michael G. (CDC/NIOSH/DART); DeBord, Gayle (CDC/NIOSH/DART); BerryAnn, Roland (CDC/NIOSH/NPPTL); Elliott, Larry J. (CDC/NIOSH/OD); Bernard, Bruce P. (CDC/NIOSH/DSHEFS); Earnest, G. Scott (CDC/NIOSH/DART); Hall, Ronald M. (CDC/NIOSH/DART)
Subject: RE: Surge Protective/Reverse Patient Isolation Capacity for Radiation-exposed populations

Ken and Mike,
Dr Howard really liked your white paper and thanks you for your initiative. He thinks you should move forward and even suggests you might want to work to get it published electronically somewhere but that is another issue I will let you resolve with your leadership and the ADS Office. Please also recall John Piacentino's suggestion to track this document and comments in Documentum.

Please work with Jenn and Jim on Monday to determine the best path forward with the EOC, NCEH, DHQP, etc.

Thanks again for bringing this to light.
Margaret

Margaret M. Kitt, MD, MPH
CAPT USPHS
Deputy Director for Program
National Institute for Occupational Safety and Health
ajy8@cdc.gov
404-498-2500

From: Mead, Kenneth R. (CDC/NIOSH/DART)
Sent: Friday, March 25, 2011 5:18 PM
To: Kitt, Margaret (CDC/NIOSH/OD); Hornsby-Myers, Jennifer (CDC/NIOSH/OD)
Cc: Gressel, Michael G. (CDC/NIOSH/DART); DeBord, Gayle (CDC/NIOSH/DART); BerryAnn, Roland (CDC/NIOSH/NPPTL); Elliott, Larry J. (CDC/NIOSH/OD); Bernard, Bruce P. (CDC/NIOSH/DSHEFS); Earnest, G. Scott (CDC/NIOSH/DART); Hall, Ronald M. (CDC/NIOSH/DART)
Subject: RE: Surge Protective/Reverse Patient Isolation Capacity for Radiation-exposed populations

Margaret, Jen et al,...

The attached version is the most current, and incorporates modifications due to yesterday's comments as well as additional discussions and input from Roland and Mike today.

Have a good weekend!!

-Ken

From: Mead, Kenneth R. (CDC/NIOSH/DART)
Sent: Friday, March 25, 2011 12:13 PM
To: BerryAnn, Roland (CDC/NIOSH/NPPTL); Elliott, Larry J. (CDC/NIOSH/OD); Hornsby-Myers, Jennifer (CDC/NIOSH/OD); Bernard, Bruce P. (CDC/NIOSH/DSHEFS)
Cc: Gressel, Michael G. (CDC/NIOSH/DART); DeBord, Gayle (CDC/NIOSH/DART); Kitt, Margaret (CDC/NIOSH/OD)
Subject: RE: Surge Protective/Reverse Patient Isolation Capacity for Radiation-exposed populations

This is the most updated version of the whitepaper. I've attempted to address everyone's concerns from yesterday.

Roland is still evaluating the protection factor discussion so there may still be some tweaks there but in the meantime, I wanted to get this out to everyone else so they could comment.

-Ken

Kenneth R. Mead, PhD, PE
CAPT, U.S. Public Health Service
Senior Research Engineer
National Institute for Occupational Safety and Health
Centers for Disease Control and Prevention
phone: 513-841-4385
email: kmead@cdc.gov

WHITE PAPER: A Protective Isolation Headboard Configuration for Patients Requiring Protective Environments (Reverse Isolation) as a Result of Moderate-to-High Acute Radiation Exposures

POCs CAPT Kenneth R. Mead, PhD, PE (KMead@cdc.gov)
CAPT Mike Gressel, PhD, CSP (MGressel@cdc.gov)

Disclaimer: This discussion highlights a method for developing surge capacity in protective (reverse isolation) environments such as those prescribed for patients who are immunosuppressed due to radiation exposure.. While patient care strategy is outside of the traditional NIOSH mandate, the protective isolation headboard concept was an obvious adaption of existing NIOSH research on expedient airborne infectious isolation techniques. Through distribution of this document, NIOSH is not implying that an identified need for surge capacity in protective environments currently exists or is predicted. The document's intended audience includes individuals and agencies responsible for determining emergency response patient care strategies. The document's intent is to share knowledge of the protective isolation headboard concept, its performance, and its economical availability.

Abstract: NIOSH researchers modified an expedient airborne infectious isolation hood to operate under positive pressure protective isolation conditions. Protective Environments (a.k.a. Reverse Isolation) are medically prescribed for profoundly immunosuppressed patients, such as those who have experienced moderate (2-5 Gy) to high (5-10 Gy) acute radiation exposures. NIOSH tested the Protective Isolation Headboard (PIH) configuration within a room with an intentionally-elevated particle count. Despite this challenge, the tests revealed the protected patient environment within the PIH to be consistently cleaner than the U.S. Food and Drug Administration's requirements for sterile pharmaceutical compounding (i.e. ISO Class 5 environment). Using a modified respirator testing protocol, quantitative results were also employed to reveal the PIH to have an average "Patient Protection Factor" exceeding 15,000. For comparison purposes, the OSHA-assigned protection factor for an N-95 half-mask respirator (often referred to as N95) is only 10, while the assigned protection factor for a full-facepiece powered air purifying respirator (PAPR) is 1000. During testing, the PIH was supplied with filtered air using a HEPA-Filtered fan system such as those used to control dust levels during hospital renovations. The headboard itself can be built for approximately $50.00 each using off-the-shelf materials from a home improvement store. A lightweight extruded aluminum version is also in development.

Background: For the past few years the Centers for Disease Control and Prevention's (CDC's) National Institute for Occupational Safety and Health (NIOSH) has been working on the development of Expedient Airborne Infectious Isolation (EAII) strategies. The EAII strategies are intended as a method to provide surge airborne infectious isolation capacity for use during an airborne infectious epidemic that exceeded the national healthcare system's engineered capacity for airborne infectious isolation rooms. One of the identified EAII configurations, The Ventilated Headboard (see Figure below), combines a filtered headboard and retractable canopy system with low velocity unidirectional airflow to remove infectious particles at their source (the patient) before they have an opportunity to expose bedside healthcare workers or other room occupants. The captured aerosol are pulled through the headboard

and can either be exhausted outdoors or passed through a high efficiency particulate air (HEPA) filter and recirculated back into the room.

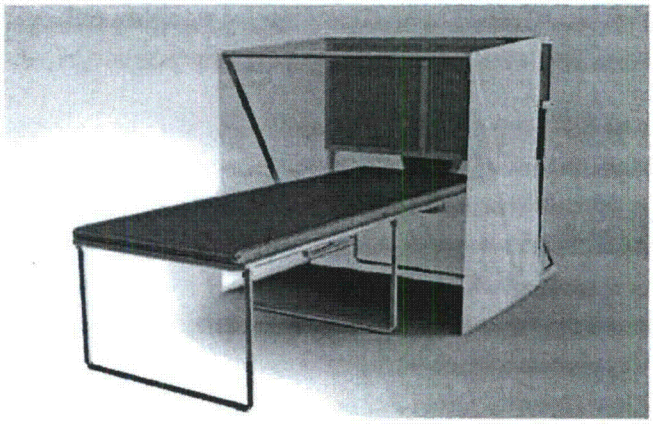


Figure: 3D Rendering of Ventilated Headboard configuration for expedient airborne infectious isolation. Graphic Drawing By: Nick Trifonoff, CDC/NIOSH

Relevance To Current Events: One side benefit of the Ventilated Headboard design is the ability to reverse airflow direction, thus creating a positive pressure patient environment within the canopy area. When the headboard is connected to the air-supply side of a HEPA-filtered fan system and a transparent front drape (not shown in above figure) is positioned loosely over the front of the canopy, the patient environment is maintained under positive-pressure "clean room" conditions. This Protective Isolation Headboard (PIH) configuration protects the patient from breathing in airborne viruses, bacteria or other room contaminants. Just as the EAII configurations were analogous to a hospital airborne infectious isolation (AII) room, the positive pressure adaptation of the Ventilated Headboard is analogous to a hospital's Protective Environment patient room. Protective Environment rooms (a.k.a. Reverse Isolation Rooms) are medically prescribed for use with patients who are profoundly immunosuppressed, such as those who have experienced moderate (2-5 Gy) and high (5-10 Gy) acute radiation exposures[i,ii], high-risk burn patients, and patients who've experienced total body irradiation and chemotherapy as part of a bone marrow transplant regime.

With the current nuclear crises unfolding in Japan, there is increased interest in response strategies for dealing with large numbers of radiation-exposed persons. We should emphasize that NIOSH is unaware of any predicted potential for such a condition to develop and is certainly hopeful that it will not. As a precautionary measure, in the event such a worse-case situation were to unfold, NIOSH researchers conducted quantitative testing to identify how protective the PIH could be if required to operate under surge protective isolation conditions. For the tested configuration, the PIH was supplied with filtered air using a HEPA-Filtered fan system such as those used to control dust levels during hospital renovations. The fan setting was set to operate at a low supply velocity (under 30 feet per minute) thus noise or wind-tunnel effects should not be an issue. The HEPA filters used in these systems are rated to have at least a 99.97% filtration efficiency. The effectiveness of the PIH patient environment is dependent upon the high filtration efficiency of such a filter. Most hospitals already own such systems.

NIOSH is unaware of any defined cleanliness criteria by which hospital protective environment rooms are traditionally evaluated. However, one identified criterion is to evaluate the PIH's protected patient environment by comparing it against cleanroom standards for particle counts. Current cleanroom standards cited by U.S. authorities are based upon the International Standards Organization (ISO) Standard 14644-1, *"Cleanrooms, and associated controlled environments – Part 1: Classification of air cleanliness"*.[iii] This standard identifies classes of cleanrooms based upon their particle count of all particles of 0.5 um and larger per cubic meter. The U.S. Food and Drug Administration (through adoption of U.S. Pharmacopia <USP> Chapter 797: *Pharmaceutical Compounding – Sterile Preparations*) requires pharmacies that compound sterile preparations to compound these preparations within an ISO Class 7 cleanroom and then within a special safety cabinet that provides a critical compounding environment of ISO Class 5 (The lower the number, the cleaner the environment.)[iv].

To conduct aerosol measurements within the PIH, an aerosol spectrometer was placed within the hood and programmed to log particle counts throughout the test period. Three spectrometers were also placed outside of the hood, within the 12 ft by 20 ft test room. The test room was maintained with an artificially elevated particle count in order to challenge the PIH protective capacity. **The NIOSH testing results of the PIH protected patient area revealed a patient environment that was cleaner than both of the FDA's ISO Class 7 & ISO Class 5 requirements for sterile pharmaceutical compounding.**

As an alternate way to quantitatively evaluate the PIH's protective capacity, the protected patient environment was also evaluated in a fashion similar to how a respirator is evaluated for its fit and protective capacity. To conduct the test, a particle counter traditionally used for respirator fit testing was configured to sample both within and outside of the PIH patient area. The particle counter was operated in the same mode as that used for respirator fit testing, as described in the OSHA Fit Test Protocol Identified in 29 CFR 1910.134.[v] Results of the OSHA Fit tests are reported as a numerical Fit Factor (FF), which is the ratio of the concentration of a substance in ambient air compared to the concentration inside the respirator when worn. For the PIH test results, NIOSH is reporting this value as a *Patient Protection Factor* (PPF). Higher PPF values indicate a more protective patient environment. A protective environment that provides a 90% reduction in aerosol exposure would receive a PPF of 10. One that provides a 99% reduction would receive a PPF of 100. **Test results of the PIH environment resulted in an average "Patient Protection Factor" of 15,233 (n=6, range = 13600 to 16700).** For comparison purposes, the OSHA-assigned protection factor for someone wearing an N-95 respirator is only 10, while the assigned protection factor for a full-facepiece powered air purifying respirator (PAPR) is 1000.

Limitations: (1) The tested configuration provides a protected environment only while the patient remains in their bed/cot. (2) The protective concepts discussed in this paper are intended for emergency surge strategy consideration only. Depending upon the applied jurisdiction, a declaration of national emergency, emergency use authorization, or some alternative-authority authorization may be required. (3) Attending healthcare workers should be aware that if the immunosuppressed patient is also a carrier of an airborne infectious disease, the positive-pressure patient environment could increase the distribution of airborne contagion. Ideally, the PIH would then be placed within a negative pressure environment and individuals entering this environment should exercise airborne precautions.

Other EAII configurations that are less location-restrictive for the patient are believed to also be adaptable to provide surge Protective Environment capacity. This could address part of the concern for limitation #1 and would potentially be more adaptable for pediatric patients. While NIOSH has not tested those configurations for their Protective Environment/Reverse Isolation capabilities, additional consultation and testing could be available. The points of contact for this topic include CAPT Kenneth R. Mead (kmead@cdc.gov, 513-841-4385) or CAPT Mike Gressel (MGressel@cdc.gov, 513-841-4378).

References:

[i] The Radiation Emergency Assistance Center/Training Site (REAC/TS), www.orau.gov/reacts, accessed March 18, 2011.

[ii] The Armed Forces Radiobiology Research Institute, Medical Radiobiology Advisory Team (MRAT), www.afri.usuhs.mil, , accessed March 18, 2011.

[iii] International Standards Organization (ISO) (1999), "Cleanrooms, and associated controlled environments – Part 1: Classification of air cleanliness" ISO 14644-1:1999 1st ed. New York: American National Standards Institute.

[iv] United States Pharmacopia (USP) (2008), Chapter 797: Pharmaceutical Compounding – Sterile Preparations, USP33-NF28: United States Pharmacopeial Convention, Inc., 12601 Twinbrook Parkway, Rockville, MD 20852, USA, www.usp.org.

[v] Occupational Safety and Health Administration (OSHA), (2008) "Respiratory Protection" pp. 419-445. — Code of Federal Regulations Title 29 (6), Section 1910.134.

From: Brandon, Lou
Sent: Tuesday, March 29, 2011 6:53 AM
To: Nimitz, Ronald
Subject: RE: Japan

Not sure what you mean Ron? No bridge line is staffed.

From: Nimitz, Ronald
Sent: Monday, March 28, 2011 1:08 PM
To: Brandon, Lou
Subject: RE: Japan

Can I get in on the PMT link..

From: Brandon, Lou
Sent: Saturday, March 26, 2011 3:09 AM
To: Nimitz, Ronald
Subject: RE: Japan

Sorry Ron, just getting to your email. Is our public website informative. I have 360 emails accumulated that I'm catching up on.

From: Nimitz, Ronald
Sent: Saturday, March 12, 2011 7:18 AM
To: Brandon, Lou
Subject: RE: Japan
Importance: High

Lou.. any place the agency is giving updates.. what is going on ??

ron

DJ/222

From: Bob Allen <ballen@chainbridgetech.com>
Sent: Tuesday, March 29, 2011 1:49 PM
To: Brandon, Lou; lkbl@nrc.gov
Subject: RAMS touching base..
Attachments: RAMS As A Service - Executive Summary.pdf; RAMS AS A SERVICE - Component Overview Diagram.pdf

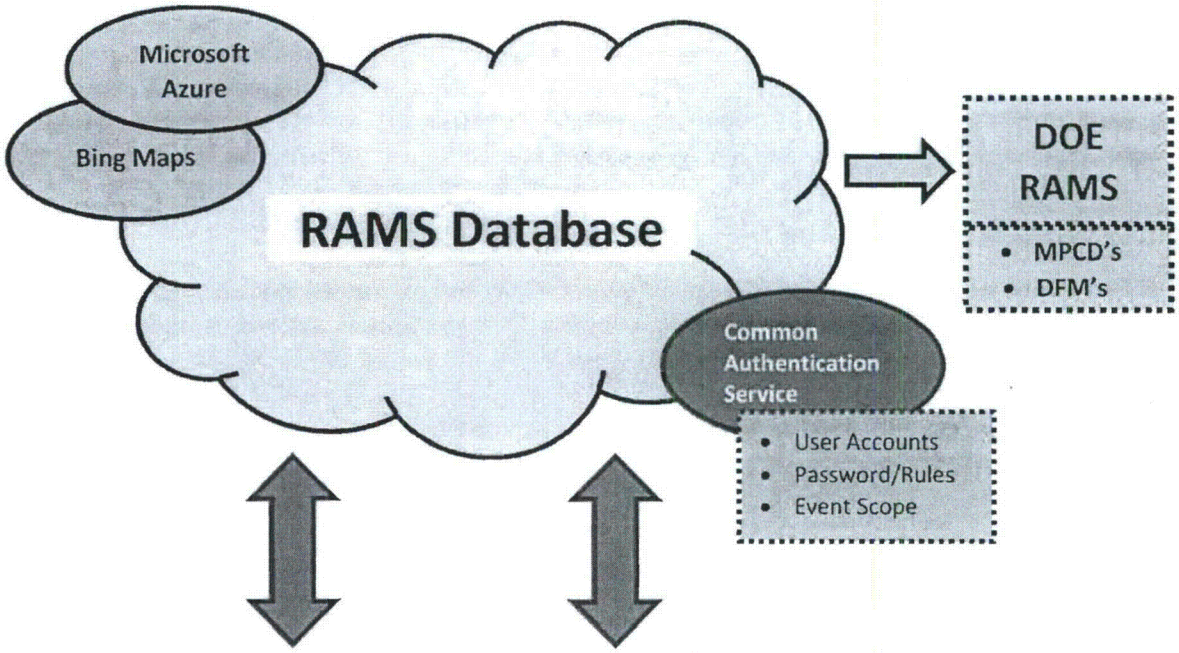
Lou-
I'm sure you're at least as busy as the rest of us, but I was hoping I could get a little bit of time to touch base. Beyond sharing notes on RAMS and the Japan response, I wanted to bring you up to speed on what we've been working on with DOE and FEMA, and ask you a question about NREP.

Hope all is well, and give me a call when you can. Also, I've attached two short documents you might find interesting, but please don't send them around just yet; I'll brief you in when we talk.

Bob Allen
Chainbridge Technologies (www.ChainbridgeTech.com)
8229 Boone Boulevard, Suite 100
Vienna, VA 22182
ballen@chainbridgetech.com
(o) (703) 938-1270 [general]
(o) (703) 752-2745 [direct]
(m) (b)(6)

DJ/223

RAMS AS A SERVICE - RAAS



Machine-to-Machine Integration

- Common protocols
- Easily adaptable API: SOAP WebServices, ODATA, RSS etc.
- Accessible to authorized external emergency response organizations & systems including:
  - EPA (RADNET/Scribe)
  - NYC (EDEN)
  - NARAC (CMWeb)
  - NASA (eCAMS)
  - NNSA (ARMS)
  - Health Canada
  - State/Local/Tribal

Emergency Responder tools (Person-to-Machine)

Android | Windows Phone | iPad iPhone

RAMS Client application publicly available via respective AppStores/Markets with automatic updates

User Community

- Other Federal Agencies
- State/Local/Tribal
- International Partners
- Power Plants
- Universities/Hospitals

YouTube — Publicly Accessible Training and Orientation Videos

RAMS AS A SERVICE – Executive Summary

Overview

The NNSA's Office of Emergency Response (NA42) created the Radiological Assessment and Monitoring System (RAMS) database in 2007 in response to Lessons Learned developed during previous exercises. Specifically, it was determined that a centralized data management system was needed to function as the master repository of all scientific data collected during a response.

Over the last 4 years the RAMS database has been exercised extensively and significantly expanded. In addition to managing the collection and assessment of "field measurement"[1] data, RAMS has a significant LIMS[2] module, work product and action item features, scientific analysis tools, and a large number of utilities used to integrate with external systems[3].

Challenge

RAMS is hosted on the DOE's Emergency Communication Network (ECN). The ECN provides a high degree of security and reliability, but as a result has difficulty directly integrating with external parties and systems; e.g. other NNSA assets, federal agencies, state and local responders, etc.

The majority of RAMS data is collected utilizing proprietary software running on ruggedized tablets that is then transmitted over a closed network via specialized antennas[4]. This infrastructure would be necessary in the event of a large scale radiological emergency. However, it poses significant challenges for external parties in terms of flexibility and cost, consequently hindering RAMS' utility to the wider community. This negatively impacts the adoption of common protocols and impairs the overarching goal of enabling all members of the community to quickly and effectively coordinate a joint response.

Proposed Solution

To address this challenge and fully capitalize on the investment the Federal Government has made in RAMS, it would be desirable to create a lightweight, flexible mirror of the RAMS system. The optimum solution would support the day-to-day operations[5] of external response organizations while retaining the ability to instantly integrate with the core RAMS system in the event of an actual emergency.

Key Components

To achieve the proposed solution, the following components would need to be in place[6]:

- RAMS database hosted in a cloud environment
- GIS services provided via lightweight "Software as a Service" provider
- Easily obtainable, automatically updated client software running on common devices; Apple iPhones and iPad's, Android powered devices, Windows Phone 7, RIM(Blackberry) devices etc.
- API exposed to authorized external parties; e.g. EPA, NARAC, NYC/EDEN, other NNSA assets etc.
- On demand, rapid import mechanism into production NNSA/FRMAC RAMS system
- Common Authentication Mechanism
- Publicly accessible training and support media; e.g. YouTube based videos

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[1] Field Measurement data includes raw α,β,and γ readings collected with meters and probes
[2] LIMS: Laboratory Information Management System managing physical media samples; soil, air filters, water, food, swipes, spectra, etc.
[3] NARAC, EPA(Scribe), TurboFRMAC (Sandia), Laboratory Results upload, Early Responder upload, NASA eCams, AdHoc export, WebService API
[4] "Digital Field Monitor" software; specially manufactured ruggedized tablets; "MultiPathway Communication Device" (MPCD) antennas
[5] Day-to-day operations include routine monitoring, training, exercises, and managing localized/low-impact radiological response activities
[6] Please see associated "RAMS AS A SERVICE-Component Overview Diagram"

Key Components Comments and Further Discussion

- The proposed "RAMS in the Cloud" hosting solution would have the following benefits: 100% uptime; fully publicly accessible and discoverable; secure; cost effective; immediately adaptable to unplanned surge usage. In addition, leveraging the existing MS "Bing Maps" services provides a "99%" GIS capability that has a much lower cost and smaller footprint than an equivalent ESRI based solution.
- The RAMS database running in the cloud could either be a full featured mirror, or else a "slimmed down" version of the core RAMS components. At a minimum, all core components would be in place and identical to the production RAMS environment; Events, Equipment (Meters, Probes, & Instruments), Personnel, Field Measurements, and Field Samples. A decision would be made as to whether a number of the more specialized features used for operation of the FRMAC itself would be necessary or desirable. These include Work Products, Action Items, TurboFRMAC integration, and inclusion of the various assessment tools such as auto-QA, unit normalization, measurement sets, and auto decay correction.
- For consistency, maintenance, and cost, a distributed environment based on Microsoft and other common technologies would be highly desirable: Microsoft Azure and SQL Azure cloud environment; Microsoft Bing Maps service; Android, Apple, and Microsoft "AppStores" for software distribution and updating; YouTube for training and support media.
- It is important to note that the "RAMS AS A SERVICE" (RAAS) concept is an extension of the existing RAMS environment, leveraging the work already done and would not be viewed as a replacement or a competitor with the existing RAMS infrastructure. Specifically, RAAS's core mission would be to provide access to a RAMS environment accessible to outside parties for day-to-day operations, training, and exercises without impinging upon the operational readiness of the core NNSA/FRMAC RAMS infrastructure.
- Device software (e.g. iPad, Android, Blackberry etc.) would be developed in thin client and/or fat client based versions. In a phased approach, it would be preferable and cost effective to first develop a single, common "thin client" interface that would run all common devices, followed by applications targeted at specific platforms. In either case, all software would automatically update and would utilize the identical WebService based API that the existing DFM tablets employ. Consequently, existing DFM tablets could be readily "pointed" and be fully compatible with the proposed RAAS environment.
- By exposing the common RAMS WebService API, it would be extremely easy to implement any number of "Machine-to-Machine" based integrations that are difficult or impossible to implement from within the ECN based hosting infrastructure; e.g. NYC EDEN integration.
- The proposed RAMS-RAAS integration would consist of a service hosted within RAAS accessible to a utility within RAMS that would allow authorized FRMAC staff to bulk import data from RAAS. Once implemented, such a framework could be readily automated. It is expected that it would be desirable if this consisted of a uni-directional import from RAAS into RAMS.
- The purpose of the proposed "Common Authentication Mechanism" (CAM) would be to provide a single location where user accounts could be requested, authorized, and administered. This would permit RAMS and RAAS users to have common usernames, passwords, and role assignments. While the CAM would not be immediately required, it would be highly desirable once RAAS is fully implemented. Specifically, it would permit RAMS to quickly "surge" personnel and equipment in the event of an actual radiological emergency.
- Whatever training and support mechanism is developed should be self-discoverable, self-documenting, and video based. Whether or not YouTube based, these materials should be accessible to all radiological emergency response organizations.

From: Rini, Brett
Sent: Thursday, March 31, 2011 7:21 PM
To: Brandon, Lou
Subject: RES Volunteers for the Ops Center
Attachments: RES_input_IRCvolunteers.xlsx

Lou,

I sent this table to Rick and Peter already, but I thought it might be helpful to you if you are looking for more people for the PMT. The staff's expertise is noted in the table.

Thanks,

Brett

Brett A. Rini
Technical Assistant
Office of Nuclear Regulatory Research
U.S. Nuclear Regulatory Commission
(301)251-7615
Brett.Rini@nrc.gov

DJ/224

Last	First	Position	Phone (301)	Room	Op Center Staffing (Y/N)	Shift Priority 1 (7am-3pm) 2 (3pm-11pm) 3 (11pm-7am)	Japan staffing (Y/N)	Area of expertise (BWR, Dose Assessment/HP, Fuels, Nuclear, Severe Accident, Systems Analysis, T/H, EST or RST etc)	Additional Notes
RES/Division of Systems Analysis - Directors Office									
~~Gibson~~	~~Kathy~~	~~Division Director~~	~~251-7499~~	~~3-A02~~	~~Y~~	~~1~~		~~Management, PMT~~	~~Already supporting Op Center~~
Scott	Michael	Deputy Division Director (acting)	251-7524	3-B01	Y	1,2	Y	Management, RST	
Bajorek	Stephen	Sr. Lvl. Advisor	251-7561	3-D03	Y	1,2,3	Y	System Analysis, T/H, BWR, Severe Accidents	Not available March 24-27
Boyd	Christopher	Sr. Lvl. Advisor	251-7525	3-B02					
~~Tinkler~~	~~Charles~~	~~Sr. Lvl. Advisor~~	~~251-7496~~	~~2-D01~~	~~Y~~	~~1~~		~~Severe Accident, Systems Analysis, T/H~~	~~Already supporting Op Center~~
Zigh	Abdelghani	Sr. Lvl. Advisor	251-7505	3-B06					
Rubin	Stuart	Sr. Lvl. Advisor	251-7527	3-B04	Y	1,2	Y	BWR, Severe Accident, System Analysis, EST	
Voglewede	John	Sr. Lvl. Advisor	251-7555	3-D01	Y	1,2,3	Y	Fuels	
Sherbini	Sami	Sr. Tech. Advisor	251-7508	3-D05	N		Y	Dose Assessment/HP	
Armstrong	Kenneth	Tech. Assistant	251-7551	3-A01	Y	1,2,3	N	Coordination, Systems Analysis, T/H	Will go to Japan if skill set is needed
Bowlin	Elizabeth	Mgmt. Analyst	251-7955	3-A10	Y	1,2,3	N	Liaison, Coordination	
RES/Division of Systems Analysis - Code Development Branch									
Hudson	Nathanael	Reactor Syst. Eng.	254-7534	3-C06	Y	3	N	Systems Analysis, T/H	
Staudenmeier	Joseph	Sr. Reactor Syst. Eng.	251-7522	3-A23	Y	1	N	Systems Analysis, T/H	
Velazquez-Lozad	Alex	Reactor Syst. Eng.	251-7509	3-A09	Y	1,2,3	Y	System Analysis, T/H	after March 23, 2011
Thurston	Carl	Reactor Syst. Eng.	251-7517	3-A24	Y	1,2,3		BWR, Nuclear Systems	
Notafrancesco	Allen	Reactor Systems Eng.	251-7560	3-C40	Y	1,2,3		Severe Accident	
Staudenmeier	Joeseph	Reactor Systems Eng.	251-7522	3-A23	Y	1,2,3		BWR Nuclear Systems	
Whitman	Joshua	Reactor Syst. Eng.	251-7514	3-A17	Y	1,2,3	Y	System Analysis	prior TEPCO experence
RES/Division of Systems Analysis - Fuel and Source Term Branch									
Lee	Richard	Branch Chief	251-7526	3-B03	N		Y	Severe Accident	
Aissa	Mourad	Sr. Crit. Saf. & Reac. Phys.	251-7511	3-A12	Y	1	N	Severe Accident, T/H	Op Center Mon-Wed
Algama	Don	Reactor Syst. Eng.	251-7940	3-C26	Y	1,2,3	Y	Core Design, Nuclear	Japanese language experience and cultural experience

Last	First	Position	Phone (301)	Room	Op Center Staffing (Y/N)	Shift Priority 1 (7am-3pm) 2 (3pm-11pm) 3 (11pm-7am)	Japan staffing (Y/N)	Area of expertise (BWR, Dose Assessment/HP, Fuels, Nuclear, Severe Accident, Systems Analysis, T/H, EST or RST etc)	Additional Notes
~~Esmaili~~	~~Hossein~~	~~Sr. Reactor Syst. Eng.~~	~~251-7554~~	~~3-C34~~	~~Y~~	~~1,2~~	~~N~~	~~Severe Accident, T/H~~	~~Already supporting Op Center~~
Flanagan	Michelle	Reactor Syst. Eng.	251-7547	3-C27	Y	1,2	Y	Fuels, Communication	
Raynaud	Patrick	Reactor Syst. Eng.	251-7542	3-C25	Y			Fuel	traveling from 3/18 to 3/23
~~Salay~~	~~Michael~~	~~Reactor Syst. Eng.~~	~~251-7543~~	~~3-C20~~	~~Y~~	~~1,2,3~~	~~Y~~	~~Severe Accident~~	~~Already supporting Op Center~~
Wagner	Katie	General Eng.	251-7552	3-C32	Y	1,2,3	N	Communication	
RES/Division of Systems Analysis - Health Effects Branch									
Anzenberg	Vered	Nuclear Eng.	251-7546	3-A20	Y	1,2,3	N	Dose Assessment/HP	
~~Huffert~~	~~Tony~~	~~Sr. Health Physicist~~	~~251-7506~~	~~3-C01~~	~~Y~~	~~1,2,3~~	~~Y~~	~~RASCAL/Dose Assessment/HP~~	~~Already supporting Op Center (like 1st shift, will do 2nd or 3rd if needed)~~
~~Lewis~~	~~Doris~~	~~Health Physicist~~	~~251-7559~~	~~3-C38~~	~~Y~~	~~1~~	~~N~~	~~Dose Assessment/HP~~	~~Already supporting Op Center~~
~~Sun~~	~~Casper~~	~~Health Physicist~~	~~251-7912~~	~~3-C21~~	~~Y~~	~~1,2~~	~~Y~~	~~RASCAL/Dose Assessment/HP~~	~~member of the RST, available after 3/21/11~~
Tomon	John	Health Physicist	251-7904	3-C23	Y	1,2,3	N	Dose Assessment/HP	
RES/Division of Systems Analysis - New and Advanced Reactors Branch									
Zaki	Tarek	Branch Chief (acting)	251-7986	3-A11	Y	2	N	T/H	
Barr	Jonathan	Reactor Syst. Eng.	251-7538	3-C12	Y	1,2,3	N	Coordination, Nuclear	
Kelly	Joseph	Sr. Reactor Syst. Eng.	251-7510	3-A18	Y	1,2,3		Systems Analysis, T/H	
Nosek	Andrew	Reactor Syst. Eng.	251-7476	2-C13	Y	1,2,3	N	Offsite Transport and Dose Response, T/H	
Rubin	Michael	Reactor Syst. Eng.	251-7549	3-C29	Y	2	Y	T/H	
Skarda	Ray	Reactor Syst. Eng.	251-7969	3-C13	Y	1,2,3	Y	Nuclear Threat Assessment, Severe Accident, System Analysis, T/H	
RES/Division of Systems Analysis - Reactors Systems Anaylsis Branch									
Elkins	Scott	Branch Chief	251-7544	3-D02	Y	1,2	N	System Analysis	Day Shift on Monday, Wednesday and/or Thursday

Last	First	Position	Phone (301)	Room	Op Center Staffing (Y/N)	Shift Priority 1 (7am-3pm) 2 (3pm-11pm) 3 (11pm-7am)	Japan staffing (Y/N)	Area of expertise (BWR, Dose Assessment/HP, Fuels, Nuclear, Severe Accident, Systems Analysis, T/H, EST or RST etc)	Additional Notes
Dorn	Jaclyn	Reactor Systems Eng.	251-7565	3-C31	Y	1,2,3	Y	System Analysis, T/H	
Frankl	Steve	Sr. Reactor Syst. Eng.	251-7901	3-C02	Y	1,2	Y	BWR, Fuel, Nuclear, System Analysis, T/H	
Krepel	Scott	Reactor Systems Eng.	251-7421	3-A21	Y	1,2	Y	BWR, System Analysis	
Lien	Peter	Sr. Reactor Syst. Eng.	251-7540	3-C14	Y	1,2,3	N	System Analysis, T/H	Shift 1 or 2 preferred
Marshall	Shawn	Reactor Systems Eng.	251-7523	3-A26	Y	2	N	Coordination, T/H	
Yarsky	Peter	Sr. Reactor Syst. Eng.	251-7518	3-A19	Y	1	Y	BWR, Containment Systems, System Analysis, T/H	
RES/Division of Systems Analysis - Special Projects Branch									
Santiago	Patricia	Branch Chief	251-7982	2-D04	Y	1,2,3	N	Dose Assessment/HP	Will go to Japan if skill set is needed
Chang	Richard	Program Manager	251-7980	2-A17	Y	1,2,3	N	Coordination	
Gonzalez	Sergio	STUDENT ENGINEER (CO-OP)	251-7453	2-C18	Y	1	N	Coordination	
Navarro	Carlos	Reactor Syst. Eng.	251-7485	2-C26	Y	1,2,3	N	Dose Assessment (RASCAL)	
Ghosh	Tina	Sr. Program manager	251-7984	2-A6	Y	1,2,3		PRA	
~~Schaperow~~	~~Jason~~	~~Sr. Reactor Syst. Eng.~~	~~251-7452~~	~~2-A19~~	~~Y~~	~~1~~		~~Severe Accident, Systems Analysis, T/H~~	~~Already supporting Op Center~~
RES/Division of Risk Analysis									
Chang	James	human reliability eng.	251-7589	4-C03	Y	1,2,3	n	BWR, PRA, human reliability	
Beasley	Ben	branch chief (Op ex.)	251-7676	2-B1	Y	1,2,3	n	BWR, systems analysis, severe accidents	
Criscone	Larry	risk and reliability eng.	251-7603	2-A14	Y	1,2,3	y	systems analysis, operaations, BWR and Nuclear systems	not available until 3/22
Ibarra	Jose	Reactor Systems Eng.	251-7612	2-A10	Y	1,2,3	n		
Kauffman	John	Sr. Reactor Systems Eng.	251-7465	2-C01	y	1,2,3	y	BWR, Mark 1 containment	
Lane	John	Sr. Risk and Reliability Eng.	251-7446	2-A12	y	1,2,3	y	PRA, severe accident, containment systems	
Stroup	David	Fire protection eng	251-7609	4-C32	y	1,2,3	n	fire protection	
Hill	Kendra	General Eng.	251-3300	4-C20	y	1,2,3	n	fire prtection, HRA	

Last	First	Position	Phone (301)	Room	Op Center Staffing (Y/N)	Shift Priority 1 (7am-3pm) 2 (3pm-11pm) 3 (11pm-7am)	Japan staffing (Y/N)	Area of expertise (BWR, Dose Assessment/HP, Fuels, Nuclear, Severe Accident, Systems Analysis, T/H, EST or RST etc)	Additional Notes
Taylor	Gabirel	Fire protection eng.	251-7576	4-C07M	y	1,2,3	n	fire protection	
Melly	Nicholas	Fire protection en.	251-7916	4C-07M	y	1,2,3	n	fire protection	
Gonzalez	Felix	risk and reliability eng.	251-7596	4-C11	y	1,2,3	n	fire protection	
Stutzke	Marty	Sr. Lvl. Advisor	251-7614	4-D5	y	1,2,3	n	PRA	
Helton	Don	risk and reliability eng.	251-7594	4-C9	y	1,2,3		TH, spent fuel behavior, sytem modeling, sever accidents	Not available till Mar 18
Marksberry	Don	Reactor Systems Eng.	251-7593	4-C8	y	1,2,3	n	IRC coordinator	
Coe	Doug	Division Director	251-7914	C-4A2	y	1,2,3	y	PRA, Systems analysis	not available until March 20th
Drouin	Mary	Sr. Program manager	251-7574	4-A15	y	1,2,3		Reactor systems, PRA	Not available till Mar 18
Salley	Mark	branch chief (Fire protection)	251-7613	4-D02	n		y	fire protection	not available for IRC
hudson	Dan	risk and reliability eng.	251-7919	4-A1	y	1,2,3		coordination, PRA	
Wood	Jeff	risk and reliability eng.	251-7588	4-C02	y	1,2,3		PRA	
Ott	Bill	Branch chief (env transport)	251-7407	2-A04	n		n	environmental Groundwater radionuclide transport	RES/ETB can provide additional tech support in this area as needed
RES/PMDA									
Brobst	Janet	PMDA	251-7468	2-C4	y	1,2,3	n	communciation/ coordination	
RES/DE									
Ramadan	Liliana	electrical engineer	251-7642	5-C10	Y	1,2,3		communicator/ coordinator	
Boyce	Tom	Branch Chief (RGDB)	251-7599	2-D2	Y	1,2,3		RST Coordinator	
Dion	Jeanne	digital I&C engineer	251-7482	2-C22	Y	1,2,3	n	RST Coordinator	not available 3/30-4/3
Hardin	Leroy	digital I&C engineer	251-7929	2-C28	y	1,2,3	y	RASCAL, PMT, RST	already supports PMT
Koshy	Tom	Branch Chief (MEEB)	251-7663	5-D06	Y	1,2,3		misc support	alread supports IRC
Murdock	Darrell	electrical engineer	251-7629	5-A20	Y	1,2,3		misc support	
Rathbun	Howard	Mechanical Engineer	251-7647	5-C15	Y	1,2,3		miscellaneous support	
Gavrilas	Marela	Branch Chief (CMB)	251-7556	3-D2	Y	1,2,3		severe accidents	
Herrity	Thomas	Structural Engineer	251-7447	5-A18	y	1,2,3		miscellaneous support	
Iyengar	Raj	materials engineer	251-7907	5-A10	y	1,2,3		miscellaneous support	

Last	First	Position	Phone (301)	Room	Op Center Staffing (Y/N)	Shift Priority 1 (7am-3pm) 2 (3pm-11pm) 3 (11pm-7am)	Japan staffing (Y/N)	Area of expertise (BWR, Dose Assessment/HP, Fuels, Nuclear, Severe Accident, Systems Analysis, T/H, EST or RST etc)	Additional Notes

From: Brandon, Lou
Sent: Thursday, March 31, 2011 11:56 PM
To: PMT01 Hoc; PMT02 Hoc; Hoc, PMT12
Subject: FW: Website of Interest

From: Smallwood, Karen R [mailto:Karen.Smallwood@fda.hhs.gov]
Sent: Wednesday, March 30, 2011 1:13 PM
To: Pavek, John - Washington, DC; Evans, Donna L. (CDC); Allen Jr, George T; Anderson, Jeri L. (CDC); Ansari, Armin J. (CDC); Brandon, Lou; Brooks, Michael D. (ATSDR); Brozowski, George (EPA); Buzzell, Jennifer J. (CDC); Charp, Paul (ATSDR); Cherniack, James; Gordon S Cleveland (APHIS); Connell, Carol (ATSDR); Cunningham, William C; DeCair, Sara (EPA); Dixon, John E. (CDC); Evans, Rachel T; Funk, Renee H. (CDC); Goodman, Roger (EPA); Graham, Ron (FSIS); Hansen, Patricia A; Hargrave, Scotty L; Hornsby-Myers, Jennifer L. (CDC); Howard King, Vinetta; Jablonowski, Gene (EPA); Jensen, John (USDA); Jones, Terri; Keith, Sam (ATSDR); Liles, Darrell (EPA); Lotz, William G. (CDC); Lough, Scott (AMS); Maher, Carmen; Mena, RaJah (DOE/FRMAC); Miller, Charles W. (CDC); Morrison, Ellen F; Nemhauser, Jeffrey B. (CDC); Noska, Michael A; O'Laughlin, Colleen (DOE/FRMAC); Pemberton, Wendy (DOE/FRMAC); Peter A Petch (APHIS); Russo, Mark; Sincek, Jeffrey; Tupin, Ed (EPA); Veal, Lee (EPA); Whitcomb, Robert (CDC); Wiley, Albert (ORAU)
Subject: Website of Interest

Get a load of this:

http://blog.alexanderhiggins.com/2011/03/19/realtime-epa-japan-nuclear-fallout-radiation-graphs-west-coast-cities-9228/

DJ/225

From: Brandon, Lou
Sent: Friday, April 01, 2011 5:11 AM
To: Manor, Perry J - DHS
Subject: RE: Japan Nuclear Accident and US REP Preparedness

Perry, good points. It's beyond me what the implications will be. The basis was a worst case scenario, 100% melt, 100%/h run, not necessarily representative of the situation, but at the time, the situation was both chaotic and pretty bad.

Lou

From: Manor, Perry J - DHS [mailto:Perry.Manor@dhs.wisconsin.gov]
Sent: Friday, March 18, 2011 10:59 AM
To: Brandon, Lou
Subject: RE: Japan Nuclear Accident and US REP Preparedness

Lou –

Some follow up curiosity on my part to your comment below since the NRC recently released the recommendation for US citizens in Japan to evacuate out to 50 miles, and the posting of the RASCAL runs on the NRC website. Could you share the basis for this level of off-site projections on dose? Was it based on four reactors and their combined source term (including the spent fuel pools, etc.)? The NRC recommendation for US citizens in Japan sounds different from the one issued by TEPCO and the government for the citizens of Japan.

Also, with the historic and current US policies using 10 miles as the anticipated maximum evacuation for REP planning, are we creating a nightmare for future US REP activities by introducing the new 50 mile evacuation concept? This could also have huge implications for our nuclear power plant industry and their preparedness costs. It would seem prudent that we have an argument in place to re-affirm our 10 mile evacuation planning standard here in the US.

These are questions that came to my mind, and may well also be in the minds of other REP program personnel across the US. I do hope there is a follow up strategy in place or being formulated.

Respectfully submitted,

PJ

Perry J. Manor, Nuclear Engineer
WI Dept. of Health Services
Division of Public Health
Radiation Protection Section
(608) 267-4794 Phone
(608) 267-4799 FAX
perry.manor@wisconsin.gov

From: Brandon, Lou [mailto:Lou.Brandon@nrc.gov]
Sent: Wednesday, March 16, 2011 1:58 AM
To: Manor, Perry J - DHS
Subject: RE: Japan Nuclear Accident

Perry, the NRC Ops Center is staffed 24/7 and we're doing lots of RASCAL runs, some very creative, most based on best guesses and speculative. NARAC runs are being done but these products don't necessarily characterize the situation and not available.

DJ/226

From: Manor, Perry J - DHS [mailto:Perry.Manor@dhs.wisconsin.gov]
Sent: Tuesday, March 15, 2011 3:54 PM
To: Brandon, Lou
Subject: Japan Nuclear Accident

Lou –

You are probably very busy with NREP and other upcoming events, but have you tried any RASCAL runs using data from the Japan nuclear accident? Just curious if you had access to source term data and tried any RASCAL downrange projections. Has FRMACC tried any? Send a reply only if you have time.

PJ

Perry J. Manor, Nuclear Engineer
WI Dept. of Health Services
Division of Public Health
Radiation Protection Section
(608) 267-4794 Phone
(608) 267-4799 FAX
perry.manor@wisconsin.gov

From: Brandon, Lou
Sent: Friday, April 01, 2011 5:19 AM
To: PMT01 Hoc; PMT02 Hoc
Subject: FW: food safety limits in Japan

-----Original Message-----
From: Boyd.Mike@epamail.epa.gov [mailto:Boyd.Mike@epamail.epa.gov]
Sent: Monday, March 21, 2011 5:31 PM
To: Wiley, Albert (ORAU); Ansari, Armin (CDC/ONDIEH/NCEH); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Maher, Carmen T. (FDA/OC/OCS); Connell, Carol (ATSDR/DHAC/SRAB); Miller, Charles W. (CDC/ONDIEH/NCEH); Liles.Darrell@epamail.epa.gov; Morrison, Ellen F. (FDA/OC/OCTC); Jablonowski.Eugene@epamail.epa.gov; Hornsby-Myers, Jennifer (CDC/NIOSH/OD); Brozowski.George@epamail.epa.gov; Allen, George T. (FDA/ORA/NE-FO); Evans, Lynn (CDC/ONDIEH/NCEH); Cleveland, Gordon (USDA); Dixon, John E. (CDC/ONDIEH/NCEH); Cherniack, James J. (FDA/ORA/NE-FO); Sincek, Jeffrey A. (FDA/ORA/CE-FO); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); Jensen, John (USDA); 'Pavek, John (USDA)'; Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Smallwood, Karen R. (FDA/ORA/SE-FO); Keith, Sam (ATSDR/DTEM/ATB); Veal.Lee@epamail.epa.gov; Brandon, Lou; Russo, Mark R. (FDA/OC/OCTC); Brooks, Michael (ATSDR/DHAC/SRAB); Mena, RaJah (DOE/FRMAC); 'Noska, Mike (FDA)'; O'Laughlin, Colleen (DOE/FRMAC); Buzzell, Jennifer (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); Hansen, Patricia A. (FDA/CFSAN); Pemberton, Wendy (DOE/FRMAC); Petch, Peter (USDA); Evans, Rachel T. (FDA/ORA/CE-FO); Funk, Renee (CDC/NIOSH/OD); Goodman.Roger@epamail.epa.gov; Graham, Ron (USDA); DeCair.Sara@epamail.epa.gov; Hargrave, Scotty L. (FDA/ORA/SW-FO); Lough, Scott (USDA); Jones, Terri L. (FDA/ORA/P-FO); Howard King, Vinetta M. (FDA/OC/OCTC); Lotz, William G. (Greg) (CDC/NIOSH/DART); Cunningham, William C. (FDA/CFSAN); Cardarelli.John@epamail.epa.gov; Tupin.Edward@epamail.epa.gov
Cc: EOC_Environmental_Unit@epamail.epa.gov
Subject: food safety limits in Japan

FYI, Ted Lazo at NEA in Paris supplied me the following information.

Mike Boyd
Liaison Officer
EPA EOC
----- Forwarded by Mike Boyd/DC/USEPA/US on 03/21/2011 05:26 PM -----

From: <Edward.LAZO@oecd.org>
To: Mike Boyd/DC/USEPA/US@EPA
Date: 03/21/2011 01:42 PM
Subject:RE: question

Mike,

The Japanese Ministry of Health, Labor and Welfare has the following criteria, established in 2002:

DJ/227

300 Bq/L (8110 pCi/L) for I-131 in milk
200 Bq/L (5410 pCi/L) for Cs-137 in milk

Contamination limits for vegetables
2000 Bq/kg (54,100 pCi/kg) for I-131
500 Bq/kg (13,500 pCi/kg) for Cs-137

I hope that this helps!

Ted

-----Original Message-----
From: Boyd.Mike@epamail.epa.gov [mailto:Boyd.Mike@epamail.epa.gov]
Sent: Monday, March 21, 2011 14:51
To: LAZO Edward, NEA/PR
Subject: question

Ted,

Your emails and the links on the NEA website are very helpful. I am assigned to the EPA EOC Environmental Unit. My question is, do you know what levels Japan is using for interdiction of food, especially milk? I see that they have measured unsafe milk levels at ~20 miles from Fulushima and spinach at ~75 miles. Are they using Codex Alimentarius levels? In the U.S., we use FDA derived intervention levels.

THANKS!

Mike

From: Brandon, Lou
Sent: Friday, April 01, 2011 5:45 AM
To: Hoc, PMT12; PMT02 Hoc; PMT01 Hoc
Subject: FW: FYI - useful Japan web links

2nd link has the Japanese PAG limits for foods.

-----Original Message-----
From: Cunningham, William C [mailto:William.Cunningham@fda.hhs.gov]
Sent: Tuesday, March 22, 2011 1:37 PM
To: Evans, Donna L. (CDC); Radke, Vincent J. (CDC); Talbert, Todd (CDC); 'Ferris.John@dol.gov'; 'cardarelli.john@epa.gov'; 'boyd.mike@epa.gov'; Allen Jr, George T; Anderson, Jeri L. (CDC); Ansari, Armin J. (CDC); Brandon, Lou; Brooks, Michael D. (ATSDR); Brozowski, George (EPA); Buzzell, Jennifer J. (CDC); Charp, Paul (ATSDR); Cherniack, James; Cleveland, Gordon (USDA); Connell, Carol (ATSDR); DeCair, Sara (EPA); Dixon, John E. (CDC); Evans, Rachel T; Funk, Renee H. (CDC); Goodman, Roger (EPA); Graham, Ron (USDA); Hargrave, Scotty L; Hornsby-Myers, Jennifer L. (CDC); Jablonowski, Gene (EPA); Jensen, John (USDA); Jones, Terri; Keith, Sam (ATSDR); Liles, Darrell (EPA); Lotz, William G. (CDC); Lough, Scott (USDA); Miller, Charles W. (CDC); Nemhauser, Jeffrey B. (CDC); Noska, Michael A; Pavek, John (USDA); Petch, Peter (USDA); Russo, Mark; Sincek, Jeffrey; Smallwood, Karen R; Tupin, Ed (EPA); Veal, Lee (EPA); Whitcomb, Robert (CDC)
Subject: FYI - useful Japan web links

In response to Charles' query about Japan's guidelines, I forward the following

http://www.mhlw.go.jp/stf/houdou/2r9852000001558e-img/2r98520000015apy.pdf

http://www.mhlw.go.jp/stf/houdou/2r9852000001558e-img/2r98520000015av4.pdf

http://www.kantei.go.jp/foreign/index-e.html

DJ/228

From: Thomas, Eric
Sent: Friday, April 01, 2011 7:49 AM
To: Brandon, Lou
Subject: RE: release info
Attachments: image001.jpg

Thanks Lou. I came over yesterday afternoon after emailing you and got some good info from the folks on watch.

Eric

Eric Thomas
U.S. Nuclear Regulatory Commission
NRR/DIRS/IOEB
OWFN-7E24
eric.thomas@nrc.gov
301-415-6772 (office)
(b)(6) (mobile)

From: Brandon, Lou
Sent: Friday, April 01, 2011 1:25 AM
To: Thomas, Eric
Cc: Meighan, Sean
Subject: RE: release info

Eric, you can catch me from 11pm to 7 am. Otherwise there are others who can not only provide example RASCAL runs, but also print graphics of impact plots of TEDE, Thyroid CDE, Gamma Rates, Deposition values, etc.

Lou

From: Thomas, Eric
Sent: Thursday, March 31, 2011 2:57 PM
To: Brandon, Lou
Cc: Meighan, Sean
Subject: FW: release info

Lou,

Please disregard my last message. Eric Leeds is actually looking for the current calculated values of the releases from the accident at Fukushima. Are you the right person to contact or should I go through the folks who are on watch over there now?

Thanks, Eric

Eric Thomas
U.S. Nuclear Regulatory Commission
NRR/DIRS/IOEB
OWFN-7E24

DJ/229

eric.thomas@nrc.gov
301-415-6772 (office)
(b)(6) (mobile)

From: Meighan, Sean
Sent: Thursday, March 31, 2011 2:52 PM
To: Thomas, Eric
Subject: RE: release info

Eric:

Eric Leeds want values of releases from Fukushima (I know a µCi/ml isn't going to mean much to the audience,, but he wants to give an understanding of the radiological consequences (local)).

From: Thomas, Eric
Sent: Thursday, March 31, 2011 2:42 PM
To: Brandon, Lou
Cc: Meighan, Sean
Subject: FW: release info

Lou,

Please see request below. I think what we need is a training slide (slides) that you all use over in the PMT on the basics of how releases are calculated, modeled, and tracked.

Do you have a presentation you could share with me and Sean? Sean is Eric Leeds' TA over here in NRR.

Thanks, Eric

Eric Thomas
U.S. Nuclear Regulatory Commission
NRR/DIRS/IOEB
OWFN-7E24
eric.thomas@nrc.gov
301-415-6772 (office)
(b)(6) (mobile)

From: Meighan, Sean
Sent: Thursday, March 31, 2011 10:08 AM
To: Thomas, Eric
Subject: release info

Eric:

I am developing a presentation for Eric Leeds (national governors association). Eric requested a slide on 'releases". Do you have good PMT info I can include?

Very Respectfully

Sean C. Meighan
Technical Assistant

Nuclear Reactor Regulation
Division of Operating Reactor Licensing
U.S. Nuclear Regulatory Commission
301-415-1020

From: Brandon, Lou
Sent: Saturday, April 02, 2011 1:30 AM
To: Jones, Cynthia
Subject: RE: RASCAL issue from

Cyndi, the best analysis was NUREG 1150. We highlighted many phrases in the potential source term descriptions that lead up to about page 60. In all cases, once held up in containment there was significant plate out and settling. There was a nice table showing radionuclide groups and the % reduction around P. 60, but I don't see the copy we were working with. I pointed that table out to both Randy and Chris Miller, as a single page justification of what was modeled in RASCAL. Jason Schaperow can point you to more modern references.

Lou

From: Jones, Cynthia
Sent: Friday, April 01, 2011 10:50 AM
To: Brandon, Lou
Cc: Sullivan, Randy
Subject: RE: RASCAL issue from

I would be interesting in reading that analyses and what isotopes were reportedly plated out. That's a huge number. We (PMT) have also asked RES to perform a MELCOR run (after they finish their worse case work for the Ambassador) to see if the source term is similar to that which was produced by RASCAL. It is important to validate the RASCAL runs from last week to verify the source term provided to the WH last Sat.

From: Brandon, Lou
Sent: Friday, April 01, 2011 3:49 AM
To: Jones, Cynthia
Cc: atheyconsulting@frontiernet.net; Sullivan, Randy
Subject: RE: RASCAL issue from

Cyndi,

As it turns out, it appears that we jumped the gun to conclude that RASCAL was in error. The issue was that when held up in containment for 24 hours, the source term other than noble gases, was significantly reduced. The only reduction mechanism applicable was plate out. To some of us (myself and Jennifer Uhle) it did not seem probable that it could plate out so significantly (down to 3 or 4% of what it was). We studied NUREG 1150 and consulted with Jason Schaperow. Each resource confirmed the likely hood of significant plate out, and Jason even provided additional resources to further confirm that RASCAL was modeling as it should.

Lou

From: Jones, Cynthia
Sent: Thursday, March 31, 2011 1:34 PM
To: Brandon, Lou
Cc: atheyconsulting@frontiernet.net; Sullivan, Randy
Subject: FW: RASCAL issue from
Importance: High

DJ\230

Lou-

As a follow-up to last weekend's PMT saga, can you please let me know how this issue from Sat night (3/26) on the RASCAL run was resolved? As an aside, I am not sure if I agree with the response sent by the PMT RAAD to Steve Fetter at the White House on Sunday 3/27 (which stated that the source terms for U1-3 run by RASCAL last Friday are accurate). In addition, I would like to know how this info has been distributed to the dose assessors in the PMT on other shifts (I saw some of the emails in a log book, and I attached copies of these emails for their awareness, but it's been lost between shifts). When I was on shift today and asked about the status of RASCAL and the adequacy of the runs last done for NARAC (from Fri-Sat), no one knew about it and was unable to answer the Q raised below.

We (PMT) have asked RES today perform a MELCOR run (after they complete their most recent request to perform a worst-case "pessimistic source term" scenario with U1 and 4) on the same parameters used below to see if the source terms are similar, as well as to determine if the 50 mile EPZ is still valid or should be relaxed. As time permits, please send me a copy of the response to the below email as I would like to understand how this was resolved, as well as if RASCAL has a problem with the code or not, as you stated on Sat night. Lastly, I recommend that we have a discussion on this after we stand down the team in the months ahead to discuss and resolve. I am sure you are generating a long list of lessons-learned for the PMT for this event.

Thanks
Cyndi

From: PMT02 Hoc
Sent: Saturday, March 26, 2011 10:46 PM
To: 'atheyconsulting@frontiernet.net'
Cc: Brandon, Lou
Subject: RASCAL issue
Importance: High

George,

An issue has been identified with RASCAL after the White House brought to our attention a discrepancy in the source terms from a three piece run. That run consisted of Unit 1 – 70% core melt, 10%/d containment leak rate, Unit 2 – 33% core melt – 5 in^2 containment hole, Unit 3 – 33% core melt – 100% per day containment leak rate. There was an operator error in the Unit 3 run in that the core was uncovered at noon on the 13th, but in the release pathway, the 100% per day leak rate was set to begin at noon on the 14th. The White House presented a spreadsheet identifying the percent contributions of each radionuclide to the total activity released. For 20 select radionuclides that NARAC used, Unit 2, percentages ran about 80%, Unit 1, percentages ran about 17%, and Unit 1 percentages ran about 1%, on average. Why were the Unit 1 activities so low? When the release time was correctly set back to noon on the 13th, the total activity release rose about 20% (probably attributable to less reduction mechanism) and the percentages of the Unit 1 activities rose to about 22%, on average, of the total activities. Setting the release time equivalent to the core uncovered time, appears to correct the problem and provide activities in the range of those from Units 1 and 2. At this time we could send corrected source terms to NARAC or inform the White House that the overall activities are about 20% low for this set and the dose projections are a little less conservative than they should be.

The problem in RASCAL stems from the degree of reduction in the activities for most radionuclides. For example Cs-137* will not decay significantly over one day and reduction mechanisms appear to contribute about 15% reduction, but we're seeing the Cs-137* reduced from 2.45E4 to 2.69E2, a factor of about 100. It appears that with a 100% per day reduction factor, as with air changes, most of the activity gets out in the 1st day and a residual amount continues to be

released. What we may be seeing is that when the release is delayed for a day, we're only getting the residual (most of the activity not accounted for).

Please test this and correct the RASCAL model appropriately.

Lou

PMT Dose Analyst (PMT02)
NRC Operation Center

THIS IS A DRILL --- THIS IS A DRILL --- THIS IS A DRILL

From: Brandon, Lou
Sent: Saturday, April 02, 2011 3:38 AM
To: OST01 HOC
Subject: RE: REVISED IN 2011-05 (ML110760432) & Ops center shift

Sorry, Rebecca, this is for the PAAD position. Thanks.

From: OST01 HOC
Sent: Saturday, April 02, 2011 12:03 AM
To: Brandon, Lou
Subject: RE: REVISED IN 2011-05 (ML110760432) & Ops center shift

Lou,

For what position? I will go ahead and put her in.

Rebecca

From: Brandon, Lou
Sent: Saturday, April 02, 2011 12:01 AM
To: Rosenberg, Stacey
Cc: OST02 HOC; OST01 HOC
Subject: RE: REVISED IN 2011-05 (ML110760432) & Ops center shift

OK Stacey, I've signed you up for the week of April 10, 3-11pm in the last 5 slots available, which are:

Sunday 10th
Monday 11th
Tuesday 12th
Thursday 14th
Friday 15th

If there are any issues with these times, respond back to the OST email addresses.

Thanks for your support Stacey.

Lou

From: Rosenberg, Stacey
Sent: Friday, April 01, 2011 9:44 AM
To: Brandon, Lou
Subject: RE: REVISED IN 2011-05 (ML110760432) & Ops center shift

Thank you Lou.

You can put me back on shift for 5 days during the week of April 10th. I would prefer the 3pm to 11pm shift.

Stacey

From: Brandon, Lou
Sent: Friday, April 01, 2011 1:12 AM

DJ\231

To: Rosenberg, Stacey
Cc: Hoc, PMT12; LIA01 Hoc
Subject: RE: REVISED IN 2011-05 (ML110760432)

Stacy, probably the Liaison Federal desk, but I'm sure we have the visibility that they would hope we had.

Lou

From: Rosenberg, Stacey
Sent: Thursday, March 31, 2011 8:49 AM
To: Brandon, Lou
Subject: FW: REVISED IN 2011-05 (ML110760432)

Hi Lou,

Who in the ops center should I send e-mails such as the one below?

Thanks,
Stacey

From: Hawes, Cathy
Sent: Wednesday, March 30, 2011 11:24 AM
To: Rosenberg, Stacey
Subject: FW: REVISED IN 2011-05 (ML110760432)

FYI

From: Moore, Dale [mailto:r-moore10@ti.com]
Sent: Wednesday, March 30, 2011 9:15 AM
To: Hawes, Cathy
Subject: RE: REVISED IN 2011-05 (ML110760432)

Hi Cathy,

Just a comment and question.

It would be most helpful and appreciated if your agency would consider providing some guidance to U.S. companies that have operations in Japan. We were hoping
some guidance would be provided about what to do if radiation levels climb. For instance, we have a plant within 100 km of the Fukukshima plant. What if outdoor
readings at our plant climbed to 20, 30, 100 or higher uSv/hour? We would think to shelter in place, shutdown incoming air, etc., and heed local government directions...
We also understand what these readings mean in terms of mrem/hour that are relative to other more routine activities where radiation is encountered in everyday life, but
this is still something our employees have asked about....Why the NRC hasn't commented. We read a report that levels had spiked on morning a couple of weeks in
downtown Tokyo to over 800uSv/hour. We can look things up as easily as anyone can, but does your agency plan to provide any information about radiation levels and
comment on safety/health concerns? Given that there has been some mistrust in what we've heard from local Japanese officials, it would be helpful if your agency could
provide a voice of reason.

Best Regards,
Dale Moore

From: Cathy Hawes [mailto:cmh2@nrc.gov]
Sent: Tuesday, March 22, 2011 12:59 PM
To: Moore, Dale
Subject: REVISED IN 2011-05 (ML110760432)

REVISED version of IN 2011-05. The revision are adding Nuclear Reactor of Operations to the Title on the first page and adding MShuaibi to the signature and concurrence pages indicating that he signed for LDudes.

Attached is an PDF version Information Notice 2011-05, Tohoku-Taiheiyou-Oki Earthquake Effects On Japanese Nuclear Power Plants, dated March 18, 2011, (ML110760432), that has been posted to the NRR GCC Web, along with the URL for Web access to generic communications files on the NRC Homepage:
http://www.nrc.gov/reading-rm/doc-collections/gen-comm/info-notices/2011/.
To subscribe or unsubscribe send an email to lyris@nrc.gov , no subject, and use one of the following commands in the message portion:
subscribe gc-nrr (first and last name)
unsubscribe gc-nrr (first and last name)

thanks
Cathy

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
WASHINGTON, DC 20555-0001

March 18, 2011

NRC INFORMATION NOTICE 2011-05: TOHOKU-TAIHEIYOU-OKI EARTHQUAKE EFFECTS ON JAPANESE NUCLEAR POWER PLANTS

ADDRESSEES

All holders of or applicants for operating licenses for nuclear power reactors under the provision of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel.

All holders of or applicants for a standard design certification, standard design approval, manufacturing license, limited work authorization, early site permits or combined license issued under 10 CFR Part 52, "Licenses, Certifications and Approvals for Nuclear Power Plants."

PURPOSE

The U.S. Nuclear Regulatory Commission (NRC) is issuing this information notice (IN) to inform addressees of effects of the Tohoku-Taiheiyou-Oki Earthquake on nuclear power plants in Japan. The NRC expects that recipients will review the information for applicability to their facilities and consider actions, as appropriate, to avoid similar problems. Suggestions contained in this IN are not NRC requirements; therefore, no specific action or written response is required.

DESCRIPTION OF CIRCUMSTANCES

The following summary of events is provided based on the best information available at this time. The situation in Japan regarding recovery efforts for the Fukushima Daiichi Nuclear Power Station continues to evolve on an hourly basis.

On March 11, 2011, the Tohoku-Taiheiyou-Oki Earthquake occurred near the east coast of Honshu, Japan. This magnitude 9.0 earthquake and the subsequent tsunami caused significant damage to at least four of the six units of the Fukushima Daiichi nuclear power station as the result of a sustained loss of both the offsite and on-site power systems. Efforts to restore power to emergency equipment have been hampered or impeded by damage to the surrounding areas due to the tsunami and earthquake.

ML110760432

Units 1 through 3, which had been operating at the time of the earthquake, scrammed automatically, inserting their neutron absorbing control rods to ensure immediate shutdown of the fission process. Following the loss of electric power to normal and emergency core cooling systems and the subsequent failure of back-up decay heat removal systems, water injection into the cores of all three reactors was compromised, and reactor water levels could not be maintained. Tokyo Electric Power Company (TEPCO), the operator of the plant, resorted to injecting sea water and boric acid into the reactor vessels of these three units, in an effort to cool the fuel and ensure the reactors remained shutdown. However, the fuel in the reactor cores became partially uncovered. Hydrogen gas built up in Units 1 and 3 as a result of exposed, overheated fuel reacting with water. Following gas venting from the primary containment to relieve pressure, hydrogen explosions occurred in both units and damaged the secondary containments. It appears that primary containments for Units 1 and 3 remain functional, but the primary containment for Unit 2 may be damaged. TEPCO cut a hole in the side of the Unit 2 secondary containment to prevent hydrogen buildup following a sustained period when there was no water injection into the core.

In addition, Units 3 and 4 have low spent fuel pool (SFP) water levels. Efforts continue to supply seawater to the SFPs for Units 1 through 4 using various methods. At this time, the integrity of the SFPs for Units 3 and 4 is unknown.

Fukushima Daiichi Units 4 through 6 were shutdown for refueling outages at the time of the earthquake. The fuel assemblies for Unit 4 had been offloaded from the reactor core to the SFP. The SFPs for Units 5 and 6 appear to be intact, but the temperature of the pool water appears to be increasing. Emergency power is available to provide cooling water flow through the SFPs for Units 5 and 6.

The Japanese Government ordered an evacuation out to 20 km for the area surrounding Fukushima Daiichi. Residents out to 30 km were ordered to shelter in place.

The damage to Fukushima Daiichi nuclear power station appears to have been caused by initiating events outside of the design basis for the facilities.

BACKGROUND

10 CFR Part 50, Appendix A, "General Design Criteria for Nuclear Power Plants," General Design Criterion (GDC) 2, "Design Bases for Protection against Natural Phenomena," or similar appropriate requirements in the licensing basis for a reactor facility, requires that structures, systems, and components (SSCs) important to safety be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, hurricanes, floods, tsunami, and seiches without loss of capability to perform their safety functions. The design bases for these SSCs reflect: (1) appropriate consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area, with sufficient margin for the limited accuracy, quantity, and period of time in which the historical data have been accumulated, (2) appropriate combinations of the effects of normal and accident conditions with the effects of the natural phenomena, and (3) the importance of the safety functions to be performed.

As a result of the terrorist events of September 11, 2001, the NRC issued EA-02-026, "Order for Interim Safeguards and Security Compensatory Measures" (the ICM Order) dated February 25, 2002. The ICM Order, which is designated as Safeguards Information (SGI), modified then-operating licenses for commercial power reactor facilities to require compliance with specified interim safeguards and security compensatory measures. Section B.5.b of the ICM Order requires licensees to adopt mitigation strategies using readily available resources to maintain or restore core cooling, containment, and SFP cooling capabilities to cope with the loss of large areas of the facility due to large fires and explosions from any cause, including beyond-design-basis aircraft impacts.

By letter, dated February 25, 2005, the NRC staff provided guidance for implementing Section B.5.b of the ICM Order. This guidance, designated as SGI, included best practices for mitigating losses of large areas of the plant and measures to mitigate fuel damage and minimize releases. Following issuance of the B.5.b Phase 1 Guidance, the NRC staff conducted inspections at operating reactor sites using Temporary Instruction (TI) 2515/164 (SGI) and subsequently TI 2515/168 (SGI) to ensure compliance with Section B.5.b of the ICM Order.

In December 2006, the Nuclear Energy Institute (NEI) issued NEI 06-12, Revision 2, "B.5.b Phase 2 & 3 Submittal Guideline." NEI 06-12 is designated for Official Use Only – Security Related Information (OUO-SRI). The NRC endorsed NEI 06-12, Revision 2, by letter dated December 22, 2006, also designated OUO-SRI, as an acceptable means for developing and implementing the mitigation strategies requirement in Section B.5.b of the ICM Order. NEI 06-12, Revision 2, provides guidance for implementing a set of strategies intended to maintain or restore core cooling, containment, and SFP cooling capabilities under the circumstances associated with the loss of a large area of the plant due to explosions or fire. NEI 06-12 provides guidance in the following areas:

- Adding make-up water to the SFP,
- Spraying water on the spent fuel,
- Enhanced initial command and control activities for challenges to core cooling and containment, and
- Enhanced response strategies for challenges to core cooling and containment.

The specific strategies covered in NEI 06-12, Revision 2, were developed based on the results of assessments conducted at currently licensed power reactor facilities for the purpose of enhancing plant specific mitigation capability for damage conditions caused by a large explosion or fire. These assessments identified a wide spectrum of potential plant specific strategies. NEI 06-12, Revision 2, specifies one set of strategies applicable to all pressurized-water reactors and another set applicable to all boiling-water reactors. Both sets are derived from the results of the plant specific assessments.

The B.5.b Phase 1 Guidance and NEI 06-12, Revision 2, were used by each licensee in preparing information submitted to the NRC that describes a plant specific approach to implementing mitigating strategies and supports each plant specific license condition. The NRC staff has completed its review of the information submitted by each licensee, as well as information obtained during prior NRC inspections, and has issued an OUO-SRI safety

evaluation (SE) that documents the bases for its approval of the license condition for each facility. The SE issued for each licensee includes regulatory guidance in Section 3.0 of Appendix A, "Phase 1 Assessment," that recites the generic B.5.b Phase 1 Guidance of Reference 3, as clarified in TI 2515/168, in a form that is designated OUO-SRI rather than SGI.

By publishing new requirements in the *Federal Register* dated March 27, 2009 (74 FR 13926), the NRC amended 10 CFR Part 50, 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants," and 10 CFR Part 73, "Physical Protection of Plants and Materials." This rulemaking added paragraph (i) to 10 CFR 50.34, "Contents of Applications; Technical Information," and paragraph (d) to 10 CFR 52.80 " Contents of Applications; Additional Technical Information," to require submittal of a "description and plans for implementation of the guidance and strategies intended to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities under the circumstances associated with the loss of large areas of the plant due to explosions or fire as required by § 50.54(hh)(2) of this chapter." This rulemaking also added 10 CFR 50.54(hh)(2) to impose the same mitigating strategies requirements on all reactor applicants and licensees as those imposed by the ICM Order and associated license conditions. The Statement of Considerations for this rulemaking specifically noted that the requirements in 10 CFR 50.54(hh) are intended to address certain events that are the cause of large fires and explosions that affect a substantial portion of the nuclear power plant and are not limited or directly linked to an aircraft impact. In addition, the rule contemplates that the initiating event for such large fires and explosions could be any number of beyond-design basis events. Such events include natural phenomena such as those described in GDC 2 (i.e., earthquakes, tornadoes, floods, tsunami, and seiches), without regard to the GDC 2 provisions governing the severity of natural phenomena.

NRC regulations at 10 CFR 50.63, "Loss of All Alternating Current Power," require that light-water-cooled nuclear power plants be capable of withstanding for a specified duration and recovering from a station blackout.

DISCUSSION

The nuclear power industry has taken the actions listed below at each licensed reactor site. Additional information is available in the NEI Fact Sheet, "Industry Taking Action to Ensure Continued Safety at U.S. Nuclear Energy Plants," dated March 16, 2011, available at www.nei.org.

1. verification of the capability to mitigate conditions that result from severe adverse events, including the loss of significant operational and safety systems due to natural events, fires, aircraft impact and explosions
2. verification of the capability to mitigate a total loss of electric power to a nuclear power plant
3. verification of the capability to mitigate flooding and the impact of floods on systems inside and outside the plant
4. identification of the potential for loss of equipment functions during seismic events appropriate for the site and the development of mitigating strategies to address potential vulnerabilities

NRC assessment of the implications of beyond design-basis natural phenomena is continuing as more information becomes available. The NRC staff is currently developing a TI to guide staff in performing independent assessments of nuclear power plant readiness to address beyond design-basis natural phenomena under the Reactor Oversight Process. The NRC is considering additional generic communications and additional action including requesting operating plants to provide specific information relating to their facilities to enable the NRC staff to complete a regulatory assessment of beyond design basis phenomena.

PAPERWORK REDUCTION ACT STATEMENT

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CONTACTS

This information notice requires no specific action or written response. Please direct any questions about this matter to the technical contact listed below or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.

/RA/

Laura A. Dudes, Director
Division of Construction Inspection,
and Operational Programs
Office of New Reactors

/RA/

Timothy J. McGinty, Director
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Technical Contact: Eric E. Bowman, NRR
301-415-2963
e-mail: Eric.Bowman@nrc.gov

Note: NRC generic communications may be found on the NRC public Web site, http://www.nrc.gov, under Electronic Reading Room/Document Collections.

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ADAMS Accession Number: ML110760432 * by e-mail

OFFICE	NRR/DPR/PGCB	TECH EDITOR*	NRR/DIRS/D*	NRR/DE/D*	NSIR/DSP*
NAME	EBowman	KAzariah-Kribbs	BWestreich	PHiland (GWilson for)	RCorreia
DATE	03/17/2011	03/17/2011	03/17/2011	03/17/2011	03/17/2011
OFFICE	NRO/DCIP/CAEB*	DPR/PGCB/LA	DPR/PGCB/BC	NRO/DCIP/D	NRR/DPR/D
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DATE	03/18/2011	03/17/2011	03/17/2011	03/18/2011	03/18/2011

OFFICIAL RECORD COPY

From: Albert.Mongeon@noaa.gov
Sent: Saturday, April 02, 2011 7:38 PM
To: Brandon, Lou
Subject: Re: RE: RASCAL Ouput

Lou,

Thanks for getting back. I'll forward this tot he technical folks for their input.

AL

----- Original Message -----
From: "Brandon, Lou" <Lou.Brandon@nrc.gov>
Date: Saturday, April 2, 2011 4:52 am
Subject: RE: RASCAL Ouput
To: Albert Mongeon <Albert.Mongeon@noaa.gov>

> Al,
>
> Are you getting the NARAC results? We've produced many RASCAL runs
> but the source terms passed to NARAC may number only around 10-15.
> Some (most) are overly conservative, worst case scenarios. In many
> cases we ran individual cases for particular reactors or spent fuel
> pools and then requested NARAC to add, subtract, multiply or divide
> the activities to obtain a composite product with 50% or 33% damage
> for specific units or characterize more fresh fuel in a spent fuel
> pool than normal. We've had to use RASCAL creatively to model this
> situation roughly. To share RASCAL runs, I'll have to clear it with
> management, but if you could identify anything more specific that
> would help.
>
> Lou
>
> From: Albert Mongeon [
> Sent: Monday, March 28, 2011 1:21 PM
> To: Brandon, Lou
> Subject: RASCAL Ouput
>
> Lou,
>
> Has NRC made RASCAL runs for Fukushima? If so, is it possible to get
> those passed to NOAA for our internal use? We would not release the
> information beyond our modeling community.
>
> AL

DJ/232

From: REP_Planners@yahoogroups.com on behalf of Jim Hardeman <Jim.Hardeman@dnr.state.ga.us>
Sent: Sunday, April 03, 2011 7:49 PM
To: CARL F SIMMONS; REP Planners Mailing List
Subject: RE: [REP Planners] Chairman Jaczko's statements this afternoon
Attachments: ATT00001..gif; ATT00002

Carl --

I wonder if anybody has taken all the Japanese data coming out and done a (not so) quick and dirty calculation of thyroid doses out to 20 miles. I haven't had the time, but it looks like there might be enough info out there from TEPCO and/or NISA for somebody to take a stab at it.

Seems to me that the RASCAL projections NRC published with the Chairman's recommendations were driven by thyroid dose and groundshine dose. The first case showed a 96-hour groundshine dose of 32 rem (i.e. 333 millirem per hour) at 20 miles and a thyroid dose of 270 rem CDE (31 rem CEDE) for a total of 63 rem TEDE at 20 miles. The second case showed a 96-hour groundshine dose of 3.4 rem (i.e. ~35 millirem per hour) and a thyroid dose of 70 rem CDE (9.2 rem CEDE) for a total of 12.6 rem TEDE at 20 miles.

I don't recall anything even approaching the 35 mR/h right outside the 30 km "in-home evacuation" zone -- although there was at least one hot spot around 10 mR/h a few days after the major releases, as I recall. Definitely exceeded relocation guidance -- both ours and Japanese.

I remember taking my first Reactor Technical Manual (RTM) course from Tom McKenna back in 1996 - 1997, and him saying "never show calculations to decision makers".

Jim

>>> "SIMMONS, CARL F" <cfsimmons@oppd.com> 4/1/2011 12:02 >>>

Jim,

It looks like your assessment was a little more "conclusive" than the NRC's but not quite as "prudent." See the excerpt from the WSJ article below.

Full article at
http://online.wsj.com/article/SB10001424052748703806304576234882625310042.html?mod=dist_smartbrief.

Carl

DJ/233

WSJ

- BUSINESS
- APRIL 1, 2011

Nuclear Industry Pins Hopes on Longtime Foe (excerpt)

Mr. Jaczko has issued blunt warnings about the severity of the Japanese accident, starting with a declaration on March 16 that American citizens living within 50 miles of the plant should evacuate. His statement contradicted Japanese authorities' recommendation at the time that only people living within 12 miles of the plant needed to leave.

In response to questions about how the NRC came to such a different assessment, the agency later said the data underlying Mr. Jaczko's directive were "inconclusive." The agency has stood by the recommendation, however, calling it "prudent."

By Stephen Power at stephen.power@wsj.com

From: REP_Planners@yahoogroups.com [mailto:REP_Planners@yahoogroups.com] **On Behalf Of** Jim Hardeman
Sent: Wednesday, March 16, 2011 6:18 PM
To: REP Planners Mailing List
Subject: [REP Planners] Chairman Jaczko's statements this afternoon

Folks --

This list has been surprisingly quiet, given the recent and current events in Japan. I'm sure that's because we're all under orders not to say anything publicly.

I trust that all of you have seen or heard NRC Chairman Jazcko's statements today. Just in case you haven't -- you can find them on the NRC website at http://www.nrc.gov/reading-rm/doc-collections/news/2011/11-050.pdf

Bottom line is that the Chairman has recommended that US citizens within 50 miles of the Fukushima Daiichi site evacuate, countermanding the official guidance provided by the Japanese government.

Those of you who have been following my posts on Facebook are aware that I disagree with the Chairman's assessment. I won't repeat my reasoning here -- if you're interested you can find me on Facebook. I also fully acknowledge that the Chairman has his own staff on the ground -- in Tokyo -- and that his data sources may be better than mine.

What's troubling here is the Chairman's challenging of official guidance provided by the Japanese government. Based on NRC's actions today, what confidence should I, as a state official responsible for making protective action recommendations to the Governor, have that in a similar circumstance in my jurisdiction, NRC wouldn't take similar actions and make public statements challenging and countermanding our guidance?

Didn't we learn anything from TMI?

Jim Hardeman, Manager
Environmental Radiation Program
Environmental Protection Division
Georgia Department of Natural Resources
4220 International Parkway, Suite 100
Atlanta, GA 30354
(404) 362-2675
Fax: (404) 362-2653

Personal fax: (b)(6)

E-mail: Jim.Hardeman@dnr.state.ga.us

From: Norris, Michael
Sent: Monday, April 04, 2011 12:14 AM
To: OST01 HOC; Hart, Michelle
Cc: OST02 HOC; Brandon, Lou; Johnson, Don; Schmidt, Duane; Barr, Cynthia; LaVie, Steve
Subject: Re: PMTR RAAD Position

I signed up for Sat/Sun 4/9-10 11-7.

Mike
Sent from NRC blackberry
(b)(6)

From: OST01 HOC
To: Hart, Michelle
Cc: OST02 HOC; Brandon, Lou; Norris, Michael; Johnson, Don; Schmidt, Duane; Barr, Cynthia; LaVie, Steve
Sent: Sun Apr 03 15:35:38 2011
Subject: RE: PMTR RAAD Position

Hi Michelle,

Thanks for your response. I have you down on Saturday from 3-11pm. Thank you,

Jeff Kowalczik
EST Coordinator

From: Hart, Michelle
Sent: Sunday, April 03, 2011 3:01 PM
To: OST01 HOC; Norris, Michael; Johnson, Don; Schmidt, Duane; Barr, Cynthia; LaVie, Steve
Cc: OST02 HOC; Brandon, Lou
Subject: RE: PMTR RAAD Position

I would be willing to take Sat 3-11pm.

Michelle

From: OST01 HOC
Sent: Saturday, April 02, 2011 3:35 PM
To: Norris, Michael; Johnson, Don; Schmidt, Duane; Barr, Cynthia; LaVie, Steve; Hart, Michelle
Cc: OST01 HOC; OST02 HOC; Brandon, Lou
Subject: PMTR RAAD Position

The subject position needs to be filled for the following shifts:

Wed 4/6: 7am-3pm

Sat 4/8-4/9: 11pm – 7am

Sat-Sun 4/9: 7am-3pm

D)\234

Sat 4/9: 3pm – 11pm

Sat-Sun 4/9-10: 11pm-7am

Please "Reply to All" if you can support any of these shifts and indicate which one.

Thank you

Steve Campbell
EST Coordinator

From: Tomon, John
Sent: Monday, April 04, 2011 8:40 AM
To: Brandon, Lou
Subject: RE: Japan Incident - PMT Dose Assessor opportunities

Lou

Good morning again! Are there any documents that you recommend I should look over before I show up? I started looking at NUREG 1887 and I found some RASCAL presentation slides in ADAMS.

I figured it would help. Thanks!

V/r

John J. Tomon
Health Physicist
RES/DSA/HEB
(301) 251-7904 (Office)
(b)(6) (cell)
CSB-3C23 Mail Stop CSB- C3A24M

From: Brandon, Lou
Sent: Monday, April 04, 2011 7:12 AM
To: Tomon, John
Cc: OST02 HOC; OST01 HOC
Subject: RE: Japan Incident - PMT Dose Assessor opportunities

John, Tuesday will work for shadowing. Thanks.

Lou

From: Tomon, John
Sent: Monday, April 04, 2011 6:53 AM
To: Brandon, Lou
Subject: RE: Japan Incident - PMT Dose Assessor opportunities

Lou

Good morning! I have been talking to Duane about getting in for some training before I sign up for any slots since I have never even seen the RASCAL program. Originally, I was going to do that training on Monday 4/4 on the 7A – 3P shift; however, Duane said that there was someone already signed up for that shift.

Can I do my shadowing (training) on Tuesday 4/5 on the 7A – 3P shift?

After that I was looking at maybe signing up for one or two of the shifts for the weekend. Preferable not the 3P – 11P since I pick up the kids from school on the week days.

Let me know, thanks!

DJ/235

V/r

John J. Tomon
Health Physicist
RES/DSA/HEB
(301) 251-7904 (Office)
(b)(6) (cell)
CSB-3C23 Mail Stop CSB- C3A24M

From: Brandon, Lou
Sent: Sunday, April 03, 2011 4:20 AM
To: Sherbini, Sami; Navarro, Carlos; Santiago, Patricia; Tomon, John
Subject: Japan Incident - PMT Dose Assessor opportunities

All,

If you've volunteered, have been anxiously awaiting, and have not been invited to participate yet, we have a few dose assessment slots available on the PMT where you could contribute. If interested, let me know and I'll provide more detail on slots available. Weekend slots through 4/16 tend to be most available.

Lou

From: Evans, Ken <Ken.Evans@illinois.gov>
Sent: Monday, April 04, 2011 1:04 PM
To: Brandon, Lou
Subject: RE: RASCAL Calculation for Japan

Thanks Lou, I knew that you have been extremely busy. I had tried to duplicate the calculations and had to guess.

Ken Evans

From: Brandon, Lou [mailto:Lou.Brandon@nrc.gov]
Sent: Friday, April 01, 2011 3:45 AM
To: Evans, Ken
Subject: RE: RASCAL Calculation for Japan

Sorry Ken, just getting to some of these emails. Two worst case RASCAL runs. One modeled Unit 2, 760 KWE generic BWR, 100% fuel melt, 100%/h released. The second was a combination of Unit 2 and Unit 3 and 4 spent fuel pools. These were not intended to be used as representative of the situation at Daiiche. We ran separate cases and let NARAC add up the source terms.

Lou

From: Evans, Ken [mailto:Ken.Evans@illinois.gov]
Sent: Thursday, March 17, 2011 11:01 AM
To: Brandon, Lou
Subject: RE: RASCAL Calculation for Japan

I realize like the rest of us you are probably extremely busy with the Japan reactor accident. In yesterday's NRC press release there was a RASCAL calculation and I was curious as to how the source term was developed and what was used. Any information would be greatly appreciated.

Ken Evans

DJ\236

From: PMT02 Hoc
Sent: Tuesday, April 05, 2011 5:42 PM
To: Lou Brandon; Brandon, Lou
Subject: RE: Mor Realistic RASCAL source term

Lou,

I'm having trouble finding the Rascal runs used for producing the I-131 and Cs-137 surface concentration plots that are posted in WebEOC Rascal Graphics. Any clues of where to look will be very helpful.

Thanx,

Fritz
Cell (b)(6)

PMT Dose Analyst (PMT02)
NRC Operation Center

From: Lou Brandon [mailto (b)(6)
Sent: Wednesday, March 23, 2011 7:42 AM
To: PMT02 Hoc; Hoc, PMT12
Cc: PMT09 Hoc; PMT03 Hoc; Brandon, Lou
Subject: Mor Realistic RASCAL source term

PMT,

During the 11PM-7AM shift ending yesterday morning, assessment refined a RASCAL source term that modeled the flyover data and other ground measurements fairly well. It was noted in WebEOC and the file was attached in RASCAL graphics. This may end up very useful for future predictive analyses, particularly I-131 deposition, but I'm not sure it was ever sent to NARAC or the CMHT. Please bring this to the attention of the RAAD and Directors for consideration, if it has not already been done.

I won't be back until Friday eve, 11PM, but call if anything is needed.

Lou
(b)(6)

D5\237

From: OST02 HOC
Sent: Tuesday, April 05, 2011 8:03 AM
To: Brandon, Lou; Tomon, John
Cc: OST01 HOC
Subject: RE: PMT Dose Assessor watch standers needed

The watch bill has been revised per your below request.

EST Admin

From: Brandon, Lou
Sent: Tuesday, April 05, 2011 7:13 AM
To: Tomon, John
Cc: OST02 HOC; OST01 HOC
Subject: FW: PMT Dose Assessor watch standers needed

John,

That slot has been filled:

Sat-Sun 4/9-10 11pm-7am

OST, John is here and has now signed up for:

Sunday 4/10 7am-3pm
Mon-Tues 4/11-12 11pm-7am

Thanks, John.

Lou

From: PMT03 Hoc
Sent: Tuesday, April 05, 2011 6:27 AM
To: Brandon, Lou
Subject: FW: PMT Dose Assessor watch standers needed

From: Tomon, John
Sent: Tuesday, April 05, 2011 6:04 AM
To: OST02 HOC; Hardesty, Duane; PMT03 Hoc
Subject: RE: PMT Dose Assessor watch standers needed

Good morning! I will take the 11P -7A shift on Saturday and Sunday April 9 and 10 with Stephanie Bush Goddard.

I will complete my training today.

V/r

John J. Tomon
Health Physicist

DJ/238

RES/DSA/HEB
(301) 251-7904 (Office)
(b)(6) (cell)
CSB-3C23 Mail Stop CSB- C3A24M

From: OST02 HOC
Sent: Monday, April 04, 2011 9:31 AM
To: Hardesty, Duane; Tomon, John; PMT03 Hoc
Subject: RE: PMT Dose Assessor watch standers needed

John,

I've added you to the watch list to shadow Tony Huffert & Rich Clement on Tuesday, April 5, 7am – 3pm.

Thanks,
EST Admin. Assistant
OST02

From: Hardesty, Duane
Sent: Monday, April 04, 2011 9:20 AM
To: Tomon, John; PMT03 Hoc
Cc: OST02 HOC
Subject: RE: PMT Dose Assessor watch standers needed

John:
The fact that one person is shadowing doesn't prevent you from shadowing as well. There are two dose assessors on shift and you probably would benefit from the extra interaction.
I am not on watch today, whoever is the coordinator can tell you another day if you want to shift. Plus, the "official" watchbill is with OST02.HOC@nrc.gov.
Regards,
Duane

From: Tomon, John
Sent: Monday, April 04, 2011 6:35 AM
To: Hardesty, Duane; PMT03 Hoc
Subject: RE: PMT Dose Assessor watch standers needed

Duane

Good morning! When should I shadow? Originally I was thinking 7A -3P on Monday 4/4, but you said someone was already shadowing on that shift. Then, I was thinking of doing it on Tuesday 4/5 7A -3P. Is that shift a good time?

Thanks!

V/r

John J. Tomon
Health Physicist
RES/DSA/HEB
(301) 251-7904 (Office)
(b)(6) (cell)
CSB-3C23 Mail Stop CSB- C3A24M

From: Hardesty, Duane
Sent: Friday, April 01, 2011 4:29 PM
To: PMT03 Hoc; Tomon, John
Subject: RE: PMT Dose Assessor watch standers needed

Nima:
He needs to shadow too. That day may be ideal?
Duane

From: PMT03 Hoc
Sent: Friday, April 01, 2011 3:28 PM
To: Tomon, John
Cc: Hardesty, Duane
Subject: RE: PMT Dose Assessor watch standers needed

John,

We have a full team plus an individual shadowing the dose assessor team on 4/4 7-3pm. I'd recommend coming in another time if you are interested in sitting with the dose assessors on any shift 4/2 throgh4/7. Current openings:

Vacancies still open for:

Fri	8-Apr	3P-11P	Casper Sun / ???
Sat	9-Apr	3P–11P	Casper Sun / ???
Sat	9-Apr	7A-3P	Fritz Sturz / ???
Sat/Sun	9/10-Apr	11P-7A	Bush-Goddard / ???

Nima

PMT

From: Tomon, John
Sent: Friday, April 01, 2011 3:08 PM
To: PMT03 Hoc
Cc: Hardesty, Duane
Subject: RE: PMT Dose Assessor watch standers needed

Duane

Good afternoon! If it is all right with you all, could I do an UI watch Monday April 4th on the day shift (7A – 3P). I will speak to my wife tonight about what shifts I could fill next week after the UI watch and let you all know either this weekend or Monday.

Thanks

V/r

John J. Tomon

Health Physicist

RES/DSA/HEB

(301) 251-7904 (Office)

(b)(6) (cell)

CSB-3C23 Mail Stop CSB- C3A24M

From: PMT03 Hoc
Sent: Friday, April 01, 2011 2:42 PM
To: Tomon, John
Cc: Brandon, Lou; OST02 HOC; Hardesty, Duane; PMT03 Hoc
Subject: FW: PMT Dose Assessor watch standers needed
Importance: High

John –

Thanks for agreeing to support. Below is the open slots we need filled.

Prior to one of these slots you can come in and sit with any of the dose assessors on any shift 4/2 throgh4/7.

Please just reply back with dates so we can fill the slots!

Regards,

Duane Hardesty

From: PMT03 Hoc
Sent: Friday, April 01, 2011 12:50 PM
To: Nosek, Andrew; White, Bernard; Sun, Casper; LaVera, Ronald; Sturz, Fritz; Brandon, Lou
Cc: PMT03 Hoc; PMT01 Hoc; PMT02 Hoc; PMT09 Hoc; OST02 HOC
Subject: PMT Dose Assessor watch standers needed
Importance: High

Team:

We have some watches for PMT Dose Assessor between 4/5 and 4/9 that still need volunteers.

If you can stand watch in any of the below slots, please copy all on this email. Also, if I missed anybody on this email chain that can support these Dose Assessment watches, please forward this email.

Thanks,

Duane

Tue/Wed	5/6-Apr	11P-7A	Andrew Nosek / ???
Thu/Fri	7/8-Apr	11P-7A	Bernie White / ???
Fri	8-Apr	3P-11P	Casper Sun / ???
Fri/Sat	8/9-Apr	11P-7A	Ron LaVera / ???
Sat	9-Apr	7A-3P	Fritz Sturz / ???
Sat	9-Apr	3P–11P	Casper Sun / ???
Sat/Sun	9/10-Apr	11P-7A	??? / ???

From: Hardin, Leroy
Sent: Tuesday, April 05, 2011 10:02 AM
To: Brandon, Lou
Subject: Problem 8 Apr shift

Lou,

I was just informed I have to go to Kirtland AFB this weekend for radiation response work. I have to leave Friday night at 6. I will not be able to work the shift I had scheduled for Friday. I will try and get someone as an alternate though. I will be back to work the other shifts I am scheduled for. I will let you know when I am able to get an alternate.

Thanks

-----Original Message-----
From: OST02 HOC
Sent: Sunday, April 03, 2011 3:29 AM
To: Brandon, Lou; OST01 HOC
Cc: Hardin, Leroy
Subject: RE: Watch list

Lou,

Changes made to watch list per below request.

-----Original Message-----
From: Brandon, Lou
Sent: Sunday, April 03, 2011 3:15 AM
To: OST02 HOC; OST01 HOC
Cc: Hardin, Leroy
Subject: FW: Watch list

OST,

Leroy can be added to the master PMT roster as indicated below.

Lou

-----Original Message-----
From: Hardin, Leroy
Sent: Saturday, April 02, 2011 3:51 PM
To: Brandon, Lou
Subject: Watch list

Lou

I signed up for Dose Assessor shifts on April 5 to 6 11 Pm to 7 am. Also signed up april 8 to 9 11 to 7 shift, 12 april and 14 april 7 to 3 shifts as RAAD.

DJ\239

Thanks

Sent from an NRC Blackberry
Leroy Hardin
(b)(6)

From: Burton, William
Sent: Tuesday, April 05, 2011 12:57 PM
To: Goetz, Sujata; Brandon, Lou
Subject: RE: PMT Coordinator slots - April 10-16

Approved. Let's meet so I know where you stand on your assignments.

From: Goetz, Sujata
Sent: Tuesday, April 05, 2011 10:12 AM
To: Brandon, Lou
Cc: Burton, William
Subject: RE: PMT Coordinator slots - April 10-16

Lou,

I would like the April 13th, 7 -3 slot. I just need to get approval from my supervisor.

sue

From: Brandon, Lou
Sent: Tuesday, April 05, 2011 1:56 AM
To: Goetz, Sujata
Cc: Craffey, Ryan; Patel, Jay; Harris, Brian; Foster, Jack; MorganButler, Kimyata; Moorin, Laurette; OST02 HOC; OST01 HOC
Subject: PMT Coordinator slots - April 10-16

Sujata,

If you're comfortable with the Coordinator routines, I recommend that you sign up for some of the open PMT Coordinator slots for the week of April 10-16. Available slots on the roster include:

Tues 4/12 3-11 pm
Thurs 4/13 3-11 pm
Fri 4/15 3-11 pm

Are you available for the above three slots?

Also available:

Wed 4/13 7am-3pm
Wed-Thurs 4/13-14 11pm-7am

I'll copy several other potential PMT Coordinators who may also be able to assist with filling the roster.

If volunteering, please respond to the OST email addresses, and copy the group so we all know what is still available.

Thanks everyone.

Lou

DJ/240

From: Goetz, Sujata
Sent: Monday, April 04, 2011 9:40 AM
To: Brandon, Lou
Subject: FW: Operations Center training

Lou,

I really enjoyed my time at the OPS center this past Saturday. What do I need to do to be able to come back? Should I try to shadow someone else?

sue

From: Chowdhury, Prosanta
Sent: Saturday, April 02, 2011 3:24 PM
To: Goetz, Sujata
Subject: RE: Operations Center training

Talk to Lou Brandon about getting on the roster..

-----Original Message-----
From: Goetz, Sujata
Sent: Friday, April 01, 2011 1:56 PM
To: Chowdhury, Prosanta
Subject: RE: Operations Center training

I'LL SEE YOU tomorrow.
Sujata.

-----Original Message-----
From: Chowdhury, Prosanta
Sent: Friday, April 01, 2011 9:49 AM
To: Goetz, Sujata
Subject: RE: Operations Center training

Sujata:

You can meet me right outside of the Ops Center (TWFN 4th floor) tomorrow morning right before 7am. To answer Butch's question, you will charge your ours for tomorrow as "Training" to TAC ZT0000, or ZT0007; we will sort it out tomorrow.

Call me at (b)(6) (me personal cell) any time today (and tomorrow), if needed.

Prosanta

-----Original Message-----
From: Goetz, Sujata
Sent: Friday, April 01, 2011 8:37 AM
To: Chowdhury, Prosanta
Subject: FW: Operations Center training

Prosanta,

Butch approved. Where do i meet you?

sujata

From: Burton, William
Sent: Thursday, March 31, 2011 5:20 PM
To: Goetz, Sujata; Tartal, George
Subject: RE: Operations Center training

OK by me, but I'll need to understand how we would address your hours. Please ask Prosanta how this was handled for the others who shadowed him. We can discuss next week.

From: Goetz, Sujata
Sent: Thursday, March 31, 2011 4:15 PM
To: Burton, William; Tartal, George
Subject: FW: Operations Center training

Butch/George,

Would you mind if I shadowed Prosanta this Saturday from 7-3 to gain some experience at the Ops center?

sue

From: Chowdhury, Prosanta
Sent: Thursday, March 31, 2011 4:13 PM
To: Goetz, Sujata
Subject: Operations Center training

Sujata:

We spoke about your interest in assisting the agency with our response to the Japan Tsunami and Nuclear events. Our Operations Center (TWFN 4Th floor) maintains certain incident response positions, and routinely looks for personnel to volunteer to be trained so they can respond when necessary; this has become true particularly involving the current events in Japan. In this regard, your willingness to help will certainly be appreciated (I am sure).

The best way to get in the process and be successful in providing your assistance would be to shadow another person doing the tasks for a position in which you could become comfortable to support. One such position is PMT (Protective Measures Team) Coordinator. I have been involved in this position for quite some time, and have supported the current operation since March 12. I am again scheduled for 7am until 3pm this Saturday (4/2/2011). This can be your opportunity to shadow me, learn, and get involved quickly. I encouraged two other people since March 12 who shadowed me and are now providing 8-hr shifts when they can.

Please let me know if you would like to avail this opportunity. Our office (NRO) has encouraged staff to provide assistance, but you will need your Supervisor's approval. This will be considered training for you until you get fully involved.

Thanks
Prosanta

From: Schaperow, Jason
Sent: Wednesday, April 06, 2011 12:24 PM
To: Brandon, Lou
Subject: FW: RASCAL manuals

Hi Lou,

I borrowed Carlos Navarro's RASCAL manuals to help me look into the latest request from the Ops Center regarding reviewing RASCAL source terms provided to White House/NARAC.

How would I go about getting a copy of the latest version of the RASCAL manuals? If you give me the NUREG numbers and dates, I could try to get them from DISTRIBUTION.

Thanks,
Jason

From: Schaperow, Jason
Sent: Wednesday, April 06, 2011 12:22 PM
To: Navarro, Carlos
Subject: RASCAL manuals

Hi Carlos,

I wanted to alert you that I borrowed your RASCAL manuals (NUREG-1887 and NUREG-889). They are on top of my desk, in case you need them.

Thanks,
Jason

DJ/241

From: Brandon, Lou
Sent: Wednesday, April 06, 2011 4:32 AM
To: Latouche, Gaétan
Subject: RE: RASCAL 4.1 Released

Yes, as you like, Gaetan.

From: Latouche, Gaétan [mailto:Gaetan.Latouche@cnsc-ccsn.gc.ca]
Sent: Tuesday, April 05, 2011 1:14 PM
To: 'rascal-info@atheyconsulting.com'; 'george.athey@atheyconsulting.com'
Cc: Brandon, Lou
Subject: RE: RASCAL 4.1 Released

Good afternoon,

I just have a quick question. Could I install my Rascal 4.1 on more than one computer?

Thanks,

Gaétan Latouche M.Sc.

Environmental Program Officer
Environmental Compliance & Laboratory Services Division
Directorate of Environmental and Radiation Protection and Assessment
Canadian Nuclear Safety Commission
gaetan.latouche@cnsc-ccsn.gc.ca
(613) 943-9653

Agent des programmes environnementaux
Division de la conformité environnementale et services de laboratoire
Direction de l'évaluation et de la protection environnementales et radiologiques
Commission canadienne de sûreté nucléaire
gaetan.latouche@cnsc-ccsn.gc.ca
(613) 943-9653

From: RASCAL Distribution [mailto:rascal@atheyconsulting.com]
Sent: Monday, January 24, 2011 12:31 PM
Subject: RASCAL 4.1 Released

January 24, 2011

To: Registered RASCAL Users

From: Lou Brandon
Office of Nuclear Security and Incident Response
U. S. Nuclear Regulatory Commission
Lou.Brandon@nrc.gov
301-415-8013

DS\242

RASCAL 4.1 has been released. This update corrects some problems, enhances some features, and adds some new capabilities. See the attached PDF file for details on the changes and information on how to obtain and install RASCAL 4.1.

At this time the RASCAL technical document updates have not been completed. As soon as the revised document is ready it will be made available for download. Registered RASCAL users will receive e-mail notification of the document availability.

We appreciate all the feedback we have been receiving on RASCAL. Your input definitely helps improve the software.

If you have any questions or problems installing RASCAL 4.1, contact George Athey at george.athey@atheyconsulting.com.

Attached files:

RASCAL 4.1 Installation.PDF

From: Brandon, Lou
Sent: Wednesday, April 06, 2011 6:22 AM
To: Mazaika, Michael; PMT01 Hoc
Cc: Quinlan, Kevin; Brown, David; Harvey, Brad; Imboden, Andy; Galletta, Thomas; Hart, Michelle; Schaaf, Robert
Subject: RE: Fukushima - Requesting Guidance on Some Loose Ends Re PMT-Meteorology Activities

Mike,

Sorry, not much time for lengthy responses right now.

First, I would like to express my thanks for the quite professional support that the PMT received from all of the meteorologists involved. I'm very impressed and appreciative of your efforts.

At this time, we have not run any RASCAL runs for a long time that are intended to be shared with anyone. Therefore, although we're attempting to keep up a current NARAC forecast met file for RASCAL, we see no additional runs on the horizon. I think we're up to date through April 7 as of tonight.

We're in the process of further reducing staffing for the PMT shifts and may be down to just a PAAD and RAAD for the off hours shifts by next week. Therefore, you guys can relax. We'll call if anything comes up.

Thanks again.

Lou

From: Mazaika, Michael
Sent: Monday, April 04, 2011 4:59 PM
To: Brandon, Lou; PMT01 Hoc
Cc: Quinlan, Kevin; Brown, David; Harvey, Brad; Imboden, Andy; Galletta, Thomas; Hart, Michelle; Schaaf, Robert
Subject: Fukushima - Requesting Guidance on Some Loose Ends Re PMT-Meteorology Activities

Lou:

I polled the PMT-Meteorology group that has provided support to the events at Fukushima since first called on March 14. As you know, after the first shift on Friday, March 24, 2011, the PMT-Meteorology and GIS positions were placed on an "on-call' status. Below is a compilation of items that we'd like to bring to your attention to get a read on whether and, if so, to what extent you'd like us to keep taking the pulse of (working on) even though we may not currently have an active function.

- Correspondence was initiated with the Japan Meteorological Agency (JMA) thru the Japan Embassy Task Force with the good help of the International Liaison staff, requesting data from operational JMA monitoring stations located along the coast to the north and south of the Fukushima reactor site. The intent was to obtain hourly data summaries from March 11 thru about March 18, depending on the observing station, by which time PMT-meteorology were assembling these summaries from the JMA website. There was a request from JMA for clarification of my initial e-mail to which Andy Imboden responded. **Since standing down, we are not aware of how (or if) this request was resolved and would like to close the loop on this issue**. In the meantime, I have been downloading the daily summaries of hourly data from the JMA website (except for Saturdays; Sunday's data are still retrievable until about mid-day on Monday).

DJ/243

- An effort was begun, prior to standing down, in which a meteorological data file(s) was being assembled that could be input to RASCAL. The data file is (will be) based on the most realistic historic meteorological data available for the site area from March 11 to the present. As you're likely aware, the availability of actual meteorological data (offsite and onsite) has evolved over the course of our active support. I am told that Dave Brown generated one such file for your use based on available wind data (or forecasts) for Sendai (Airport or Observatory), about 60 miles north of the Fukushima site. However, during the period from March 14 thru March 25, 2011 (and at least once since that time, when requested by the PMT Dose Assessors), the meteorological data files used as input to RASCAL were, for the most part, based directly on model output provided by NARAC. **Please advise whether we should continue to assemble a data set based on best available, actual meteorological measurements (as opposed to NARAC-forecasted).**

- Once we began to receive onsite radiation monitoring and meteorological data, we had planned to make a request of TEPCO, again thru the Japan Embassy Task Force with the assistance of the International Liaison team, to obtain details about how the meteorological data were (are) actually collected in addition to other available details about the onsite monitoring programs at the Dai-ichi and Dai-ni sites. **If these data are to be used in the future and some indicator of their quality addressed, we would still prefer to start the process of obtaining this info now or in the near future rather than at some later date as we get farther away from the actual events. Please advise on whether and, if so, how to proceed.**

- A request to plot the results of mobile radiation measurements thru about last Thurs, March 24 for four specific areas (groups) around the Fukushima site was requested of PMT-Meteorology (Brad Harvey) during the second shift on March 24, initiated on third shift (March 24/25) by Kevin Quinlan, and data entry completed on first shift, Fri, March 25 by Mike Mazaika. Building a data base of mobile radiation measurements and meteorological data had been initiated earlier by Dave Brown, Kevin Quinlan, and Brad Harvey. Early on, these monitoring data were received by e-mail from multiple sources (sometimes duplicate). In some cases, data translation / transcription was necessary as part of that process. Dave Brown indicates that as of March 28, at least, an English-language spreadsheet of this info is being provided by TEPCO, and that those data were being used by the PMT-Dose Assessors to try and match up radiation dose rate peaks with the dates and times of known events and the occurrence of onshore winds. **Please advise whether and, if so, to what extent PMT-Meteorology and/or another team will continue to process this information.**

- On the morning of Friday, March 25, several PMT work stations were near or had reached their MS Outlook limit. For PMT-Meteorology, I requested additional storage capacity and was told that for PMT01 that it was increased to 2 GB (**not verified**). As indicated above, we were receiving e-mails providing data summaries or other info from multiple sources (e.g., onsite and offsite monitoring data, NARAC meteorology files, NOAA HYSPLIT model output) which consumed mailbox capacity. **To my knowledge, the PMT01 station has not been attended to on a regular basis since the close of the first shift on March 25. At some point, those e-mails and that information needs to be extracted, organized, and/or archived. Please advise on whether and, if so, how to proceed.**

- Finally, as of March 29, at least, PMT01 continues to be the recipient of e-mail correspondence intended for PMT12. The PMT Director and Assistant Director have been aware of this since early in the process and I have been told by Michelle Hart that someone has been checking the PMT01 terminal on a regular basis to identify any such e-mails. **No action required from PMT-Meteorology; just a reminder to remain aware of the situation.**

Looking forward to your reply; you can annotate directly on this e-mail if you prefer.

Thanks,

Mike Mazaika. on behalf of PMT-Meteorology

Physical Scientist (Meteorologist)
U.S. Nuclear Regulatory Commission
NRO/DSER/RSAC
11545 Rockville Pike, Mail Stop T-7F27
Rockville, MD 20852-2738
(301) 415-6282
michael.mazaika@nrc.gov

From: Operations <prod@alert.arl.noaa.gov>
Sent: Wednesday, April 06, 2011 11:24 AM
To: arl.emerg@noaa.gov; eercmc@ec.gc.ca; rto@bom.gov.au; srod@bom.gov.au; sdm@noaa.gov; PChen@wmo.int; Brandon, Lou; PMT01 Hoc; PMT02 Hoc
Subject: RSMC Washington model maps

*** IAEA NOTIFIED EMERGENCY ****

This is to inform you that RSMC Washington has updated the atmospheric transport model products on the joint web page.
The RSMC products can be viewed on the following web pages.

PLEASE DO NOT DISTRIBUTE THIS INFORMATION

RSMC Washington: https://ready.arl.noaa.gov/rsmc2-bin/jntrsmc.pl
RSMC Montreal: http://eer.cmc.ec.gc.ca/eer-bin/jntrsmc.pl
RSMC Melbourne: http://www.bom.gov.au/cgi-bin/reg/EER/jntrsmc.pl

The RSMC Washington meteorological maps are available on:
https://ready.arl.noaa.gov/rsmc2-bin/rsmcmap.pl

RSMC Washington
Tel: (301) 763-8298
Fax: (301) 763-8592

DJ/244

From: Jones, Cynthia
Sent: Wednesday, April 06, 2011 4:26 PM
To: Brandon, Lou
Subject: RE: PMT reduced staffing - draft document for consideration

OK with me Lou-

From: Brandon, Lou
Sent: Wednesday, April 06, 2011 6:37 AM
To: Lubinski, John; Reis, Terrence; Lui, Christiana; Coe, Doug; Cool, Donald; Mohseni, Aby; Tappert, John; Sullivan, Randy; Milligan, Patricia; Holahan, Patricia; Holahan, Vincent; Flanders, Scott; Jones, Cynthia; Gibson, Kathy
Cc: Lewis, Robert; Camper, Larry; Grant, Jeffery; Marshall, Jane
Subject: PMT reduced staffing - draft document for consideration

PMT Directors and Deputy Directors,

We've had strong support from so many individuals staffing the Director position during this incident. We're very appreciative.

Please review the attached document and provide comments by Friday, 4/8, if you have any concerns or additional recommendations.

Thanks.

Lou

DJ 245

Proposed Reduced Staffing Plan for Protective Measures Team (PMT)

Tentative start date: 4/10/2011

NRC's (and PMT's) Top Priorities

1) Continued assessment of radiological conditions, dose projections, and protective action recommendations. Currently, the NRC Japan Team reports that no PMT additional support or actions are being requested (offsite radiological assessments, RASCAL source term updates).

2) Providing technical assistance to the US Ambassador in Japan and the Japanese Government, including a particular focus on the Unit 1 drywell and the Unit 3 and 4 spent fuel pools.

3) Coordination with other US Departments and Agencies, the Institute of Nuclear Power Operations(INPO), Bechtel, General Electric Hitachi (GEH), Tokyo Electric Power Company (TEPCO), and the Japanese military.

PMT Roles and Responsibilities

Support Site Team: During the Japan day shift the PMT communicates and coordinates with the Site Team on all protective measures issues, which includes support for the Japanese Ambassador.

Communicates with other agencies: The PMT reviews radiological measurement and sample data. It reviews protective action recommendations, impacted areas, and related health effect issues and perspectives, and coordinates with DOE, EPA, the Advisory Team, and other federal agencies.

Justification for the proposed staffing below:

Day Shift (7am-3pm) - This period is the most demanding in terms of Executive Team requests, bridge line communications with other agencies, and follow up from other shifts when normal communications are not always practical. Two dose assessors are necessary for optimum quality control. As staffing transitions toward minimums, reductions are practical.

Afternoon Shift (3pm-11pm) and Night Shift (11pm-7am) – These shifts require less support since they are active after normal working hours. A PAAD and a RAAD may meet the need. These shifts support the Japan Team day shift and a PAAD and RAAD can support the quick turnaround request. The more complex requests can be accomplished with a 1-2 day turnaround.

Weekdays	US comms	Japan Team	
Japan Time:		4am-12pm	
EST:	7am-3pm	3pm-11pm	11pm-7am
Director	X		
RAAD	X	X	X
PAAD	X	X	X
Dose As1	X		
Dose AS2	X		
Coordinator	X		

Weekends	US comms	Japan Team	
Japan Time:		4am-12pm	
EST:	7am-3pm	3pm-11pm	11pm-7am
Director	X		
RAAD	X	X	X
PAAD	X	X	X
Dose As1	X		
Dose AS2			
Coordinator			

From: Morris, Scott
Sent: Thursday, April 07, 2011 2:20 AM
To: Hoc, PMT12
Cc: Brandon, Lou; Lubinski, John
Subject: RE: reduced PMT staffing - 3rd draft

Got it ... thanks

From: Hoc, PMT12
Sent: Thursday, April 07, 2011 2:01 AM
To: Morris, Scott
Cc: Brandon, Lou; Lubinski, John
Subject: FW: reduced PMT staffing - 3rd draft

~~OFFICIAL USE ONLY~~

Scott,

We believe that this is the latest PMT staffing plan revision. Lou sent this to all of the PMT directors and got feedback from the shifts. Tx greg

---

From: Brandon, Lou
Sent: Wednesday, April 06, 2011 5:49 AM
To: PMT03 Hoc; Hoc, PMT12
Subject: reduced PMT staffing - 3rd draft

DJ/2446

Proposed Reduced Staffing Plan for Protective Measures Team (PMT)

Tentative start date: 4/10/2011

NRC's (and PMT's) Top Priorities

1) Continued assessment of radiological conditions, dose projections, and protective action recommendations. Currently, the NRC Japan Team reports that no PMT additional support or actions are being requested (offsite radiological assessments, RASCAL source term updates).

2) Providing technical assistance to the US Ambassador in Japan and the Japanese Government, including a particular focus on the Unit 1 drywell and the Unit 3 and 4 spent fuel pools.

3) Coordination with other US Departments and Agencies, the Institute of Nuclear Power Operations(INPO), Bechtel, General Electric Hitachi (GEH), Tokyo Electric Power Company (TEPCO), and the Japanese military.

PMT Roles and Responsibilities

Support Site Team: During the Japan day shift the PMT communicates and coordinates with the Site Team on all protective measures issues, which includes support for the Japanese Ambassador.

Communicates with other agencies: The PMT reviews radiological measurement and sample data. It reviews protective action recommendations, impacted areas, and related health effect issues and perspectives, and coordinates with DOE, EPA, the Advisory Team, and other federal agencies.

Justification for the proposed staffing below:

Day Shift (7am-3pm) - This period is the most demanding in terms of Executive Team requests, bridge line communications with other agencies, and follow up from other shifts when normal communications are not always practical. Two dose assessors are necessary for optimum quality control. As staffing transitions toward minimums, reductions are practical.

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Japan Time:		4am-12pm	
EST:	7am-3pm	3pm-11pm	11pm-7am
Director	X		
RAAD	X	X	X
PAAD	X	X	X
Dose As1	X		
Dose AS2	X		
Coordinator	X		

Weekends	US comms	Japan Team	
Japan Time:		4am-12pm	
EST:	7am-3pm	3pm-11pm	11pm-7am
Director	X		
RAAD	X	X	X
PAAD	X	X	X
Dose As1	X		
Dose AS2			
Coordinator			

From: OST02 HOC
Sent: Friday, April 08, 2011 10:45 AM
To: Cool, Donald
Cc: Brandon, Lou
Subject: RE: PROTECTIVE MEASURES TEAM STAFFING CHANGES

Correct. Thanks.

OST02

From: Cool, Donald
Sent: Friday, April 08, 2011 9:26 AM
To: OST02 HOC
Cc: Brandon, Lou
Subject: RE: PROTECTIVE MEASURES TEAM STAFFING CHANGES

Good Morning

I am assuming you mean the Friday 3-11, and the Saturday 3-11? I was not signed up for the 11-7 shift, and certainly would not have planned on pulling a double shift, as your listing would have implied!

I am not available for the PAAD spot for that date and time.

Donald A. Cool

From: OST02 HOC
Sent: Friday, April 08, 2011 6:56 AM
To: Cool, Donald
Cc: Brandon, Lou
Subject: PROTECTIVE MEASURES TEAM STAFFING CHANGES

Hello,

This email is to inform you that you are no longer required to fill the PMTR director position on the following dates, as the position is not needed at this time:

- Friday, April 15th, 3PM-11PM
- Friday-Saturday, April 15th – 16th, 11PM – 7AM

Also, there is a an opening on the following date and time for the PMTR protective actions assistant director. Please reply to this email if you would or would not like to fill this position:

- Friday-Saturday, April 15th – 16th, 11PM – 7AM

All other staffing you have scheduled remains unchanged.

Thank You,

Stacy Smith

DJ/247

EST Coordinator

From: Pavek, John - Washington, DC <John.Pavek@wdc.usda.gov>
Sent: Friday, April 08, 2011 9:20 PM
To: 'gyf7@cdc.gov'; 'albert.wiley@orise.orau.gov'; 'jva2@cdc.gov'; 'asa4@cdc.gov'; 'mdb7@cdc.gov'; 'ozl6@cdc.gov'; 'pac4@cdc.gov'; 'james.cherniack@fda.hhs.gov'; 'ccc8@cdc.gov'; 'william.cunningham@cfsan.fda.gov'; 'DeCair.Sara@epamail.epa.gov'; 'tupin.edward@epa.gov'; 'gfn6@cdc.gov'; 'rachel.evans@fda.hhs.gov'; 'rjf8@cdc.gov'; 'jablonowski.eugene@epa.gov'; 'brozowski.george@epa.gov'; Gordon S Cleveland (APHIS); 'patricia.hansen@cfsan.fda.gov'; 'scotty.hargrave@fda.hhs.gov'; 'ezh7@cdc.gov'; 'John.Jensen@dm.usda.gov'; 'terri.jones@fda.hhs.gov'; 'ldk4@cdc.gov'; 'liles.darrell@epa.gov'; 'wgl0@cdc.gov'; Brandon, Lou; Lough, Scott (AMS); 'carmen.maher@fda.hhs.gov'; 'menarm@nv.doe.gov'; 'michael.noska@fda.hhs.gov'; 'cym3@cdc.gov'; 'emorriso@ora.fda.gov'
Subject: Re: URGENT CMHT - ATeam conf call 877-336-1274 (b)(6)

Any summarry?

From: Dixon, John E. (CDC/ONDIEH/NCEH) <gyf7@cdc.gov>
To: Albert L. Wiley Jr (albert.wiley@orise.orau.gov) <albert.wiley@orise.orau.gov>; Anderson, Jeri L. (CDC/NIOSH/DSHEFS) <jva2@cdc.gov>; Ansari, Armin (CDC/ONDIEH/NCEH) <asa4@cdc.gov>; Brooks, Michael (ATSDR/DHAC/SRAB) <mdb7@cdc.gov>; Buzzell, Jennifer (CDC/ONDIEH/NCEH) <ozl6@cdc.gov>; Charp, Paul (ATSDR/DHAC/SRAB) <pac4@cdc.gov>; Cherniack, James J. (FDA/ORA/NE-FO) <james.cherniack@fda.hhs.gov>; Connell, Carol (ATSDR/DHAC/SRAB) <ccc8@cdc.gov>; Cunningham, William C. (FDA/CFSAN/OCD) <william.cunningham@cfsan.fda.gov>; DeCair.Sara@epamail.epa.gov <DeCair.Sara@epamail.epa.gov>; Edward A. Tupin (tupin.edward@epa.gov) <tupin.edward@epa.gov>; Evans, Lynn (CDC/ONDIEH/NCEH) <gfn6@cdc.gov>; Evans, Rachel T. (FDA/ORA/CE-FO) <rachel.evans@fda.hhs.gov>; Funk, Renee (CDC/NIOSH/OD) <rjf8@cdc.gov>; 'Gene Jablonowski' <jablonowski.eugene@epa.gov>; 'George Brozowski' <brozowski.george@epa.gov>; Gordon S Cleveland (APHIS); Hansen, Patricia A. (FDA/CFSAN/OCD) <patricia.hansen@cfsan.fda.gov>; Hargrave, Scotty L. (FDA/ORA/SW-FO) <scotty.hargrave@fda.hhs.gov>; Hornsby-Myers, Jennifer (CDC/NIOSH/OD) <ezh7@cdc.gov>; 'John Jensen' <john.jensen@dm.usda.gov>; Jones, Terri L. (FDA/ORA/P-FO) <terri.jones@fda.hhs.gov>; Keith, Sam (ATSDR/DTEM/ATB) <ldk4@cdc.gov>; liles.darrell@epa.gov <liles.darrell@epa.gov>; Lotz, William G. (Greg) (CDC/NIOSH/DART) <wgl0@cdc.gov>; lou.brandon@nrc.gov <lou.brandon@nrc.gov>; Lough, Scott (AMS); Maher, Carmen T. (FDA/OC/OCS) <carmen.maher@fda.hhs.gov>; menarm@nv.doe.gov <menarm@nv.doe.gov>; michael.noska@fda.hhs.gov <michael.noska@fda.hhs.gov>; Miller, Charles W. (CDC/ONDIEH/NCEH) <cym3@cdc.gov>; Morrison, Ellen F. (FDA/OC/OCTC) <emorriso@ora.fda.gov>; Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH) <jfn1@cdc.gov>; O Laughlin, Colleen T. <olaughlin@nv.doe.gov>; Pavek, John - Washington, DC; Pemberton, Wendy (DOE/FRMAC) <pemberwj@nv.doe.gov>; Peter A Petch (APHIS); 'Roger Goodman' <Goodman.roger@epa.gov>; Graham, Ron (FSIS); Sincek, Jeffrey A. (FDA/ORA/CE-FO) <jeffrey.sincek@fda.hhs.gov>; Smallwood, Karen R. (FDA/ORA/SE-FO) <karen.smallwood@fda.hhs.gov>; Whitcomb, Robert C. (CDC/ONDIEH/NCEH) <byw3@cdc.gov>
Sent: Fri Apr 08 18:16:18 2011
Subject: FW: URGENT CMHT - ATeam conf call 877-336-1274 (b)(6)

To all responding to the Japan radiological situation,

Below is the CMHT bridge line and access code for a call to take place at 19:30 EST. Sorry for the short notice.

P. S. Please forward this e-mail to Greg Dempsey of the EPA as I cannot find his e-mail address at present.

Regards,
John

DJ/248

From: EOC Report (CDC)
Sent: Friday, April 08, 2011 7:02 PM
To: Miller, Charles W. (CDC/ONDIEH/NCEH); Dixon, John E. (CDC/ONDIEH/NCEH); Anderson, Jeri L. (CDC/NIOSH/DSHEFS)
Cc: 2011 Japan Earthquake (CDC)
Subject: FW: URGENT CMHT - ATeam conf call 877-336-1274 (b)(6)

Conference call information below.

From: Salomon, Maria (CONTR) [mailto:SalomoMA@nv.doe.gov]
Sent: Friday, April 08, 2011 6:58 PM
To: OLaughlin, Colleen (NEV); EOC Report (CDC)
Cc: Clark, Harvey (CONTR)
Subject: RE: URGENT CMHT - ATeam conf call

On behalf of Collen, CMHT number:
877-336-1274 access code (b)(6)

From: OLaughlin, Colleen [mailto:OLaughlin@nv.doe.gov]
Sent: Friday, April 08, 2011 3:49 PM
To: 'eocreport@cdc.gov'
Cc: Salomon, Maria (CONTR); Clark, Harvey (CONTR)
Subject: URGENT CMHT - ATeam conf call
Importance: High

REAL EVENT

My name is Colleen O'Laughlin, DOE Federal Lead to the CMHT which is responding to the Japan Earthquake. I need to have a conf call today ASAP – aiming for 1630 PST to discuss important information that pertains to Ateam. Below is a list of personnel that we have been working with but Ateam lead can pull others in if need be for example Gregg Dempsey, EPA.

Ed Tupin, EPA
Sara DeCair, EPA
Charles Miller, CDC
John Jensen, USDA
Ron Graham, USDA
John Dixon, CDC
Jeri Anderson, CDC
Mike Noska, FDA
Bill Cunningham, FDA
Darrell Liles, EPA

Please have all that are notified to call into the CMHT number for further instruction on the call. 702-794-1037

Thanks
colleen

Colleen O'Laughlin
DOE/NNSA/ NSO
Contact inof during response only
phone 702-794-1655
page (b)(6) -- best method

cel (b)(6)

From: Brandon, Lou
Sent: Saturday, April 09, 2011 7:36 AM
To: Jervey, Richard
Subject: RE: staffing PMTR Coordinatior for Tu-4/12 or Th-4/14

Rich, we staffed down starting tomorrow and I think all Coordinator slots are currently filled for next week. We'll see if we staff at all after that.

Lou

From: Jervey, Richard
Sent: Friday, April 08, 2011 9:03 AM
To: Brandon, Lou
Subject: staffing PMTR Coordinatior for Tu-4/12 or Th-4/14

Lou, I can fill one the 3-11 shifts open on those days, preferably Tu. 4/12.

Regards,

R. A. Jervey
RES/DE/RGDB
CS2A07
301/251-7404

DJ 249

From: Brandon, Lou
Sent: Saturday, April 09, 2011 7:46 AM
To: OST02 HOC; Hardesty, Duane
Cc: Lewis, Doris
Subject: RE: REQUEST: PMTR Dose Assessment Training/Shadowing

yes

From: OST02 HOC
Sent: Friday, April 08, 2011 11:02 AM
To: Hardesty, Duane
Cc: Lewis, Doris; Brandon, Lou
Subject: RE: REQUEST: PMTR Dose Assessment Training/Shadowing

Complete per your request. For clarification purposes, is Lou aligned with your requests.

Tony Bowers
EST Coordinator

From: Hardesty, Duane
Sent: Friday, April 08, 2011 10:56 AM
To: OST02 HOC
Cc: Lewis, Doris; Brandon, Lou
Subject: RE: REQUEST: PMTR Dose Assessment Training/Shadowing

Thank you.
The original request should have included both Monday (4/11) and Tuesday (4/12) on the 11pm-7am shift.
Would you please also add her to shadow on Monday (4/11) on the 11pm-7am shift?

From: OST02 HOC
Sent: Friday, April 08, 2011 10:48 AM
To: Hardesty, Duane
Cc: Lewis, Doris; Brandon, Lou
Subject: RE: REQUEST: PMTR Dose Assessment Training/Shadowing

Complete per your request.

From: Hardesty, Duane
Sent: Thursday, April 07, 2011 2:41 PM
To: OST02 HOC
Cc: Lewis, Doris; Brandon, Lou
Subject: RE: REQUEST: PMTR Dose Assessment Training/Shadowing

EST will you plesae put Doris on the watchbill to shadow PMT Dose Assessment for the Tuesday (4/12) 11pm-7am shift and respond in kind.
Thank you,
PMT

DJ/250

From: Lewis, Doris
Sent: Thursday, April 07, 2011 1:18 PM
To: Brandon, Lou; Hardesty, Duane
Subject: REQUEST: PMTR Dose Assessment Training/Shadowing

Hi Lou and Duane,

I work in the Health Effects Branch, as an HP, in RES and some of my colleagues (Tony Huffert, Casper Sun) have been providing PMTR support for the events in Japan.

I wanted to know if I can come in for PMTR dose assessment training/shadowing on Monday (4/11) and Tuesday (4/12) on the 11pm-7am shift. I spoke to my other colleague, John Tomon, who will also work this shift.

I have previously taken a training course in RASCAL (I believe it was version 3.0) and am somewhat familiar with this code.

Let me know if this is ok.

Thanks,
Doris

From: Brandon, Lou
Sent: Saturday, April 09, 2011 7:41 AM
To: Nosek, Andrew
Subject: RE: PROTECTIVE MEASURES TEAM STAFFING CHANGES

Yes, correct

-----Original Message-----
From: Nosek, Andrew
Sent: Friday, April 08, 2011 10:16 AM
To: OST02 HOC
Cc: Brandon, Lou
Subject: RE: PROTECTIVE MEASURES TEAM STAFFING CHANGES

Just to clarify: my Wednesday shift, 4/13, 3-11PM remains unchanged, correct?

AJ

From: OST02 HOC
Sent: Friday, April 08, 2011 7:33 AM
To: Nosek, Andrew
Cc: Brandon, Lou
Subject: PROTECTIVE MEASURES TEAM STAFFING CHANGES

Hello,

This email is to inform you that you are no longer required to fill the PMTR dose assessment position on the following dates, as the position is not needed at this time:

- Monday, 4/11, 3PM-11PM
- Friday, 4/15, 3PM-11PM

All other staffing you have scheduled remains unchanged.

Thank You,

Stacy Smith
EST Coordinator

DJ\251

/

From: Dixon, John E. (CDC/ONDIEH/NCEH) <gyf7@cdc.gov>
Sent: Saturday, April 09, 2011 8:05 AM
To: Albert L. Wiley Jr (albert.wiley@orise.orau.gov); Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Ansari, Armin (CDC/ONDIEH/NCEH); Brooks, Michael (ATSDR/DHAC/SRAB); Buzzell, Jennifer (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); Cherniack, James J. (FDA/ORA/NE-FO); Connell, Carol (ATSDR/DHAC/SRAB); Cunningham, William C. (FDA/CFSAN/OCD); DeCair.Sara@epamail.epa.gov; Edward A. Tupin (tupin.edward@epa.gov); Evans, Lynn (CDC/ONDIEH/NCEH); Evans, Rachel T. (FDA/ORA/CE-FO); Funk, Renee (CDC/NIOSH/OD); 'Gene Jablonowski'; 'George Brozowski'; gordon.s.cleveland@aphis.usda.gov; Hansen, Patricia A. (FDA/CFSAN/OCD); Hargrave, Scotty L. (FDA/ORA/SW-FO); Hornsby-Myers, Jennifer (CDC/NIOSH/OD); 'John Jensen'; Jones, Terri L. (FDA/ORA/P-FO); Keith, Sam (ATSDR/DTEM/ATB); liles.darrell@epa.gov; Lotz, William G. (Greg) (CDC/NIOSH/DART); Brandon, Lou; Lough, Scott (USDA); Maher, Carmen T. (FDA/OC/OCS); menarm@nv.doe.gov; michael.noska@fda.hhs.gov; Miller, Charles W. (CDC/ONDIEH/NCEH); Morrison, Ellen F. (FDA/OC/OCTC); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); O Laughlin, Colleen T.; Pavek, John - Washington, DC [John.Pavek@wdc.usda.gov]; Pemberton, Wendy (DOE/FRMAC); Peter.A.Petch@aphis.usda.gov; 'Roger Goodman'; Ron.Graham@fsis.usda.gov; Sincek, Jeffrey A. (FDA/ORA/CE-FO); Smallwood, Karen R. (FDA/ORA/SE-FO); Whitcomb, Robert C. (CDC/ONDIEH/NCEH)
Subject: Notes from short A-Team call on 4-8-2011 at 19:30 EST

All,

When I was informed via the EOC, there was only about 15 minutes to put the word out.

The conversation was not on the topic which was put forth by Colleen, as the call request was supposedly deferred until a later time (unknown) by DOE NIT OPS. I was left out of that loop. We did start discussions about dose levels for return of US citizens to some affected areas such as air bases.

That's all I know at this time.

Regards,
John

DJ/252

From: PMT02 Hoc
Sent: Monday, April 11, 2011 10:39 AM
To: Brandon, Lou
Subject: RASCAL limitations
Attachments: Proposal for PMT dose calculation for US Embassy in Japan.docx

DJ/253

Proposal for PMT dose calculation

RASCAL limitations:

1) RASCAL projections are limited to a 48 hour interval
2) RASCAL can only characterize multiple venting (releases) as a single release
3) Undamaged fuel situations will not produce any significant impacts
4) Release rates are characterized as an air exchange rate in percent/hour or percent/day
5) For these conditions RASCAL can model non-filtered releases through the dry well or releases filtered through the wetwell. These assume the standby gas treatment system is unavailable.
6) RASCAL models hold-up in containment (i.e. from about March 11 to April 15) such that hold-ups greater than 24 hours will result in primarily noble gases being released with other radionuclides significantly plated out
7) RASCAL models a single unit at a time but can define the time of core damage for each case
8) For multiple unit damage, multiple RASCAL source terms are typically sent to NARAC for summing to capture the entire impact
9) RASCAL models SPF releases as long, protracted events over a couple of weeks. This may not characterize a real Zr fire situation.

Input Assumptions/data for all runs:

Current conditions (realistic conditions/assumptions): assume 80% (is this a valid assumption?) core damage on all
Unit 1 Rx: occasional releases (see 2 above: how should this be characterized?), vented through the wetwell
Unit 2 Rx: continuous discharge (see 4 above: what discharge rate is applicable?), core damage/containment failure, through wetwell
Unit 3 Rx: continuous discharge (see 4 above: what discharge rate is applicable?), containment failure, through upper drywell head (may not (see 5 above: please specify) vent through wetwell)

SFP-1, steaming 5 tons per day, no fuel damage (see 3 above)
SFP-2, steaming 20 tons/day, no fuel damage (see 3 above)
SFP-3 steaming 10 tons/day, some fuel damage (60%)
SFF-4, steaming 72 tons/day, much fuel damage (60%)(some fuel damage and much fuel damage is same percentage?)
Decay until April 15, 2011 (this is the assumed date when release occurs)
Adverse meteorological conditions

Comment [USNRC1]: The most adverse meteorological data is sustained wind in the direction of Tokyo but real meteorological data would significantly reduce dose projections.

Run 1, use above

Pessimistic scenario (noting differences from the above conditions)

Melt through (vessel melt-through needs to be correlated with release rates – see 4 above) at one Rx (unit 1 more likely), either steam or hydrogen explosion
SFP-4 Zr fire (see 9 above) in the pool starting 24 h after the explosion

Run 2: same as run 1 with these mods
Calcs are for planning purposes, discussion purpose with embassy personnel only.

From: Brandon, Lou
Sent: Monday, April 11, 2011 10:03 AM
To: Hoc, PMT12
Subject: FW: blog with DOE AMS results

-----Original Message-----
From: Tupin.Edward@epamail.epa.gov [mailto:Tupin.Edward@epamail.epa.gov]
Sent: Saturday, April 09, 2011 6:14 PM
To: Albert L. Wiley Jr (albert.wiley@orise.orau.gov); Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Ansari, Armin (CDC/ONDIEH/NCEH); Brooks, Michael (ATSDR/DHAC/SRAB); Buzzell, Jennifer (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); Cherniack, James J. (FDA/ORA/NE-FO); Connell, Carol (ATSDR/DHAC/SRAB); Cunningham, William C. (FDA/CFSAN/OCD); DeCair.Sara@epamail.epa.gov; Tupin.Edward@epamail.epa.gov; Evans, Lynn (CDC/ONDIEH/NCEH); Evans, Rachel T. (FDA/ORA/CE-FO); Funk, Renee (CDC/NIOSH/OD); Jablonowski.Eugene@epamail.epa.gov; Brozowski.George@epamail.epa.gov; gordon.s.cleveland@aphis.usda.gov; Hansen, Patricia A. (FDA/CFSAN/OCD); Hargrave, Scotty L. (FDA/ORA/SW-FO); Hornsby-Myers, Jennifer (CDC/NIOSH/OD); 'John Jensen'; Jones, Terri L. (FDA/ORA/P-FO); Keith, Sam (ATSDR/DTEM/ATB); Liles.Darrell@epamail.epa.gov; Lotz, William G. (Greg) (CDC/NIOSH/DART); Brandon, Lou; Lough, Scott (USDA); Maher, Carmen T. (FDA/OC/OCS); menarm@nv.doe.gov; michael.noska@fda.hhs.gov; Miller, Charles W. (CDC/ONDIEH/NCEH); Morrison, Ellen F. (FDA/OC/OCTC); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); O Laughlin, Colleen T.; Pavek, John - Washington, DC [John.Pavek@wdc.usda.gov]; "Pemberton, Wendy George Brozowski/R6/USEPA/US.EPA,_Sara_DeCair/DC/USEPA/US.EPA,_Roger_Goodman/LV/USEPA/US.EPA,_EUGENE_JABLONOWSKI/R5/USEPA/US.EPA,_Darrell_Liles/DC/USEPA/US.EPA,_Edward_Tupin/DC/USEPA/US.EPA,_Lee_Veal/DC/USEPA/US.EPA,_"@mintra02.rtp.epa.gov; Evans@epamail.epa.gov; Donna_L._@mintra02.rtp.epa.gov; " <gfn6@CDC.GOV/O=, "@mintra02.rtp.epa.gov; CDC; Vincent_J._@mintra02.rtp.epa.gov; " <ver2@CDC.GOV/O=, "@mintra02.rtp.epa.gov; CDC; George_T@mintra02.rtp.epa.gov; " <George.Allen@fda.hhs.gov/O=, "@mintra02.rtp.epa.gov; Anderson/@epamail.epa.gov; Jeri_L._@mintra02.rtp.epa.gov; " <jva2@CDC.GOV/O=, "@mintra02.rtp.epa.gov; CDC; Armin_J._@mintra02.rtp.epa.gov; " <asa4@CDC.GOV/O=, "@mintra02.rtp.epa.gov; CDC; Michael_D._@mintra02.rtp.epa.gov; " <mdb7@CDC.GOV/O=, "@mintra02.rtp.epa.gov; ATSDR; Jennifer_J._@mintra02.rtp.epa.gov; " <ozl6@CDC.GOV/O=, "@mintra02.rtp.epa.gov; CDC; Paul_@mintra02.rtp.epa.gov; " <pac4@CDC.GOV/O=, "@mintra02.rtp.epa.gov; ATSDR; James@mintra02.rtp.epa.gov; " <James.Cherniack@fda.hhs.gov/O=, "@mintra02.rtp.epa.gov; gordon.s.cleveland/@epamail.epa.gov; Carol_@mintra02.rtp.epa.gov; " <ccc8@CDC.GOV/O=, "@mintra02.rtp.epa.gov; ATSDR; William_C@mintra02.rtp.epa.gov; " <William.Cunningham@fda.hhs.gov/O=, "@mintra02.rtp.epa.gov; Dixon/@epamail.epa.gov; John_E._@mintra02.rtp.epa.gov; " <gyf7@CDC.GOV/O=, "@mintra02.rtp.epa.gov; CDC; Rachel_T@mintra02.rtp.epa.gov; " <Rachel.Evans@fda.hhs.gov/O=, "@mintra02.rtp.epa.gov; Funk/@epamail.epa.gov; Renee_H._@mintra02.rtp.epa.gov; " <rjf8@CDC.GOV/O=, "@mintra02.rtp.epa.gov; CDC; Patricia_A@mintra02.rtp.epa.gov; " <Patricia.Hansen@fda.hhs.gov/O=, "@mintra02.rtp.epa.gov; Hargrave/@epamail.epa.gov; Scotty_L@mintra02.rtp.epa.gov; " <Scotty.Hargrave@fda.hhs.gov/O=, "@mintra02.rtp.epa.gov; Hornsby-Myers/@epamail.epa.gov; Jennifer_L._@mintra02.rtp.epa.gov; " <ezh7@CDC.GOV/O=, "@mintra02.rtp.epa.gov; CDC; Vinetta@mintra02.rtp.epa.gov; " <Vinetta.HowardKing@fda.hhs.gov/O=, "@mintra02.rtp.epa.gov; john.jensen/@epamail.epa.gov; Terri@mintra02.rtp.epa.gov; " <Terri.Jones@fda.hhs.gov/O=, "@mintra02.rtp.epa.gov; Keith/@epamail.epa.gov; Sam_@mintra02.rtp.epa.gov; " <ldk4@CDC.GOV/O=, "@mintra02.rtp.epa.gov; ATSDR; William_G._@mintra02.rtp.epa.gov; " <wgl0@CDC.GOV/O=, "@mintra02.rtp.epa.gov; CDC; Carmen@mintra02.rtp.epa.gov; " <Carmen.Maher@fda.hhs.gov/O=, "@mintra02.rtp.epa.gov; menarm/@epamail.epa.gov; Ellen_F@mintra02.rtp.epa.gov; " <Ellen.Morrison@fda.hhs.gov/O=,

DJ 1254

"@mintra02.rtp.epa.gov; Nemhauser/@epamail.epa.gov; Jeffrey_B._@mintra02.rtp.epa.gov; " <jfn1@CDC.GOV/O=, "@mintra02.rtp.epa.gov; CDC; Michael_A@mintra02.rtp.epa.gov; " <Michael.Noska@fda.hhs.gov/O=, "@mintra02.rtp.epa.gov; john.pavek/@epamail.epa.gov; Mark@mintra02.rtp.epa.gov; " <Mark.Russo@fda.hhs.gov/O=, "@mintra02.rtp.epa.gov; Smallwood/@epamail.epa.gov; Karen_R@mintra02.rtp.epa.gov; " <Karen.Smallwood@fda.hhs.gov/O=, "@mintra02.rtp.epa.gov; Whitcomb/@epamail.epa.gov; Robert_@mintra02.rtp.epa.gov; " <byw3@CDC.GOV/O=, "@mintra02.rtp.epa.gov; CDC; Teri@mintra02.rtp.epa.gov; " <DixonTL@nv.doe.gov/O=, "@mintra02.rtp.epa.gov; Brennan/@epamail.epa.gov; Inga@mintra02.rtp.epa.gov; " <BRENNAIV@nv.doe.gov/O=, "@mintra02.rtp.epa.gov; cmht/@epamail.epa.gov; Denise_-_OSHA@mintra02.rtp.epa.gov; " <Matthews.Denise@dol.gov/O=, "@mintra02.rtp.epa.gov; Menon.Ramesh/@epamail.epa.gov
Cc: EOC_Public_Information@epamail.epa.gov; Veal.Lee@epamail.epa.gov; Craig.Beth@epamail.epa.gov; Flynn.Mike@epamail.epa.gov; Edwards.Jonathan@epamail.epa.gov; EOC_Environmental_Unit@epamail.epa.gov
Subject: Fw: blog with DOE AMS results

Advisory Team,

The link in the email below goes to a DOE blog. AMS overflight data and some other information is linked on the blog. This (obviously) is not the normal route by which we get this information. This is publicly available, so it is OK to share freely.

Ed
Edward A. Tupin, MS, CHP
tupin.edward@epa.gov
Health Physicist
Center for Radiological Emergency Management
US Environmental Protection Agency 6608J
Washington, DC 20460
office: (202) 343-9383
cell (b)(6)
Office Location
1310 L. ST, NW
Washington, DC 20005
****

----- Forwarded by Edward Tupin/DC/USEPA/US on 04/09/2011 09:46 AM -----

From: "Blumenthal, Daniel" <Daniel.Blumenthal@nnsa.doe.gov>
To: Edward Tupin/DC/USEPA/US@EPA, "Evans, Lynn (CDC/CCEHIP/NCEH)" <gfn6@cdc.gov>, "Miller, Charles W. (CDC/CCEHIP/NCEH)" <CMiller1@cdc.gov>
Date: 04/08/2011 03:03 PM
Subject:blog

http://blog.energy.gov/content/situation-japan

From: George Athey <george.athey@atheyconsulting.com>
Sent: Monday, April 11, 2011 12:57 PM
To: Brandon, Lou
Subject: RE: RASCAL limitations

Lou –

I bet it feels good to be back on a somewhat normal schedule. Did you work the night shift throughout the whole last month?

Keep me posted on the RASCAL training. Where would we go if the RST is not available? I want to take one more look at the RASCAL Workbook before you send it off for printing. I am attempting to better match the PowerPoint slides to the information in the workbook. That has 2 purposes. First, I want to make sure we capture in the workbook all of the material we present with slides. Second, I hope that by doing that I can eliminate the need for slide handouts. What is the latest I can get you the workbook for printing?

I would be interested in any comments about RASCAL (positive or negative). I am looking at this as the best feedback we have ever gotten. I suspect more RASCAL runs were done in the last month than the entire previous year. Users and management are finally having to think about what they want the model to do. I don't know how we best capture all this while it is still fresh. Are you planning any debriefings with the PMT? This seems to be a good lead-in to efforts at RASCAL 5.

It is interesting about the confusion with holdup. The workbook used to contain a problem specifically to show the impact of those processes. It got dropped somewhere along the line as we made room to teach other topics in the class. What it suggests to me is that we need to capture in some written form a summary of how each process impacts the source term and the eventual doses. For example, contrast a source term with and without holdup and then show how that changes the resultant doses. This summary could be part of the workbook or just a separate document to which a user could refer to understand what they are seeing in a calculation run.

Lots of other things to think about:

- Are we able to keep dose assessors properly trained with the limited number of classes we can offer?
- How can we supplement the training to keep the dose assessors "fresh"?
- Does RASCAL need to be able to import source terms from other codes?

I will try to call you later this afternoon. I have to leave about 2:45 for a dermatologist appointment.

George

From: Brandon, Lou [mailto:Lou.Brandon@nrc.gov]
Sent: Monday, April 11, 2011 11:05 AM
To: George Athey
Subject: FW: RASCAL limitations

George,

How are you doing? I'm back in the office for the 1st time today.

On the horizon (if travel approved):

DD/255

Exelon meeting 4/14-15: I'll run RASCAL cases against URI with them for needed documentation on their end.

NREP: 4/17-21, presenting on 4/19

RASCAL training: 4/25-28: Op Center staffing reduced to 6 total staff, 2 in RST. I'm trying to determine whether Rick's room will be available.

NLE – will be sized down significantly – may be no PMT support.

The attached document highlights one RASCAL run, with multiple components, that the Japan Team was starting to send out way. I helped draft the RASCAL limitations at the top so they could understand RASCAL's limits and identify what they really wanted. After this Cyndi Jones, I think, began to circulate strong talk that RASCAL could not model the current situation and began imploring RES to do MELCOR runs. Between the time I sent you the email that RASCAL might have a bug, and this case, RASCAL has had some high level, somewhat negative emails circulated about it. I wouldn't worry too much about that, but we have a new basis for possible future improvements. Think about it, if you haven't already and we'll talk soon.

Lou

From: PMT02 Hoc
Sent: Monday, April 11, 2011 10:39 AM
To: Brandon, Lou
Subject: RASCAL limitations

Proposal for PMT dose calculation

RASCAL limitations:

1) RASCAL projections are limited to a 48 hour interval
2) RASCAL can only characterize multiple venting (releases) as a single release
3) Undamaged fuel situations will not produce any significant impacts
4) Release rates are characterized as an air exchange rate in percent/hour or percent/day
5) For these conditions RASCAL can model non-filtered releases through the dry well or releases filtered through the wetwell. These assume the standby gas treatment system is unavailable.
6) RASCAL models hold-up in containment (i.e. from about March 11 to April 15) such that hold-ups greater than 24 hours will result in primarily noble gases being released with other radionuclides significantly plated out
7) RASCAL models a single unit at a time but can define the time of core damage for each case
8) For multiple unit damage, multiple RASCAL source terms are typically sent to NARAC for summing to capture the entire impact
9) RASCAL models SPF releases as long, protracted events over a couple of weeks. This may not characterize a real Zr fire situation.

Input Assumptions/data for all runs:

Current conditions (realistic conditions/assumptions): assume 80% (is this a valid assumption?) core damage on all
Unit 1 Rx: *occasional releases* (see 2 above: how should this be characterized?), vented through the wetwell
Unit 2 Rx: continuous discharge (see 4 above: what discharge rate is applicable?), core damage/containment failure, through wetwell
Unit 3 Rx: continuous discharge (see 4 above: what discharge rate is applicable?), containment failure, through upper drywell head (may not (see 5 above: please specify) vent through wetwell)

SFP-1, steaming 5 tons per day, no fuel damage (see 3 above)
SFP-2, steaming 20 tons/day, no fuel damage (see 3 above)
SFP-3 steaming 10 tons/day, some fuel damage (60%)
SFF-4, steaming 72 tons/day, much fuel damage (60%)(some fuel damage and much fuel damage is same percentage?)
Decay until April 15, 2011 (this is the assumed date when release occurs)
Adverse meteorological conditions

Comment [USNRC1]: The most adverse meteorological data is sustained wind in the direction of Tokyo but real meteorological data would significantly reduce dose projections.

Run 1, use above

Pessimistic scenario (noting differences from the above conditions)

Melt through (vessel melt-through needs to be correlated with release rates – see 4 above) at one Rx (unit 1 more likely), either steam or hydrogen explosion
SFP-4 Zr fire (see 9 above) in the pool starting 24 h after the explosion

Run 2: same as run 1 with these mods
Calcs are for planning purposes, discussion purpose with embassy personnel only.

From: Schmitt, Ronald
Sent: Monday, April 11, 2011 1:49 PM
To: Brandon, Lou
Subject: RE: PMT Update on NLE Activities

Lou:

I haven't heard much about Ops Center activities, and its' role in the Japanese, plant(s) accident. Will their activities be a problem for the NLE.

Has there been any changes to the, previously scheduled, NLE??? Are they proceeding with the NLE, in May (16 – 19)???.

Let me know. I had scheduled some leave during that time, then I realized that my leave dates were in conflict with the NLE.

If there has been a change to the NLE schedule, I will plan on taking the leave. If not, then I will plan on helping with the NLE.

v/r,

Ron Schmitt

From: Brandon, Lou
Sent: Wednesday, March 09, 2011 3:45 PM
To: Schmitt, Ronald
Subject: RE: PMT Update on NLE Activities

Thanks Ron. We appreciate the support (tell Jody that). I've updated your office to reflect HR.

From: Schmitt, Ronald
Sent: Wednesday, March 09, 2011 1:28 PM
To: Brandon, Lou
Cc: Hudson, Jody; Eng, Patricia
Subject: RE: PMT Update on NLE Activities

Brandon:

I have talked to my supervisor (Jody Hudson), concerning my participation in the National Level Event, which is planned for May 16 – 19. He is supportive of my role in the NRC Incident Response Center, for the two 12 hour shifts (0700 – 1900) on May 17 and May 19.

Keep me informed, as to the actual extent of play, which we (i.e., the NRC) will be expected to fulfill. While I don't particularly love to work 12 hour shifts, it won't kill me to do a couple of them, to support the exercise (it'll remind me of my naval shipyard days).

v/r,

Ron Schmitt
(b)(6)

DJ 1256

P.S. Please revise my office that is delineated on the schedule, to reflect that I currently work in HR, vice NRR. Thanks !!!

RS

From: Brandon, Lou
Sent: Monday, March 07, 2011 7:22 AM
To: Schmitt, Ronald
Subject: RE: PMT Update on NLE Activities

Thanks for the update Ron. I'll stay tuned.

From: Schmitt, Ronald
Sent: Friday, March 04, 2011 7:47 AM
To: Brandon, Lou
Subject: RE: PMT Update on NLE Activities

Lou:

I have been detailed to HR for at least six months, and most likely, up to a year. I have reviewed the email, and looked at the rosters for the multiple shifts, as well as the planned training dates. Before I can commit much further, I will have to sit down with my new supervisor, Jody Hudson, and see if even understands what the agency's emergency response function is. He comes out of DOE, so he might be aware of the role that the NRC plays in these exercises. If I had to read him "remotely", I would say that if I bring this exercise up, and the fact that I have been involved with them since I came to the agency ten years ago, he will most likely support my participation. My schedule is flexible, except for the dates that you have planned for training fall right on top of a three day conference, for which I have already registered. The last date of training (5/6), I would be available though.

I'll get back to as soon as possible.

v/r,

Ron Schmitt

From: Brandon, Lou
Sent: Thursday, March 03, 2011 4:20 PM
To: Ashkeboussi, Nima; Barss, Dan; Brock, Kathryn; Costa, Arlon; Devlin, Stephanie; Fields, Leslie; Hardin, Kimberly; Hardin, Leroy; Hart, Michelle; Huffert, Anthony; Johnson, Don; Lui, Christiana; Milligan, Patricia; Purciarello, Gerard; Quinlan, Kevin; Roach, Edward; Robinson, Edward; Saba, Mohammad; White, Bernard; Benner, Eric; Brandon, Lou; Camper, Larry; Cervera, Margaret; Cool, Donald; Gambone, Kimberly; Helton, Donald; Keegan, Elaine; Kim, Tae; Lubinski, John; Musico, Bruce; Schmidt, Duane; Takacs, Michael; Tappert, John; Wheeler, Larry; Armstrong, Garry; Burgess, Michele; Casto, Greg; Chowdhury, Prosanta; Clemons-Webb, Candace; Eads, Johnny; Gray, Anita; Hardesty, Duane; Harvey, Brad; Holahan, Vincent; Lappert, Glenna; LaVie, Steve; Magruder, Stewart; Mohseni, Aby; Norris, Michael; Schmitt, Ronald; Sun, Casper; Wunder, George; Clement, Richard; Coe, Doug; Creedon, Meghan; DeCicco, Joseph; Galletta, Thomas; Rosenberg, Stacey; Sebrosky, Joseph; Sullivan, Randy; Yin, Xiaosong; Derr, Kathryn; Brandt, Philip; Broaddus, Doug; Easson, Stuart; Mazaika, Michael; Parillo, John; Pelton, David; Purdy, Gary; Reis, Terrence; Schneider, Stewart; Sturz, Fritz; Wastler, Sandra; Watson, Bruce; Williams, Kevin
Cc: Grant, Jeffery; Hasselberg, Rick; Temple, Jeffrey; Stone, Rebecca; Kozal, Jason; Bush-Goddard, Stephanie; Foster, Jack; Horn, Brian; Killian, Michelle; Lewis, Robert; McKenna, Eileen; Witt, Kevin
Subject: PMT Update on NLE Activities

HQ PMT Staff,

The attached National Level Exercise (NLE) PMT Roster has significant updates. The NLE is scheduled for May 16-19. NLE planning is still evolving on State, Federal, and NRC levels. In the end, it may shape up differently than what we expect now. One issue being considered is 12 hr versus 24 hour play. Current guidance is to plan for 24 hr play. We should know more about 24 hr staffing (or not – FEMA has a large influence) by the end of March. Remain flexible, particularly regarding the attached roster as it will likely change again as the scenario firms and as I resolve future conflicts.

The TAC for time devoted is ZT0007, Formal Training Program.

Training

The new **General Response Training** (GRT) went live yesterday.

Here is a link to the GRT course for your convenience:
https://ilearnnrc.plateau.com/plateau/user/deeplink.do?linkId=ITEM_DETAILS&componentID=1014&componentTypeID=Course&revisionDate=1250185980000

GRT will be required annually, and though not required before the exercise, you're encouraged to go through it. It takes about 1 hr. If you've completed the old version within the last year, you need not repeat it. The GRT iLearn module along with the NIMS iLearn module, that most of you completed last September, and some PMT specific modules will eventually become a tracked training program that replaces the paper qualification cards. The PMT specific version of iLearn training is delayed but may be available within a month or so. It will cover a basic PMT overview, including WebEOC use.

PMT Team Training (PMT Area)

Each PMT member should attend just the earliest (one) of the team training sessions below, based on the Roster:

Monday, May 2, Red Day Team:	8:30 – 12:00 and 1:00 – 3:00 PM
Tuesday, May 3, White Day Team:	8:30 – 12:00 and 1:00 – 3:00 PM
Wednesday, May 4, Blue Day (untrained) and White Night Teams:	8:30 – 12:00 and 1:00 – 3:00 PM
Thursday, May 5, Gold Day (untrained) and Blue Night Teams:	8:30 – 12:00 and 1:00 – 3:00 PM

For clarification, when the Blue Day Team trains on Wednesday, it will be light by the number of members who already trained on Monday (and are scheduled for a second NLE exercise shift on Wednesday). The White Night Team can fill the empty slots. There may be some position overlap, but not much.

These training sessions will be all the same and if you have a conflict on one day you can attend another session. Let me know of conflicts as the training will likely be scenario based and I need to keep some specific positions filled. I will attempt to do a proficiency check on every individual before you leave the training, based on scenario results (saved dose assessments, GIS plots, chronology, WebEOC team log entries, etc) to ensure that everyone is ready. I will give more attention to new PMT staff who should plan to stay for the entire training interval. The week following this training provides an opportunity for additional position specific training before the exercise, as needed. I won't send schedulers quite yet, as change is probable. Mark your own calendars as necessary.

Roster

The roster is structured for the White Day PMT to be backup for the Red Day PMT, and the Blue Day team to be backup for the White, etc. The night teams structure has changed. To accommodate coordinating evening

exercise activities with normal daytime activities, I've scheduled the Monday night team to also work Tuesday night (then they could work Thursday and Friday normally, if desired).

My experience with these national level exercises is that demand is much less at night. To address concerns that a half staffed PMT may not be adequate, especially on the first night, I've essentially called in the backup night team in advance to create a full Red Night PMT for Monday evening. Although this team will have no additional backup, I don't see the need. It can be determined from the Monday night experience, to what extent we need to staff Tuesday and Wednesday nights. This now complicates life a little for the Wednesday night team (moved from Tuesday night). Worst case, with a few individual exceptions, the night teams might need to work three shifts. Best case, we may end up not playing at night (don't jump to any conclusions yet).

We may be tasked with providing a number of controllers for simulation cells from our team to play with up to 350 other controllers at Gallaudet University (would cause more change to our roster).

Bridge Line Coordination and Surge Volumes

Normally our communicators are linked with only one other entity, but it's possible for one communicator to gather information from several bridge lines. Please see the attached Bridge Line Coordination slides for guidance on possible methods for accomplishing this. WebEOC can be set up to have multiple impacted facilities under one umbrella event. Specific facilities can be easily selected to enter relevant data, before moving on to second and third priority facilities that may also have information to capture. The attached slides also suggest options for dealing with multiple demand surges that may periodically occur during the exercise.

I am honored to be working with each of you. There is a vast extent of emergency response experience and radiological expertise within our ranks. The upcoming 2011 NLE is being designed to test us to our limits and beyond. As things shape up, I'm confident that we will be able to prioritize demands and efficiently address the needs. As in a real incident, success will likely spring from each individual's ability to size up the situation and find creative ways to support the entire team. As we plan, each of your suggestions and opinions are valuable, related to what I propose and otherwise. I encourage you to express them.

Unannounced Drill

By the way, there was a Chairman requested unannounced drill intended for last Thursday evening. It turned out that due to an automated update to the ANS system, the number of outgoing calls was limited. No one noticed for over an hour (Op Center filling with observers and controllers) that the callout did not happen. That unsuccessful demonstration was cancelled about an hour an forty minutes into it. Qualified PMT staff should be prepared for subsequent test at a time when you may not expect it.

Citrix Accounts

Only two staff have reported that they have Citrix accounts so far. A Citrix account will provide access to WebEOC, eLibrary, RASCAL, etc from your home. Please let me know if you have an account or would like one.

I'm copying those on the PMT who are not participating in the exercise due to conflicts. You are encouraged to do the on-line training and attend a PMT training session (may be last chance this year) to help keep up your proficiencies.

I appreciate everyone's support.

Lou

From: Brandon, Lou
Sent: Monday, April 11, 2011 2:34 PM
To: Hoc, PMT12
Subject: IAEA Operational Intervention Levels (OILs)

Kathy,

Checked our InterRAS notes. There is a comment in there that their guideline is 100 mSv in 1st 7 days. This is consistent with the website below. For iodine prophylaxis it appears to be 50 mSv in 1st 7 days.

http://www.slideshare.net/iaea/fukushima-background-information-on-operational-intervention-levels-1-april-2011

E.Buglova@iaea.org

Elena at the email address above, can clarify if necessary, although she tends to stay quite busy.

Lou

DJ\257

From: Evans, Lynn (CDC/ONDIEH/NCEH) <gfn6@cdc.gov>
Sent: Monday, April 11, 2011 3:59 PM
To: Wood, Charles (CDC/ONDIEH/NCEH) (CTR) (b)(6) Kunz, Jasen M. (CDC/ONDIEH/NCEH); Allen, George T. (FDA/ORA/NE-FO); Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Ansari, Armin (CDC/ONDIEH/NCEH); Brandon, Lou; Brooks, Michael (ATSDR/DHAC/SRAB); Brozowski, George (EPA); Buzzell, Jennifer (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); Cherniack, James J. (FDA/ORA/NE-FO); Cleveland, Gordon (USDA); Connell, Carol (ATSDR/DHAC/SRAB); Cunningham, William C. (FDA/CFSAN); DeCair, Sara (EPA); Dixon, John E. (CDC/ONDIEH/NCEH); Evans, Lynn (CDC/ONDIEH/NCEH); Evans, Rachel T. (FDA/ORA/CE-FO); Funk, Renee (CDC/NIOSH/OD); Goodman, Roger (EPA); Graham, Ron (USDA); Hansen, Patricia A. (FDA/CFSAN); Hargrave, Scotty L. (FDA/ORA/SW-FO); Hornsby-Myers, Jennifer (CDC/NIOSH/OD); Howard King, Vinetta M. (FDA/OC/OCTC); Jablonowski, Gene (EPA); Jensen, John (USDA); Jones, Terri L. (FDA/ORA/P-FO); Keith, Sam (ATSDR/DTEM/ATB); Liles, Darrell (EPA); Lotz, William G. (Greg) (CDC/NIOSH/DART); Lough, Scott (USDA); Maher, Carmen T. (FDA/OC/OCS); Mena, RaJah (DOE/FRMAC); Miller, Charles W. (CDC/ONDIEH/NCEH); Morrison, Ellen F. (FDA/OC/OCTC); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); Noska, Mike (FDA); O'Laughlin, Colleen (DOE/FRMAC); Pavek, John (USDA); Pemberton, Wendy (DOE/FRMAC); Petch, Peter (USDA); Russo, Mark R. (FDA/OC/OCTC); Sincek, Jeffrey A. (FDA/ORA/CE-FO); Smallwood, Karen R. (FDA/ORA/SE-FO); Tupin, Ed (EPA); Veal, Lee (EPA); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Wiley, Albert (ORAU)
Subject: Long Term Habitability Assessment
Attachments: Long Term Habitability Assessment.docx; Long Term Habitability Assessment.docx

Attached are the documents discussed during the Advisory Team conference call at 2:00 PM today. These documents are meant for your awareness in case the Advisory Team is asked to provide recommendations on long term habitability.

Thanks!
Lynn Evans

DJ/258

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From: Brandon, Lou
Sent: Monday, April 11, 2011 4:27 PM
To: Brunner, Brennen (DPS); atheyconsulting@frontiernet.net
Cc: Barker, Allan
Subject: RE: RASCAL 4.1 and Understanding Source Term to Dose Options

Brennen,

Notice that in your A and B tables you have exactly the same activity released for the iodines. For most exercises we play the release a few hours after shutdown. At that time (about 3 hours post shutdown) I-131 will be about 20% of the total iodines. So in table B if you had scaled up the total iodine activity to reflect this, the numbers in your 2nd row of the results would be in the ballpark with the rest of the values. A rule of thumb that plays out frequently is that if the safety systems are working (sprays on) then I-131 released will be about 1000 times less than the nobles (but the total iodines will be about 5 times higher than I-131, early on).

Lou

From: Brunner, Brennen (DPS) [mailto:brennen.brunner@state.mn.us]
Sent: Tuesday, April 05, 2011 3:29 PM
To: Brandon, Lou; atheyconsulting@frontiernet.net
Cc: Barker, Allan
Subject: RASCAL 4.1 and Understanding Source Term to Dose Options

Lou and George –

Last week I put on a 4 hour RASCAL 4.1 and advanced issues training for our state assessment team. I was able to put this together by closely studying the 4.1 workbook, emailing previously on a great variety of topics, and tooling around with the program. If you're at all interested in what we covered, or wanted to fact check it, I'd be happy to send a PDF of the PPT.

That said, one topic raised a great number of questions – as the title alluded, choosing between the different Source Term to Dose Options for a monitored release. What I did was take a follow-up message from the 2009 Monticello evaluated exercise for my release data, and had people run it in three different ways. I chose standard meteorology, a four hour release, eight hours time to end of calculation, and had the sample taken 5 minutes after shutdown. Here's what I got:

A. Effluent Release Rates –by Representative Nuclide (Xe-133, I-131, and Cs-137 for all Noble Gases, Radioiodines, and Particulates)

Xe-133	1.96e+8 µCi/s
I-131	9.09e+6 µCi/s
Cs-137	4.73e+6 µCi/s

B. Effluent Releases – by Mixtures

Noble Gases	1.96e+8 µCi/s

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Iodines	9.09e+6 µCi/s
Particulates	4.73e+6 µCi/s

C. **Effluent Release Rates – by Individual Nuclide**

Kr-85m	1.87e+4	Xe-138	4.31e-17
Kr-85	8.08e+5	Sr-89	1.32e+6
Kr-87	1.88e-4	Sr-90	5.34e+4
Kr-88	5.80e+2	Cs-137	6.78e+4
Xe-131m	1.28e+6	Ba-140	2.07e+6
Xe-133m	4.61e+6	Ce-144	1.22e+6
Xe-133	1.88e+8	I-131	6.18e+6
Xe-135	1.24e+6	I-133	2.91e+6

The Results

Method	TEDE 2 miles	CDE Thyroid 2 miles	TEDE 5 miles	CDE 5 miles	TEDE 10 miles	CDE 10 miles	Exceeds TEDE PAG	Exceeds CDE PAG
Representative Nuclide	2.8E+00	5.1E+01	1.5E+00	2.9E+01	7.7E-01	1.5E+01	7.5 miles	18.75 miles
Mixture – Total Iodine	6.6E-01	1.2E+01	3.7E-01	6.9E+00	1.7E-01	3.4E+00	1 mile	7 miles
Mixture – I-131 Equiv.	2.0E+00	5.4E+01	1.2E+00	3.1E+01	5.6E-01	1.5E+01	5.5 miles	20 miles
Individual Nuclide	4.4E+00	3.6E+01	2.5E+00	2.1E+01	1.3E+00	1.0E+01	11.25 miles	16.25 miles

Now I know that models are hypothetical and will vary, but since I have to chose one as our default procedure, I'm wondering if you can shed some light on the underlying assumptions and how one might select among the three. Here are a few of my thoughts:

1. Page 71 of the RASCAL 4.1 Handbook discusses the Monitored Mixtures setting. From the first paragraph under the Background heading "However the effluent monitor cannot identify the specific radionuclides present. Instead, the effluent monitor will usually be able to provide only the noble gas activity release rate, the radioiodine activity release rate, and sometimes a particulate activity release rate."

   So basically, though an outside observer may think entering all the individual isotopes to be the most accurate, it's not likely the monitors picked up them, but rather they were extrapolated through some ratio based on normal core operating inventory and what the monitor read. So let's rule out Method C.

2. For the whichever method we choose, speed (also minimizing data entry, and with it chances for human error) is a key consideration. So practically, in developing the first PAR, we would want to use Method A (representative isotopes) or B (monitored mixtures). I suppose it makes a difference what kind of monitors the particular plant has, but can you offer some thoughts on the underlying assumptions and choosing between the two?

Another thing that's not spelled out in the workbook is the choice between designating "Total Iodine" and "I-131 Equiv." under Monitored Mixtures. As you can see I did both in the table above, and the total iodine row was the outlier with much lower projected doses. Can you offer any thoughts on selecting between these two options.

So another light round of questions from Minnesota. Hopefully it's encouraging that people are taking an investment in RASCAL 4.1 and are moving beyond just kicking the tires to study how to best employ its many tools. Any light you can shed on these source term option questions would be greatly appreciated. Currently Monticello is early in the process of moving from MIDAS to RASCAL. They've taken some interest in how the state employs the program, which makes this an excellent time for us to study our processes and make sure that the best practices are in play. Thanks again for all your help.

All the Best,
Brennen

Brennen Brunner
Principal Planner
Homeland Security and Emergency Management
651-201-7436
brennen.brunner@state.mn.us

"Keeping Minnesota Ready"
www.hsem.state.mn.us

From: MetDataServices_DTRA (b)(6)
Sent: Monday, April 11, 2011 4:51 PM
Subject: Status of DTRA MDS

ALCON,

We have restored DTRA's meteorological data servers to a normal operating state. We apologize for any inconvenience the past few weeks' technical difficulties have produced. Please feel free to call or e-mail the MDS support team for further information or guidance.

Best regards,

DTRA Meteorological Data Services Team
703-767-3451/6087 or dsn 427-3451/6087
(b)(6)

-----Original Message-----
From: MetDataServices_DTRA (b)(6)
Sent: Thursday, March 17, 2011 2:10 PM
Subject: URGENT request to DTRA MDS Users
Importance: High

Dear DTRA Meteorological Data Server User:

Due to the emergency situation in Japan, we must request that you *cease* use of the DTRA Meteorological Data Server (MDS) until further notice. This will allow us to reserve MDS resources for essential operational personnel only. We apologize for any inconvenience and will notify you immediately as soon as you can resume use of the MDS.

If you are not logged-off within the next 15 minutes, we must disconnect your current connections to the MDS until further notice.

Please contact us at 703-767-3451/6087 or dsn 427-3451/6087 if you require additional assistance or have concerns regarding this urgent requirement.

Best regards,

DTRA Meteorological Data Services Team

DJ/260

From: Palmer, Brendan <Brendan.Palmer@orise.orau.gov>
Sent: Monday, April 11, 2011 5:45 PM
To: Brandon, Lou
Subject: Re: Amber Waves C&O Summary

Lou- sorry for the delay. I"m in Japan and will work this issue today. Thanks for the email.

From: Brandon, Lou <Lou.Brandon@nrc.gov>
To: Palmer, Brendan
Sent: Mon Apr 11 13:38:21 2011
Subject: RE: Amber Waves C&O Summary

Brendan,

I'm not seeing any Concepts and Objectives folder under Amber Waves 2012 in CMWeb. Am I missing something or does this folder need to be shared?

Lou

Lou Brandon, CHP
PMT and RASCAL Program Manager
NRC, NSIR, Incident Response
Mail Stop: T4A43
Washington, DC 20555-0001
301-415-8013

From: Palmer, Brendan [mailto:Brendan.Palmer@orise.orau.gov]
Sent: Friday, April 01, 2011 5:00 PM
To: (b)(6)
(b)(6)

DJ/261

(b)(6)

Cc: Bertram, William
Subject: Amber Waves C&O Summary

All – The Amber Waves C&O summary has been added to CM Web under the Concept and Objectives folder. Please review this document and let me know if you have any changes to the content or list of attendees. I have also created working group folders which contain a preliminary contact list. Please review these lists and let me know who should be added to which group. If you have problems accessing CM Web or any of the Amber Waves sub folders please don't hesitate to send me an email. Thank you.

Brendan Palmer
National Security & Emergency Management Programs
Oak Ridge Institute for Science and Education (ORISE)
Washington, DC
Brendan.Palmer@orise.orau.gov
Desk: 202.955.3658
Cell: (b)(6)
Fax: 202.955.1063

From: Brandon, Lou
Sent: Tuesday, April 12, 2011 10:55 AM
To: Marshall, Jane
Cc: Grant, Jeffery
Subject: PMT Staffing for next week

Jane, Jeff,

I still have a couple of PMT PAAD slots to fill to get us to Saturday morning (Thurs and Fri nights). What about the weekend and next week? I've been informed that two PAAD stalwarts, Greg Casto and Kathy Brock will not be available next week. Therefore it's imperative that I begin now if we plan to staff through the weekend and next week.

Thanks for the guidance.

Lou

DJ\262

From: Schmitt, Ronald
Sent: Tuesday, April 12, 2011 12:40 PM
To: Brandon, Lou
Subject: RE: PMT Update on NLE Activities

Thanks for the insights Lou. I will hold off on making any reservations and such things, until I hear from you. I didn't think that there was much of a likelihood of the NLE proceeding (as scheduled), given the ongoing situation in Japan.

Let me know as soon as possible.

Thanks !!!

v/r,

Ron S.

From: Brandon, Lou
Sent: Tuesday, April 12, 2011 12:35 PM
To: Schmitt, Ronald
Subject: RE: PMT Update on NLE Activities

Ron

What? You're getting approval from your supervisor, then forgetting the dates? Those scheduling annual leave during an exercise should work the graveyard shift for 5 years to make amends, shouldn't they? Not to worry... there should be some NLE communications in the near future and I think..... you will be fine with your scheduled leave (but I can't formally say that yet).

Lou

From: Schmitt, Ronald
Sent: Monday, April 11, 2011 1:49 PM
To: Brandon, Lou
Subject: RE: PMT Update on NLE Activities

Lou:

I haven't heard much about Ops Center activities, and its' role in the Japanese, plant(s) accident. Will their activities be a problem for the NLE.

Has there been any changes to the, previously scheduled, NLE??? Are they proceeding with the NLE, in May (16 – 19)???.

Let me know. I had scheduled some leave during that time, then I realized that my leave dates were in conflict with the NLE.

If there has been a change to the NLE schedule, I will plan on taking the leave. If not, then I will plan on helping with the NLE.

v/r,

DJ/263

Ron Schmitt

From: Brandon, Lou
Sent: Wednesday, March 09, 2011 3:45 PM
To: Schmitt, Ronald
Subject: RE: PMT Update on NLE Activities

Thanks Ron. We appreciate the support (tell Jody that). I've updated your office to reflect HR.

From: Schmitt, Ronald
Sent: Wednesday, March 09, 2011 1:28 PM
To: Brandon, Lou
Cc: Hudson, Jody; Eng, Patricia
Subject: RE: PMT Update on NLE Activities

Brandon:

I have talked to my supervisor (Jody Hudson), concerning my participation in the National Level Event, which is planned for May 16 – 19. He is supportive of my role in the NRC Incident Response Center, for the two 12 hour shifts (0700 – 1900) on May 17 and May 19.

Keep me informed, as to the actual extent of play, which we (i.e., the NRC) will be expected to fulfill. While I don't particularly love to work 12 hour shifts, it won't kill me to do a couple of them, to support the exercise (it'll remind me of my naval shipyard days).

v/r,

Ron Schmitt
(b)(6)

P.S. Please revise my office that is delineated on the schedule, to reflect that I currently work in HR, vice NRR. Thanks !!!

RS

From: Brandon, Lou
Sent: Monday, March 07, 2011 7:22 AM
To: Schmitt, Ronald
Subject: RE: PMT Update on NLE Activities

Thanks for the update Ron. I'll stay tuned.

From: Schmitt, Ronald
Sent: Friday, March 04, 2011 7:47 AM
To: Brandon, Lou
Subject: RE: PMT Update on NLE Activities

Lou:

I have been detailed to HR for at least six months, and most likely, up to a year. I have reviewed the email, and looked at the rosters for the multiple shifts, as well as the planned training dates. Before I can commit much further, I will have to sit down with my new supervisor, Jody Hudson, and see if even understands what the agency's emergency response function is. He comes out of DOE, so he might be aware of the role that the

NRC plays in these exercises. If I had to read him "remotely", I would say that if I bring this exercise up, and the fact that I have been involved with them since I came to the agency ten years ago, he will most likely support my participation. My schedule is flexible, except for the dates that you have planned for training fall right on top of a three day conference, for which I have already registered. The last date of training (5/6), I would be available though.

I'll get back to as soon as possible.

v/r,

Ron Schmitt

From: Brandon, Lou
Sent: Thursday, March 03, 2011 4:20 PM
To: Ashkeboussi, Nima; Barss, Dan; Brock, Kathryn; Costa, Arlon; Devlin, Stephanie; Fields, Leslie; Hardin, Kimberly; Hardin, Leroy; Hart, Michelle; Huffert, Anthony; Johnson, Don; Lui, Christiana; Milligan, Patricia; Purciarello, Gerard; Quinlan, Kevin; Roach, Edward; Robinson, Edward; Saba, Mohammad; White, Bernard; Benner, Eric; Brandon, Lou; Camper, Larry; Cervera, Margaret; Cool, Donald; Gambone, Kimberly; Helton, Donald; Keegan, Elaine; Kim, Tae; Lubinski, John; Musico, Bruce; Schmidt, Duane; Takacs, Michael; Tappert, John; Wheeler, Larry; Armstrong, Garry; Burgess, Michele; Casto, Greg; Chowdhury, Prosanta; Clemons-Webb, Candace; Eads, Johnny; Gray, Anita; Hardesty, Duane; Harvey, Brad; Holahan, Vincent; Lappert, Glenna; LaVie, Steve; Magruder, Stewart; Mohseni, Aby; Norris, Michael; Schmitt, Ronald; Sun, Casper; Wunder, George; Clement, Richard; Coe, Doug; Creedon, Meghan; DeCicco, Joseph; Galletta, Thomas; Rosenberg, Stacey; Sebrosky, Joseph; Sullivan, Randy; Yin, Xiaosong; Derr, Kathryn; Brandt, Philip; Broaddus, Doug; Easson, Stuart; Mazaika, Michael; Parillo, John; Pelton, David; Purdy, Gary; Reis, Terrence; Schneider, Stewart; Sturz, Fritz; Wastler, Sandra; Watson, Bruce; Williams, Kevin
Cc: Grant, Jeffery; Hasselberg, Rick; Temple, Jeffrey; Stone, Rebecca; Kozal, Jason; Bush-Goddard, Stephanie; Foster, Jack; Horn, Brian; Killian, Michelle; Lewis, Robert; McKenna, Eileen; Witt, Kevin
Subject: PMT Update on NLE Activities

HQ PMT Staff,

The attached National Level Exercise (NLE) PMT Roster has significant updates. The NLE is scheduled for May 16-19. NLE planning is still evolving on State, Federal, and NRC levels. In the end, it may shape up differently than what we expect now. One issue being considered is 12 hr versus 24 hour play. Current guidance is to plan for 24 hr play. We should know more about 24 hr staffing (or not – FEMA has a large influence) by the end of March. Remain flexible, particularly regarding the attached roster as it will likely change again as the scenario firms and as I resolve future conflicts.

The TAC for time devoted is ZT0007, Formal Training Program.

Training

The new **General Response Training** (GRT) went live yesterday.

Here is a link to the GRT course for your convenience:
https://ilearnnrc.plateau.com/plateau/user/deeplink.do?linkId=ITEM_DETAILS&componentID=1014&componentTypeID=Course&revisionDate=1250185980000

GRT will be required annually, and though not required before the exercise, you're encouraged to go through it. It takes about 1 hr. If you've completed the old version within the last year, you need not repeat it. The GRT iLearn module along with the NIMS iLearn module, that most of you completed last September, and some PMT specific modules will eventually become a tracked training program that replaces the paper qualification cards. The PMT specific version of iLearn training is delayed but may be available within a month or so. It will cover a basic PMT overview, including WebEOC use.

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Monday, May 2, Red Day Team:	8:30 – 12:00 and 1:00 – 3:00 PM
Tuesday, May 3, White Day Team:	8:30 – 12:00 and 1:00 – 3:00 PM
Wednesday, May 4, Blue Day (untrained) and White Night Teams:	8:30 – 12:00 and 1:00 – 3:00 PM
Thursday, May 5, Gold Day (untrained) and Blue Night Teams:	8:30 – 12:00 and 1:00 – 3:00 PM

For clarification, when the Blue Day Team trains on Wednesday, it will be light by the number of members who already trained on Monday (and are scheduled for a second NLE exercise shift on Wednesday). The White Night Team can fill the empty slots. There may be some position overlap, but not much.

These training sessions will be all the same and if you have a conflict on one day you can attend another session. Let me know of conflicts as the training will likely be scenario based and I need to keep some specific positions filled. I will attempt to do a proficiency check on every individual before you leave the training, based on scenario results (saved dose assessments, GIS plots, chronology, WebEOC team log entries, etc) to ensure that everyone is ready. I will give more attention to new PMT staff who should plan to stay for the entire training interval. The week following this training provides an opportunity for additional position specific training before the exercise, as needed. I won't send schedulers quite yet, as change is probable. Mark your own calendars as necessary.

Roster

The roster is structured for the White Day PMT to be backup for the Red Day PMT, and the Blue Day team to be backup for the White, etc. The night teams structure has changed. To accommodate coordinating evening exercise activities with normal daytime activities, I've scheduled the Monday night team to also work Tuesday night (then they could work Thursday and Friday normally, if desired).

My experience with these national level exercises is that demand is much less at night. To address concerns that a half staffed PMT may not be adequate, especially on the first night, I've essentially called in the backup night team in advance to create a full Red Night PMT for Monday evening. Although this team will have no additional backup, I don't see the need. It can be determined from the Monday night experience, to what extent we need to staff Tuesday and Wednesday nights. This now complicates life a little for the Wednesday night team (moved from Tuesday night). Worst case, with a few individual exceptions, the night teams might need to work three shifts. Best case, we may end up not playing at night (don't jump to any conclusions yet).

We may be tasked with providing a number of controllers for simulation cells from our team to play with up to 350 other controllers at Gallaudet University (would cause more change to our roster).

Bridge Line Coordination and Surge Volumes

Normally our communicators are linked with only one other entity, but it's possible for one communicator to gather information from several bridge lines. Please see the attached Bridge Line Coordination slides for guidance on possible methods for accomplishing this. WebEOC can be set up to have multiple impacted facilities under one umbrella event. Specific facilities can be easily selected to enter relevant data, before moving on to second and third priority facilities that may also have information to capture. The attached slides also suggest options for dealing with multiple demand surges that may periodically occur during the exercise.

I am honored to be working with each of you. There is a vast extent of emergency response experience and radiological expertise within our ranks. The upcoming 2011 NLE is being designed to test us to our limits and beyond. As things shape up, I'm confident that we will be able to prioritize demands and efficiently address the

needs. As in a real incident, success will likely spring from each individual's ability to size up the situation and find creative ways to support the entire team. As we plan, each of your suggestions and opinions are valuable, related to what I propose and otherwise. I encourage you to express them.

Unannounced Drill

By the way, there was a Chairman requested unannounced drill intended for last Thursday evening. It turned out that due to an automated update to the ANS system, the number of outgoing calls was limited. No one noticed for over an hour (Op Center filling with observers and controllers) that the callout did not happen. That unsuccessful demonstration was cancelled about an hour an forty minutes into it. Qualified PMT staff should be prepared for subsequent test at a time when you may not expect it.

Citrix Accounts

Only two staff have reported that they have Citrix accounts so far. A Citrix account will provide access to WebEOC, eLibrary, RASCAL, etc from your home. Please let me know if you have an account or would like one.

I'm copying those on the PMT who are not participating in the exercise due to conflicts. You are encouraged to do the on-line training and attend a PMT training session (may be last chance this year) to help keep up your proficiencies.

I appreciate everyone's support.

Lou

From: Brandon, Lou
Sent: Tuesday, April 12, 2011 12:46 PM
To: Hoc, PMT12
Subject: FW: CMweb book access granted (Useful Japanese Guidance)

Also good IAEA guidance PP on limits in this folder from 3/14.

Lou

-----Original Message-----
From: CMweb [mailto:cm-web-spt@aquinas.llnl.gov]
Sent: Monday, April 11, 2011 9:02 PM
Subject: CMweb book access granted (Useful Japanese Guidance)

CMweb Web User,

You have been granted access to the book titled,

Useful Japanese Guidance

To access this information, you will need to log in to the CMweb system by clicking on the link below:
https://cmweb.llnl.gov/web/share/shareHome.html?pk=bok_201100000106

Additional Information:

Added a Japanese memo on allowable radioactivity in food items.

DJ\264

From: Brandon, Lou
Sent: Tuesday, April 12, 2011 12:48 PM
To: Hoc, PMT12
Subject: FW: Japan IHR materials posted
Attachments: Revised 260311-Rev280311 english data food.pdf; 110406_Sum radionuclide test results food.pdf; 110406-data-radioactive contaminants food.pdf; 110407 radioactive materials in tap water 28.pdf; 110407_Sum radionuclide test results food.pdf; 110407-data-radioactive contaminants food.pdf; 110408_0800_UTC+9hrs__event info update.pdf; PressRelease.pdf

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From: Evans, Lynn (CDC/ONDIEH/NCEH) [mailto:gfn6@cdc.gov]
Sent: Tuesday, April 12, 2011 12:19 PM
To: Allen, George T. (FDA/ORA/NE-FO); Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Ansari, Armin (CDC/ONDIEH/NCEH); Brandon, Lou; Brooks, Michael (ATSDR/DHAC/SRAB); Brozowski, George (EPA); Buzzell, Jennifer (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); Cherniack, James J. (FDA/ORA/NE-FO); Cleveland, Gordon (USDA); Connell, Carol (ATSDR/DHAC/SRAB); Cunningham, William C. (FDA/CFSAN); DeCair, Sara (EPA); Dixon, John E. (CDC/ONDIEH/NCEH); Evans, Lynn (CDC/ONDIEH/NCEH); Evans, Rachel T. (FDA/ORA/CE-FO); Funk, Renee (CDC/NIOSH/OD); Goodman, Roger (EPA); Graham, Ron (USDA); Hansen, Patricia A. (FDA/CFSAN); Hargrave, Scotty L. (FDA/ORA/SW-FO); Hornsby-Myers, Jennifer (CDC/NIOSH/OD); Howard King, Vinetta M. (FDA/OC/OCTC); Jablonowski, Gene (EPA); Jensen, John (USDA); Jones, Terri L. (FDA/ORA/P-FO); Keith, Sam (ATSDR/DTEM/ATB); Liles, Darrell (EPA); Lotz, William G. (Greg) (CDC/NIOSH/DART); Lough, Scott (USDA); Maher, Carmen T. (FDA/OC/OCS); Mena, RaJah (DOE/FRMAC); Miller, Charles W. (CDC/ONDIEH/NCEH); Morrison, Ellen F. (FDA/OC/OCTC); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); Noska, Mike (FDA); O'Laughlin, Colleen (DOE/FRMAC); Pavek, John (USDA); Pemberton, Wendy (DOE/FRMAC); Petch, Peter (USDA); Russo, Mark R. (FDA/OC/OCTC); Sincek, Jeffrey A. (FDA/ORA/CE-FO); Smallwood, Karen R. (FDA/ORA/SE-FO); Tupin, Ed (EPA); Veal, Lee (EPA); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Wiley, Albert (ORAU)
Subject: FW: Japan IHR materials posted

FYI...Information on food. For distribution within Federal gov.

D. Lynn Evans, MS
CAPT, USPHS
Centers for Disease Control and Prevention
NCEH/EHHE/Radiation Studies Branch
Mail Stop F58
4770 Buford Highway NE
Atlanta, GA 30341-3717
Phone: (770) 488-3656
Fax: (770) 488-1539
Email: gfn6@cdc.gov

From: Christian, Kira (CDC/CGH/DGDDER)
Sent: Monday, April 11, 2011 12:02 PM
To: EOC Report (CDC); Deitchman, Scott (CDC/ONDIEH/NCEH); Khan, Ali S. (CDC/OPHPR/OD); Navin, Philip (CDC/OPHPR/DEO); Evans, Lynn (CDC/ONDIEH/NCEH); Dixon, John E. (CDC/ONDIEH/NCEH); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Miller, Charles W. (CDC/ONDIEH/NCEH); Hemphill, Mark (CDC/OCOO/OSEP); Vacalis, Demetri (CDC/OCOO/OSEP); Lagomasino, Ray (CDC/OCOO/OSEP); Burkholder, Jacqueline (CDC/OPHPR/DEO) (CTR); Marano, Nina (CDC/OID/NCEZID); Brunette, Gary W. (CDC/OID/NCEZID); Buzzell, Jennifer (CDC/ONDIEH/NCEH)
Cc: GDD-OUTBREAK (CDC)
Subject: Japan IHR materials posted

DJ/265

From the WHO IHR Event Information Site. ~~FOUO.~~

--Kira

<<Revised 260311-Rev280311 english data food.pdf>> <<110406_Sum radionuclide test results food.pdf>> <<110406-data-radioactive contaminants food.pdf>> <<110407 radioactive materials in tap water 28.pdf>> <<110407_Sum radionuclide test results food.pdf>> <<110407-data-radioactive contaminants food.pdf>> <<110408_0800_UTC+9hrs__event info update.pdf>> <<PressRelease.pdf>>

Global Disease Detection Operations Center (GDDOC)

Center for Global Health

U.S. Centers for Disease Control and Prevention

1600 Clifton Road NE, Mailstop D69

Atlanta, GA 30333

GDDOC secure mailbox: gddoutbreak@cdc.gov

Ray Arthur, PhD, Director: tel: +1.404.639.3855; mobile (b)(6)

Rohit A Chitale, PhD, MPH, Analyst: tel: +1.404.553.7664; mobile: (b)(6)

Catherine Chow, MD, MPH, Captain, USPHS, Analyst: tel: (b)(6)

Kira Christian, DVM, MPH, DACVPM, Analyst: tel: +1.404.553.7666; mobile: (b)(6)

Derek Hardy, Emergency Operations Coordinator: mobile: (b)(6)

Myron (Mike) Schultz, DVM, MD, DCMT, FACP Analyst: tel: +1.404.553.7665

For after hours support, please phone the EOC Watch Desk at: +1.770.488.7100

Levels of radioactive contaminants in foods (data reported on 6 April 2011)

Note: This data sheet compiles individual test results shown in corresponding press release written in Japanese, available at http://www.mhlw.go.jp/stf/houdou/bukyoku/iyaku.html

	Press release date	Food origin		Sampling date	Food tested	Level of radioactive contaminants in food (expressed as radionuclide levels (Bq/kg)).		
		Prefecture	Area			Iodine-131	Cesium-134	Cesium-137
1	06-Apr-11	Ibaraki	Hitachiota-shi	05-Apr-11	raw milk	6	ND	
2	06-Apr-11	Ibaraki	Kasama-shi	05-Apr-11	raw milk	6	2	
3	06-Apr-11	Ibaraki	Inashiki-shi	05-Apr-11	raw milk	11	1	
4	06-Apr-11	Ibaraki	Kawachi-machi	05-Apr-11	raw milk	18	6	
5	06-Apr-11	Ibaraki	Joso-shi	05-Apr-11	raw milk	5	1	
6	06-Apr-11	Hyogo	Kobe-shi	05-Apr-11	cabbage	ND	ND	ND
7	06-Apr-11	Hyogo	Minamiawaji-shi	05-Apr-11	cabbage	ND	ND	ND
8	06-Apr-11	Hyogo	Minamiawaji-shi	05-Apr-11	lettuce	ND	ND	ND
9	06-Apr-11	Ibaraki	Not known	06-Apr-11	cabbage	2	2	1
10	06-Apr-11	Kanagawa	Kawasaki-shi	05-Apr-11	spinach	150	21.9	
11	06-Apr-11	Kanagawa	Atsugi-shi	05-Apr-11	spinach	240	175	
12	06-Apr-11	Kanagawa	Ebina-shi	05-Apr-11	spinach	86	25.5	
13	06-Apr-11	Kanagawa	Ebina-shi	05-Apr-11	komatsuna	47	98	
14	06-Apr-11	Kanagawa	Hiratsuka-shi	05-Apr-11	cabbage	ND	ND	
15	06-Apr-11	Fukushima	Fukushima-shi	04-Apr-11	asatsuki	200	130	120
16	06-Apr-11	Fukushima	Aizuwakamatsu-shi	04-Apr-11	cabbage	ND	ND	ND
17	06-Apr-11	Fukushima	Koriyama-shi	04-Apr-11	cabbage	ND	ND	16
18	06-Apr-11	Fukushima	Iwaki-shi	04-Apr-11	broccoli	660	340	290
19	06-Apr-11	Fukushima	Shirakawa-shi	04-Apr-11	rapeseed	290	600	570
20	06-Apr-11	Fukushima	Sugakawa-shi	03-Apr-11	turnip	1000	2000	2100
21	06-Apr-11	Fukushima	Kitakata-shi	04-Apr-11	asatsuki	12	ND	ND
22	06-Apr-11	Fukushima	Soma-shi	04-Apr-11	leek	17	42	20
23	06-Apr-11	Fukushima	Nihonmatsu-shi	04-Apr-11	kousaitai	440	1000	1100
24	06-Apr-11	Fukushima	Tamura-shi	04-Apr-11	spinach	5200	9300	9700
25	06-Apr-11	Fukushima	Minamisoma-shi	04-Apr-11	cabbage	17	39	41
26	06-Apr-11	Fukushima	Date-shi	04-Apr-11	broccoli	360	1400	1500

27	06-Apr-11	Fukushima	Motomiya-shi	04-Apr-11	kukitachina	590	3000	3000
28	06-Apr-11	Fukushima	Kori-machi	04-Apr-11	broccoli	110	520	540
29	06-Apr-11	Fukushima	Kunimi-cho	04-Apr-11	broccoli	150	990	990
30	06-Apr-11	Fukushima	Kawamata-cho	04-Apr-11	shinobuhuyuna	2100	5200	5300
31	06-Apr-11	Fukushima	Otama-mura	04-Apr-11	spinach	2100	11000	11000
32	06-Apr-11	Fukushima	Kagamiishi-machi	04-Apr-11	broccoli	770	850	860
33	06-Apr-11	Fukushima	Tenei-mura	03-Apr-11	giant butterbur	7.7	28	37
34	06-Apr-11	Fukushima	Shimogo-machi	04-Apr-11	cabbage	ND	ND	ND
35	06-Apr-11	Fukushima	Tadami-machi	04-Apr-11	leek	ND	ND	ND
36	06-Apr-11	Fukushima	Minamiaizu-machi	04-Apr-11	cabbage	ND	ND	ND
37	06-Apr-11	Fukushima	Kitashiobara-mura	04-Apr-11	giant butterbur	31	71	81
38	06-Apr-11	Fukushima	Nishiaizu-machi	04-Apr-11	asatsuki	ND	ND	ND
39	06-Apr-11	Fukushima	Inawashiro-machi	04-Apr-11	cabbage	ND	ND	ND
40	06-Apr-11	Fukushima	Yanaizu-machi	04-Apr-11	asatsuki	ND	ND	ND
41	06-Apr-11	Fukushima	Saigo-mura	04-Apr-11	bitaminna	540	4800	4800
42	06-Apr-11	Fukushima	Izumizaki-mura	04-Apr-11	spinach	970	2200	2200
43	06-Apr-11	Fukushima	Nakajima-mura	04-Apr-11	spinach	840	790	790
44	06-Apr-11	Fukushima	Yabuki-machi	04-Apr-11	spinach	1300	1700	1600
45	06-Apr-11	Fukushima	Tanagura-machi	04-Apr-11	spinach	400	770	830
46	06-Apr-11	Fukushima	Yamatsuri-machi	04-Apr-11	spinach	590	200	230
47	06-Apr-11	Fukushima	Hanawa-machi	04-Apr-11	spinach	920	710	650
48	06-Apr-11	Fukushima	Samekawa-mura	04-Apr-11	komatsuna	610	810	880
49	06-Apr-11	Fukushima	Ishikawa-machi	04-Apr-11	cabbage	370	840	880
50	06-Apr-11	Fukushima	Tamakawa-mura	04-Apr-11	rapeseed	1000	1200	1300
51	06-Apr-11	Fukushima	Hirata-mura	04-Apr-11	spinach	1500	320	340
52	06-Apr-11	Fukushima	Asakawa-machi	04-Apr-11	cabbage	190	710	730
53	06-Apr-11	Fukushima	Furudono-machi	04-Apr-11	mizuna	600	450	460
54	06-Apr-11	Fukushima	Miharu-machi	04-Apr-11	broccoli	150	690	680
55	06-Apr-11	Fukushima	Ono-machi	04-Apr-11	spinach	2200	2500	2600
56	06-Apr-11	Niigata	Not known	05-Apr-11	spinach	ND	ND	
57	06-Apr-11	Niigata	Not known	05-Apr-11	spinach	ND	ND	
58	06-Apr-11	Niigata	Not known	05-Apr-11	komatsuna	ND	ND	
59	06-Apr-11	Niigata	Not known	05-Apr-11	komatsuna	ND	ND	
60	06-Apr-11	Niigata	Not known	05-Apr-11	cucumber	ND	ND	
61	06-Apr-11	Niigata	Not known	05-Apr-11	strawberry	ND	ND	

62	06-Apr-11	Saitama	Not known	05-Apr-11	tomato	ND	ND	
63	06-Apr-11	Saitama	Not known	05-Apr-11	tomato	ND	ND	
64	06-Apr-11	Saitama	Not known	05-Apr-11	leek	14	ND	
65	06-Apr-11	Gunma	Not known	05-Apr-11	leek	7.7	ND	
66	06-Apr-11	Gunma	Not known	05-Apr-11	trifoliate	9.5	ND	
67	06-Apr-11	Saitama	Not known	05-Apr-11	mizuna	45	36	
68	06-Apr-11	Yamagata	Mamurogawa-machi	06-Apr-11	Hosta montana	ND	ND	
69	06-Apr-11	Saitama	Saitama-shi	05-Apr-11	komatsuna	140	22	22
70	06-Apr-11	Saitama	Kawagoe-shi	05-Apr-11	komatsuna	87	5.7	7.5
71	06-Apr-11	Saitama	Kumagaya-shi	05-Apr-11	leek	ND	ND	ND
72	06-Apr-11	Saitama	Tokorozawa-shi	05-Apr-11	spinach	160	16	16
73	06-Apr-11	Saitama	Honjo-shi	05-Apr-11	spinach	120	13	11
74	06-Apr-11	Saitama	Honjo-shi	05-Apr-11	cucumber	ND	ND	ND
75	06-Apr-11	Saitama	Sayama-shi	05-Apr-11	mizuna	30	6.8	7.4
76	06-Apr-11	Saitama	Fukaya-shi	05-Apr-11	leek	28	ND	ND
77	06-Apr-11	Saitama	Kuki-shi	05-Apr-11	strawberry	ND	4.1	5
78	06-Apr-11	Saitama	Yoshikawa-shi	05-Apr-11	komatsuna	55	ND	ND

evels in gray-highlight exceed action levels set by the MHLW for withdrawal from markets

(Up-to-date Report as of 20:30, 6 April 2011)

Food origin (Prefecture)	Food group	Number of food samples tested	Number of foods positive at levels exceeding provisional regulation limits (action levels)	Food concerned (numbers)
Fukushima	milk	125	18	raw milk (18)
	vegetable	252	79	spinach (26), broccoli (19), rapeseed (6) komatuna (4), kukitachina (4), cabbage (4), shinobuhuyuna (3), kosaitai (3), santona (2), turnip (2), mizuna (2), chijirena (1), hana wasabi (1), bitaminna (1), shiitake(1)
	meat	18	※	
	egg	17	-	
	fishery products	2	-	
	subtotal	**414**	**97**	
Ibaraki	milk	25	5	raw milk (5)
	vegetable	128	35	spinach (27), parsley (6), mizuna (1), red leaf lettuce (1)
	meat	5	-	
	egg	2	-	
	fishery products	19	1	sand lance (1)
	others	2	-	
	subtotal	**181**	**41**	
Tochigi	milk	5	-	
	vegetable	53	11	spinach (9), garland chrysanthemum (2)
	subtotal	**58**	**11**	
Gunma	milk	4	-	
	vegetable	91	3	spinach (2), kakina (1)
	subtotal	**95**	**3**	
Saitama	milk	4	-	
	vegetable	57	-	
	subtotal	**61**	-	
Chiba	milk	6	-	
	vegetable	47	11	garland chrysanthemum (4) qing-geng-cai (1), celery (1), sanchu asian lettuce (1), parsley (2), spinach (2)
	fishery products	14	-	
	subtotal	**67**	**11**	
Tokyo	milk	2	-	
	vegetable	14	1	komatuna (1)
	fishery products	2		
	subtotal	**18**	**1**	
Kanagawa	milk	6	-	
	vegetable	17	-	
	meat	1		
	fishery products	3		
	subtotal	**27**	-	
Yamagata	milk	1	-	
	vegetable	9	-	
	subtotal	**10**	-	
Miyagi	milk	2	-	
	vegetable	4	-	
	subtotal	**6**	-	
Niigata	milk	4	-	
	vegetable	93	-	
	subtotal	**97**	-	
Nagano	milk	1	-	
	vegetable	5	-	
	subtotal	**6**	-	
Shizuoka	vegetable	2	-	
	subtotal	**2**	-	
Ehime	vegetable	2	-	
	subtotal	**2**	-	
Kyoto	vegetable	2	-	
	subtotal	**2**	-	
Hyogo	vegetable	3	-	
	subtotal	**3**	-	
total		**1049**	**164**	

Ristriction of distribution and/or consumption within the whole and/or part of prefecture are applied to the underlined foods.

ひと、くらし、みらいのために
厚生労働省
Ministry of Health, Labour and Welfare

Press Release

Press Release (This is provisional translation. Please refer to the original text written in Japanese.)

April 7, 2011
Water Supply Division,
Health Service Bureau

To Press and those whom may concern,

Detection of radioactive materials in tap water (28th announcement)
--Fukushima Prefecture --

This is an announcement that we have obtained the results of radioactive materials survey conducted by the Government's Nuclear Emergency Response Headquarters on tap water.

1. The results of the survey

The results of the survey conducted by the Government's Nuclear Emergency Response Headquarters on radioactive materials in tap water collected by April 6 within Fukushima prefecture are shown in Attachment 1 (114 data). No results exceeding the "Index values for infants (radioactive iodine)" (Reference 4) were found in this survey.

The Ministry of Health, Labour and Welfare (MHLW) will continue to obtain data on tap water and take appropriate measures based on it.

※ Only the parts with thick frame have been newly issued in Attachment 1.

The information on the measurement results newly reported to MHLW, except for the above information, is also provided (246 data in the reference material).

Please note that the possibility that the health risk posed by the short period of tap water intake exceeding the index values is extremely low. It is not intended to restrict drinking water (including infants' ingestion of tap water) in case you have no access to alternative drinking water. You can use the tap water for washing hands and bathing at home without any concern.

(Reference 1) There has been <u>no change</u> in the implementation status of public relations that water supply

utilities have informed residents to refrain from drinking tap water or refrain from having infants intake tap water (Attachment 2).

(Reference 2)
Index values for restrictions on the intake of food and beverages set out by the Nuclear Safety Commission:
Radioactive iodine in drinking water: 300 Bq (Becquerel)/kg;
Radioactive cesium in drinking water: 200 Bq (Becquerel)/kg
(Note) The concept of the "Index values for restrictions on the intake of food and beverages"
The index values were established by the Nuclear Safety Commission by foodstuff category (drinking water, food, etc.), taking into account such factors as the amount of Japanese foodstuff intake, based on the radiation protection standards recommended by the International Committee on Radiological Protection (ICRP) (Thyroid gland equivalent dose of radioactive iodine is 50 millisieverts (mSv)/year).

(Reference 3) "Measures to be taken against water supply associated with the accident in the Fukushima No.1 and No.2 nuclear power plants" (No. 1-0319 issued by Water Supply Division, Health Service Bureau, MHLW on March 19, 2011)
oMeasures to be taken against tap water in case radiation measured in the tap water exceeds in connection with the nuclear power plant accident: Water Supply Division, Health Service Bureau notified heads of departments in charge of water supply administration in each prefecture and water supply utilities:
1) To refrain from drinking tap water exceeding the index values;
2) That you can use the tap water for domestic use without any concern;
3) That it is not intended to restrict drinking tap water in case you have no access to alternative drinking water; and such.

(Reference 4) "Measures for infants' ingestion of tap water" (No. 1-0321 issued by Water Supply Division, Health Service Bureau, MHLW on March 21, 2011)
oMHLW notified heads of departments in charge of water supply administration in each prefecture and water supply utilities, in case the level of radioactive iodine in tap water exceeds 100 Bq/kg, to refrain from giving infants formula milk dissolved by tap water, having them intake tap water, and so on.

(Reference 5)
Infants here mean babies who take breast feeding or formula milk.

Attachment 1: Omitted
Attachment 2: The implementation status of public relations that water supply utilities have informed residents to refrain from drinking tap water or refrain from having infants intake tap water
Reference material: Omitted

	Fukushima	Date-shi (city)/Tsukitate Small-Scale Water Supply Utility (Date-shi (city))	Cancelled on 3/26
		Kawamata-machi (town) Water Supply Utility (Kawamata-machi (town))	Cancelled on 3/25
		Koriyama-shi (city) Water Supply Utility (Koriyama-shi (city))	Cancelled on 3/25
		Minamisoma-shi (city) Water Supply Utility (Minamisoma-shi (city))	Cancelled on 3/30
		Tamura-shi (city) Water Supply Utility (Tamura-shi (city))	Cancelled on 3/23
	Fukushima	Iwaki-shi (city) Water Supply Utility (Iwaki-shi (city))	Cancelled on 3/31
	Ibaraki	Tokai-mura (village) Water Supply Utility (Tokai-mura (village))	Cancelled on 3/26
		Suifu district Hokubu (northern area) Small-Scale Water Supply Utility (Hitachi-ota-shi (city))	Cancelled on 3/26
	Chiba	Chiba Prefecture Water Supply Utility (Chiba Nogiku-no-sato Water Treatment Plant and Kuriyama Water Treatment Plant)	Cancelled on 3/25
		Kitachiba-Koiki Bulk Water Supply Utility	Cancelled on 3/26
	Tokyo	Tokyo Water Supply Utility (23 wards and 5 cities)	Cancelled on 3/24
	Ibaraki	Kita-Ibaraki-shi (city) Water Supply Utility (Kita-Ibaraki-shi (city))	Cancelled on 3/27
		Hitachi-shi (city) Water Supply Utility (Hitachi-shi (city))	Cancelled on 3/26
		Kasama-shi (city) Water Supply Utility (Kasama-shi (city))	Cancelled on 3/27
	Tochigi	Utsunomiya-shi (city) Water Supply Utility (Utsunomiya-shi (city))	Cancelled on 3/25
		Nogi-machi (town) Water Supply Utility (Nogi-machi (town))	Cancelled on 3/26
	Ibaraki	Ibaraki-Ken-Nan Water Supply Utility (Toride-shi (city))	Cancelled on 3/26
		Koga-shi (city) Water Supply Utility (Koga-shi (city))	Cancelled on 3/25
	Fukushima	Tamura-shi (city) Water Supply Utility (Tamura-shi (city))	Cancelled on 3/28
	Chiba	Chiba Prefecture Water Supply Utility (Kashiwai Water Treatment Plant (East side facility))	Cancelled on 3/27
		Inba-gun (county) Bulk Water Supply Utility	Cancelled on 3/27
	Fukushima	Date-shi (city)/Tsukitate Small-Scale Water Supply Utility (Date-shi (city))	Cancelled on 4/1

blic

	Prefecture	Water supply utility, etc.	Notes
	Fukushima	Iitate-mura (village) Small-Scale Water Supply Utility (Iitate-mura (village))	Cancelled on 4/1

" refer to informing that infants refrain from intaking tap water (including giving infants formula milk dissolved by tap); "General public" means informing residents to refrain from drinking tap water. In addition, "Start" and "Cancel" refer inning" and "cancellation" of the public announcement of relavant information (public relations), respectively.

e was created based on information confirmed by the MHLW by the time of issuance of this announcement.

		Start	Cancel	Start	Cancel
Fukushima	Iitate-mura (village) Small-Scale Water Supply Utility (Iitate-mura (village))	3/21		3/21	4/1
	Date-shi (city)/Tsukitate Small-Scale Water Supply Utility (Date-shi (city))	3/22	3/26		
		3/27	4/1		
	Kawamata-machi (town) Water Supply Utility (Kawamata-machi (town))	3/22	3/25		
	Koriyama-shi (city) Water Supply Utility (Koriyama-shi (city))	3/22	3/25		
	Minamisoma-shi (city) Water Supply Utility (Minamisoma-shi (city))	3/22	3/30		
	Tamura-shi (city) Water Supply Utility (Tamura-shi (city))	3/22	3/23		
		3/26	3/28		
	Iwaki-shi (city) Water Supply Utility (Iwaki-shi (city))	3/23	3/31		
Ibaraki	Tokai-mura (village) Water Supply Utility (Tokai-mura (village))	3/23	3/26		
	Suifu district Hokubu (northern area) Small-Scale Water Supply Utility (Hitachi-ota-shi (city))	3/23	3/26		
	Kita-Ibaraki-shi (city) Water Supply Utility (Kita-Ibaraki-shi (city))	3/24	3/27		
	Hitachi-shi (city) Water Supply Utility (Hitachi-shi (city))	3/24	3/26		
	Kasama-shi (city) Water Supply Utility (Kasama-shi (city))	3/24	3/27		
	Koga-shi (city) Water Supply Utility (Koga-shi (city))	3/25	3/25		
	Ibaraki-Ken-Nan Water Supply Utility (Toride-shi (city))	3/25	3/26		
Chiba	Chiba Prefecture Water Supply Utility (Chiba Nogiku-no-sato Water Treatment Plant and Kuriyama Water Treatment Plant)	3/23	3/25		
	(Kashiwai Water Treatment Plant (East side facility))	3/26	3/27		
	Kitachiba-Koiki Bulk Water Supply Utility	3/23	3/26		
	Inba-gun (county) Bulk Water Supply Utility	3/26	3/27		
Tokyo	Tokyo Water Supply Utility (23 wards and 5 cities)	3/23	3/24		
Tochigi	Utsunomiya-shi (city) Water Supply Utility (Utsunomiya-shi (city))	3/25	3/25		
	Nogi-machi (town) Water Supply Utility (Nogi-machi (town))	3/25	3/26		

※"Infants" refer to informing that infants refrain from intaking tap water (including giving infants formula milk dissolved by tap water, etc.); "General public" means informing residents to refrain from drinking tap water. In addition, "Start" and "Cancel" refer to the "beginning" and "cancellation" of the public announcement of relavant information (public relations), respectively.

※The table was created based on information confirmed by the MHLW by the time of issuance of this announcement.

Levels of radioactive contaminants in foods (data reported on 7 April 2011)

Note: This data sheet compiles individual test results shown in corresponding press release written in Japanese, available at http://www.mhlw.go.jp/stf/houdou/bukyoku/iyaku.html

	Press release date	Food origin		Sampling date	Food tested	Level of radioactive contaminants in food (expressed as radionuclide levels (Bq/kg)).		
		Prefecture	Area			Iodine-131	Cesium-134	Cesium-137
1	07-Apr-11	Chiba	Iwawada harbor	05-Apr-11	bonito	ND	33	
2	07-Apr-11	Chiba	Katsuura harbor	05-Apr-11	splendid alfonsino	ND	ND	
3	07-Apr-11	Kanagawa	Sagamihara-shi	-	raw milk	ND	ND	
4	07-Apr-11	Hyogo	Akashi-shi	-	cabbage	ND	ND	ND
5	07-Apr-11	Tochigi	Iwafune-machi	06-Apr-11	mizuna	24	ND	
6	07-Apr-11	Tochigi	Nasushiobara-machi	06-Apr-11	leek	ND	ND	
7	07-Apr-11	Tochigi	Kaminokawa-machi	06-Apr-11	spinach	930	410	
8	07-Apr-11	Tochigi	Shioya-machi	06-Apr-11	spinach	120	34	
9	07-Apr-11	Tochigi	Nasushiobara-machi	06-Apr-11	spinach	30	15.3	
10	07-Apr-11	Tochigi	Sano-shi	06-Apr-11	kakina	79	116	
11	07-Apr-11	Tochigi	Sano-shi	06-Apr-11	kakina	35	38	
12	07-Apr-11	Tochigi	Sakura-shi	06-Apr-11	garland chrysanthemum	300	85	
13	07-Apr-11	Tochigi	Mooka-shi	06-Apr-11	garland chrysanthemum	530	133	
14	07-Apr-11	Tochigi	Southern area	06-Apr-11	raw milk	ND	ND	
15	07-Apr-11	Niigata	Not known	06-Apr-11	komatsuna	ND	ND	
16	07-Apr-11	Niigata	Not known	06-Apr-11	komatsuna	ND	ND	
17	07-Apr-11	Niigata	Not known	06-Apr-11	spinach	ND	ND	
18	07-Apr-11	Niigata	Not known	06-Apr-11	cucumber	ND	ND	
19	07-Apr-11	Niigata	Not known	06-Apr-11	touna	ND	ND	
20	07-Apr-11	Gunma	Not known	06-Apr-11	mizuna	85	44	
21	07-Apr-11	Ibaraki	Not known	06-Apr-11	lettuce	ND	ND	
22	07-Apr-11	Ibaraki	Not known	06-Apr-11	lettuce	ND	ND	
23	07-Apr-11	Gunma	Not known	06-Apr-11	cucumber	ND	9.4	
24	07-Apr-11	Gunma	Not known	06-Apr-11	cucumber	7.1	9.9	
25	07-Apr-11	Fukushima	Nakajima-mura	06-Apr-11	pork (muscle)	ND	ND	
26	07-Apr-11	Fukushima	Nakajima-mura	06-Apr-11	pork (liver)	ND	ND	
27	07-Apr-11	Fukushima	Aizuwakamatsu-shi	06-Apr-11	chicken	ND	ND	ND
28	07-Apr-11	Fukushima	Kawamata-machi	06-Apr-11	chicken	ND	ND	ND
29	07-Apr-11	Fukushima	Shimogo-machi	06-Apr-11	chicken	ND	ND	ND

30	07-Apr-11	Fukushima	Mishima-machi	06-Apr-11	chicken	ND	ND	ND
31	07-Apr-11	Fukushima	Kitakata-shi	06-Apr-11	pork	ND	ND	ND
32	07-Apr-11	Fukushima	Nihonmatsu-shi	06-Apr-11	pork	ND	6.8	9.1
33	07-Apr-11	Fukushima	yabuki-machi	06-Apr-11	pork	ND	ND	ND
34	07-Apr-11	Fukushima	Koriyama-shi	06-Apr-11	beef	ND	ND	ND
35	07-Apr-11	Fukushima	Otama-mura	06-Apr-11	beef	19	19	18
36	07-Apr-11	Fukushima	Aizuwakamatsu-shi	06-Apr-11	horse meat	ND	ND	7.3
37	07-Apr-11	Fukushima	Koriyama-shi	06-Apr-11	carp	ND	ND	ND
38	07-Apr-11	Fukushima	Saigo-mura	06-Apr-11	char	8.1	ND	ND
39	07-Apr-11	Fukushima	Saigo-mura	06-Apr-11	rainbow trout	5.5	ND	ND
40	07-Apr-11	Ibaraki	Koga-shi	07-Apr-11	lettuce	180	62	
41	07-Apr-11	Ibaraki	Sakai-machi	07-Apr-11	lettuce	ND	ND	
42	07-Apr-11	Gunma	Midori-shi	07-Apr-11	leek	47	ND	
43	07-Apr-11	Ibaraki	Takahagi-shi	06-Apr-11	spinach (grown outdoor)	2700	444	
44	07-Apr-11	Ibaraki	Hitachi-shi	06-Apr-11	spinach (grown outdoor)	400	87	
45	07-Apr-11	Ibaraki	Hitachiota-shi	06-Apr-11	spinach (grown outdoor)	920	114	
46	07-Apr-11	Ibaraki	Daigo-machi	06-Apr-11	spinach (hothouse cultivation)	190	58	
47	07-Apr-11	Ibaraki	Hitachiomiya-shi	06-Apr-11	spinach (grown outdoor)	560	161	
48	07-Apr-11	Ibaraki	Ibaraki-machi	06-Apr-11	spinach (hothouse cultivation)	330	72	
49	07-Apr-11	Ibaraki	Hokota-shi	06-Apr-11	spinach (hothouse cultivation)	1000	444	
50	07-Apr-11	Ibaraki	Tsukuba-shi	06-Apr-11	spinach (hothouse cultivation)	82	19	
51	07-Apr-11	Ibaraki	Moriya-shi	06-Apr-11	spinach (hothouse cultivation)	110	ND	
52	07-Apr-11	Ibaraki	Chikusei-shi	06-Apr-11	spinach (hothouse cultivation)	110	12	
53	07-Apr-11	Ibaraki	Yachiyo-machi	06-Apr-11	spinach (hothouse cultivation)	320	58	
54	07-Apr-11	Ibaraki	Hokota-shi	06-Apr-11	parsley (hothouse cultivation)	1100	321	
55	07-Apr-11	Ibaraki	Hokota-shi	06-Apr-11	parsley (hothouse cultivation)	420	83	
56	07-Apr-11	Ibaraki	Namegata-shi	06-Apr-11	parsley (hothouse cultivation)	150	148	
57	07-Apr-11	Ibaraki	Tsukuba-shi	06-Apr-11	kakina (grown outdoor)	92	78	
58	07-Apr-11	Ibaraki	Tsukuba-shi	06-Apr-11	kakina (grown outdoor)	330	195	
59	07-Apr-11	Ibaraki	Hitachinaka-shi offshore	05-Apr-11	octopus	4	ND	
60	07-Apr-11	Ibaraki	Hitachinaka-shi offshore	05-Apr-11	righteye flounder	ND	ND	
61	07-Apr-11	Ibaraki	Hitachinaka-shi offshore	05-Apr-11	cod	ND	ND	
62	07-Apr-11	Ibaraki	Hinuma	05-Apr-11	shijimi clam	96	68	
63	07-Apr-11	Yamagata	Yamagata-shi	07-Apr-11	cucumber	ND	ND	

evels in gray-highlight exceed action levels set by the MHLW for withdrawal from markets

(Up-to-date Report as of 20:30, 7 April 2011)

Food origin (Prefecture)	Food group	Number of food samples tested	Number of foods positive at levels exceeding provisional regulation limits (action levels)	Food concerned (numbers)
Fukushima	milk	125	18	raw milk (18)
	vegetable	252	79	spinach (26), broccoli (19), rapeseed (6) komatuna (4), kukitachina (4), cabbage (4), shinobuhuyuna (3), santona (2), kosaitai (3), turnip (2), chijirena (1),hana wasabi (1), bitaminna (1), mizuna (2), shiitake(1)
	meat	30	※	
	egg	17	-	
	fishery products	5	-	
	subtotal	**429**	**97**	
Ibaraki	milk	25	5	raw milk (5)
	vegetable	148	36	spinach (28), parsley (6), mizuna (1), red leaf lettuce (1)
	meat	5	-	
	egg	2	-	
	fishery products	23	1	sand lance (1)
	others	2	-	
	subtotal	**205**	**42**	
Tochigi	milk	6	-	
	vegetable	62	11	spinach (9), garland chrysanthemum (2)
	subtotal	**68**	**11**	
Gunma	milk	4	-	
	vegetable	95	3	spinach (2), kakina (1)
	subtotal	**99**	**3**	
Saitama	milk	4	-	
	vegetable	57	-	
	subtotal	**61**	-	
Chiba	milk	6	-	
	vegetable	47	11	garland chrysanthemum (4) qing-geng-cai (1), celery (1), sanchu asian lettuce (1), parsley (2), spinach (2)
	fishery products	16	-	
	subtotal	**69**	**11**	
Tokyo	milk	2	-	
	vegetable	14	1	komatuna (1)
	fishery products	2		
	subtotal	**18**	**1**	
Kanagawa	milk	7	-	
	vegetable	17	-	
	meat	1		
	fishery products	3		
	subtotal	**28**	-	
Yamagata	milk	1	-	
	vegetable	10	-	
	subtotal	11	-	
Miyagi	milk	2	-	
	vegetable	4	-	
	subtotal	**6**	-	
Niigata	milk	4	-	
	vegetable	98	-	
	subtotal	**102**	-	
Nagano	milk	1	-	
	vegetable	5	-	
	subtotal	**6**	-	
Shizuoka	vegetable	2	-	
	subtotal	**2**	-	
Ehime	vegetable	2	-	
	subtotal	**2**	-	
Kyoto	vegetable	2	-	
	subtotal	**2**	-	
Hyogo	vegetable	3	-	
	subtotal	**4**	-	
total		**1112**	**165**	

Ristriction of distribution and/or consumption within the whole and/or part of prefecture are applied to the underlined foods.

Event information update (Translation Draft) as of 09:30 (UTC+9hrs), 8th April 2011

(1).Radiation monitoring data are available at these sites:

- The English site containing monitoring data
  http://www.mext.go.jp/english/radioactivity_level/detail/1303962.htm
- The Japanese site containing monitoring data
  http://www.kantei.go.jp/saigai/monitoring/index.html
  http://www.tepco.co.jp/nu/monitoring/index-j.html
- The Japanese site containing monitoring date of sea water (Tokyo Electric Power Co., Inc. (TEPCO) http://www.tepco.co.jp/cc/press/index11-j.html

(2). Situation of radioactive materials in tap water

- See the 28th Announcement in PDF and other PDF file attached(Handling of the Index on Radioactive Materials in Tap Water)

(3). Situation of radioactive contaminants in foods

- See the five Excels attached.

(4). Situation of Fukushima Dai-ichi Nuclear Power Station, Tokyo Electric Power Co., Inc. (TEPCO)On 8th April:

- On 6th April, TEPCO has started injecting nitrogen into the core of the No. 1 reactor at the crippled Fukushima No. 1 nuclear power plant in an attempt to prevent a hydrogen explosion.
- On 7th April, a powerful earthquake measuring magnitude 7.4 hit northern Japan, resulting at least 4 deaths. It is thought an aftershock to 11th March temblor. At this time, there were no damages to nuclear power station including those of Fukushima.

Information Sources of (4)

- News Release by Nuclear and Industrial Safety Agency(NISA), Ministry of Economy, Trade, and Industry http://www.nisa.meti.go.jp/english/index.html
  - 2nd Miyagi Earthquake report, on 8th April 2011 at 01:00(UTC+9hrs)
  - 79th Earthquake damage report, on 7th April 2011 at 08:00(UTC+9hrs)
- About the accidents of Fukushima Dai-ichi and Dai-ni Nuclear Power Stations as of 08:00 (UTC+9hrs), 8th April 2011 http://www.kantei.go.jp/foreign/incident/index.html

Related information sites:

Ministry of Health, Labour and Welfare:
http://www.mhlw.go.jp/english/topics/2011eq/index.html
Ministry of Foreign Affairs:
http://www.mofa.go.jp/j_info/visit/incidents/index.html

日本における原子力発電所の状況について　　2011 年 4 月 6 日　日本時間 09:30 時点

1. 放射線モニタリングポスト情報の状況について以下のサイトを参照

- 英語のモニタリング情報
  http://www.mext.go.jp/english/radioactivity_level/detail/1303962.htm
- 日本語のモニタリング情報
  http://www.kantei.go.jp/saigai/monitoring/index.html
  http://www.tepco.co.jp/nu/monitoring/index-j.html
- 日本語の海水中のモニタリング情報 (東京電力)
  http://www.tepco.co.jp/cc/press/index11-j.html

2. 水道水における放射能の状況

- 28報(PDFファイル)ならびに、PDF(Handling of the Index on Radioactive Materials in Tap Water)

3. 食品における放射能の状況

- エクセルファイル参照

4. 事業所名称　東京電力(株)　福島第一・第二原子力発電所について

4 月 8 日:

- 4 月 6 日より福島第一原子力発電所一号機の格納容器の水素爆発を防ぐため、窒素ガスの注入を開始した。
- 4 月 7 日夜宮城県沖を震源とする M 7.4 の地震が発生した。この地震は 3 月 11 日に発生した東日本大震災の余震と考えられ、3 月 11 日以降発生したものとしては最大の余震で少なくとも 4 人の死者を出している。この地震による福島原発を含めた全ての原発に大きな問題は現時点では見られていない。

4 の出典

- 経済産業省　原子力安全・保安院　:http://www.nisa.meti.go.jp/index.html
  「News release　地震被害情報(79 報 4 月 7 日 08:00 現在)」
  「News release 宮城県沖の地震発生による状況について(2 報 4 月 8 日 01:00 現在)」
- 「首相官邸　平成 23 年(2011 年)福島第一・第二原子力発電所事故について」(4 月 8 日 08:00 現在):http://www.kantei.go.jp/saigai/report.html

関連情報サイト

厚生労働省東北地方太平洋沖地震関連情報:
http://www.mhlw.go.jp/english/topics/2011eq/index.html
外務省東北地方太平洋沖地震関連情報:
http://www.mofa.go.jp/j_info/visit/incidents/index.html
以上

ひと、くらし、みらいのために
厚生労働省
Ministry of Health, Labour and Welfare

Press Release

Press Release (This is provisional translation. Please refer to the original text written in Japanese.)

April 4, 2011
Water Supply Division,
Health Service Bureau

To Press and those who may concern,

Handling of the Index Levels on Radioactive Materials in Tap Water, etc.

Today, an announcement was made on the handling of the provisional regulation levels on radioactive materials in food. Based on this announcement, the Ministry of Health, Labour, and Welfare announces the following regarding tap water:

(1) The handling of the index levels on radioactive materials in tap water;

(2) The monitoring policy on radioactive materials in tap water.

1. See Attachment 1 for the handling of the index levels on radioactive materials in tap water.

2. See Attachment 2 for the monitoring policy on radioactive materials in tap water. In the attachment, the requests for the restriction of intake and public announcement as well as recommended measure for its cancellation are indicated.

3. See Reference for the implementation status of inspection on radioactive materials in tap water (from March 16 to April 2, 2011).

   (Reference: Omitted)

Attachment 1

April 4, 2011
Ministry of Health, Labour, and Welfare (MHLW)

Handling of the Index Levels on Radioactive Materials in Tap Water, etc.

- The MHLW has requested that water supply utilities refrain from having their users intake tap water, when the radioactive materials in their tap water exceeded the index levels (for radioactive iodine: 300 Bq/kg (for intake by infants: 100 Bq/kg); for radioactive cesium: 200 Bq/kg);

- Regarding the above measure, the MHLW has decided to maintain the present index levels for the time being, taking into consideration of such conditions that the first nuclear emergency situation ever experienced in Japan has not restored to its normal state; and

- This handling has been adopted in response to the policy that the provisional regulation levels on radioactive materials in food were decided to be maintained, following the issuance of the "Emergency Report on Radioactive Materials" (Food Safety Committee, March 29, 2011), the opinions of the Nuclear Emergency Response Headquarters based on the advice of the Nuclear Safety Commission, and the "Provisional Remarks on Radioactive Materials Present in Food" compiled by the Food Sanitation Subcommittee, Pharmaceutical Affairs and Food Sanitation Council.

Attachment 2

April 4, 2011
MHLW

The Monitoring Policy on Radioactive Materials in Tap Water

1. Introduction

In response to radioactive materials detected in tap water in relation to the accident at the Fukushima No. 1 Nuclear Power Plant, the MHLW has decided to request that water supply utilities refrain from having their users intake tap water when the radioactive materials in their tap water exceed the index levels (for radioactive iodine: 300 Bq/kg (for intake by infants: 100 Bq/kg); for radioactive cesium: 200 Bq/kg), based on the "Measures to be taken against water supply associated with the accident at the Fukushima No. 1 and No 2. Nuclear Power Plants (No. 2-0319 Notice of the director of the Water Supply Division, Health Service Bureau, MHLW, issued on March 19, 2011) and the "Measures for infants' ingestion of tap water" (No. 2-0321 Notice of the director of the Water Supply Division, Health Service Bureau, MHLW, issued on March 21, 2011).

As the results of measurements conducted by the Local Headquarters for Disaster Control, the Ministry of Education, Culture, Sports, Science and Technology (MEXT), local governments, and water supply utilities have accumulated, the MHLW requested that water supply utilities whose water supply exceeded the index levels restrict their users' intake of tap water and publicly announce it. In response, the water supply utilities informed their users of the restriction. With the subsequent decrease in the concentration of radioactive materials, the water supply utilities have lifted their restriction on the intake of tap water.

Considering the changes in the results of measurements over time, it has become apparent that the concentration of radioactive materials in tap water fluctuates considerably.

Based on the above course and the inspection outcomes obtained so far, the MHLW officially announces the monitoring policy from now on, the judgment on necessity of the restriction of tap water intake based on the inspection results, and recommended measure for its cancellation.

2. Fundamental concepts

Taking into consideration of such conditions that the first nuclear emergency situation ever experienced in Japan has not restored to its normal state, <u>the continuous and regular inspections on tap water is necessary.</u>

Under such circumstances, Fukushima prefecture and the neighboring local governments need to enhance their inspection systems in order to check the influence on tap water associated with

the diffusion of radioactive materials as well as its safety. The situation of non-inspected areas that tap water is considered to be influenced by the diffusion of radioactive materials has to be resolved, so the steady implementation of wide-area inspection is necessary.

In the light of these inspection results, it is important that the MHLW request that water supply utilities refrain from having their users intake tap water and publicly announce it, in case the concentration of radioactive materials in tap water exceeds the index level, based on the judgment on the necessity of the restriction of tap water intake and recommended measures for its cancellation. Also, it is essential to sustain safe and secure water supply by dispelling the concerns of water users, with the public announcement of the inspection results including data on the concentration of radioactive materials in tap water that falls below the index levels.

3. The monitoring policy

(1) Survey policy

The MHLW implements monitoring focused on water supply utilities in Fukushima prefecture and its neighboring regions (Miyagi prefecture, Yamagata prefecture, Niigata prefecture, Ibaraki prefecture, Tochigi prefecture, Gunma prefecture, Saitama prefecture, Tokyo Metropolitan Government, Kanagawa prefecture, and Chiba prefecture), in reference to the inspection results on radioactive materials in tap water and in the atmosphere, and the distance from the Fukushima No.1 Nuclear Power Plant.

In carrying out these inspections, the MHLW requests that these local governments regularly conduct inspections on tap water in municipalities of these regions, to resolve the situation of the non-inspected areas.

In Fukushima prefecture, the Local Headquarters for Disaster Control has been conducting inspections with the cooperation of Fukushima prefecture. The MHLW continues to collect this information including the inspection data and the contents of investigations. Furthermore, the MHLW accumulates the monitoring results, by collecting nation-wide results of the survey conducted by the MEXT and water supply utilities.

Moreover, the MHLW continuously keeps track of the inspection systems of the local governments, and considers securing the inspection systems including setting up exclusive inspection equipments for tap water in the medium and long term.

(2) Inspection items

Radioactive iodine and radioactive cesium are inspected for the time being.

Inspection items are reviewed as needed as a result of the change in the accident of nuclear power plant.

(3) Samples

The sampling places are set up by each water supply utility: tap water at the end of pipelines or treated water at water treatment plant.

※In case water is supplied by a single water treatment plant, tap water that residents intake is sampled. In case supplied water is a mixture of water from multiple water treatment plants of different water systems, water at one of the water treatment plants is sampled, because the inspection results obtained from tap water at the end of pipelines is not regarded as those representing the whole water supply areas.

(4) Frequency of inspection

Inspections are performed more than once per week, in accordance with the inspection systems of the local governments and water supply utilities. However, if the obtained results exceed the index levels or are close to the index levels, the inspection will be conducted every day in principle.

For water supply utilities exposed to the influence of rainfall such as those with river water source, the frequency of inspection should be increased while water is affected by precipitation.

(5) Securing inspection system

If the inspection of tap water by the laboratories of local governments is difficult in spite of the request, the MHLW introduces these local governments to private laboratories or national research institutions capable of inspection, so thereby tentatively secures the inspection systems.

※If it is difficult to ensure the frequency of inspection for the time being, the inspection results obtained by the nearby water supply utilities that share the same water system can be used as reference.

(6) Compilation and public announcement

MHLW summarizes the nation-wide inspection results and regularly announces them publicly together with the charts indicating the inspected areas (with the legend of "less than index levels", "the restriction of intake by infants", and "the restriction of intake by general public) and the non-inspected areas.

4. The requests for the restrictions on intake of tap water and public announcement by the MHLW

In principle, the MHLW requests the restriction of intake and public announcement to water supply utilities whose average inspection results of the radioactive materials in tap water in the last three days exceeds the index levels. However, in case a single inspection outcome considerably exceeds the index levels, the MHLW requests the restriction of intake and public announcement to the said water supply utility.

If a single water supply utility owns multiple water treatment plants and its water supply areas

are exclusive for each water treatment plant, the MHLW requests the restriction of intake and public announcement by the water supply area.

※Fundamentally, the index levels on intake restrictions are set up taking into account the long-term effects of radioactive materials, and thus the assessment should be conducted in comparison with the long-term intake. On the other hand, according to the inspection results obtained so far, the concentration of radioactive materials in tap water fluctuates in time. Therefore, it is difficult to forecast fluctuation in the long-term. In the light of the above, the MHLW has decided to conduct an assessment with acquired data over three days for the time being, considering that the prompt judgment to a certain extent is required for the commencement and cancellation of the restriction of the intake.

5. Recommended measure for the cancellation of intake restrictions by water supply utilities

Water supply utilities restricting the intake of tap water are recommended to lift their restrictions in case the average inspection results of radioactive materials in tap water in the last immediate 3 days falls below the index levels and that the outcomes have been on the decrease. The MHLW also requests that they properly publicly announce the cancellation of the intake of tap water.

6. Others

Regarding the above 3, 4, and 5, the MHLW may make additional requests to the local governments as needed.

7. Measures to be taken in the future

- By coordinating with the local governments, appropriate monitoring systems will be prepared and expanded.
- Monitoring manuals with the methods of sampling and analysis of water will be compiled.
- With the accumulation of monitoring results of tap water in the future, the MHLW will further consider the conditions of requesting the restriction of tap water intake and recommended measure for its cancellation, based on the inspection results on radioactive materials in the atmosphere, meteorological conditions including precipitation and wind direction, the distance from the Fukushima No. 1 nuclear power plant, etc.

Levels of radioactive contaminants in foods (data reported on 28 March 2011)

Note: This data sheet compiles individual test results shown in corresponding press release written in Japanese, available at http://www.mhlw.go.jp/stf/houdou/bukyoku/iyaku.html

	Press release date	Food origin		Sampling date	Food tested	Level of radioactive contaminants in food (expressed as radionuclide levels (Bq/kg)).		
		Prefecture	Area			Iodine-131	Cesium-134	Cesium-137
1	28-Mar-11	Niigata	Not known	27-Mar-11	komatsuna	ND		ND
2	28-Mar-11	Niigata	Not known	27-Mar-11	komatsuna	ND		ND
3	28-Mar-11	Niigata	Not known	27-Mar-11	komatsuna	ND		ND
4	28-Mar-11	Niigata	Not known	27-Mar-11	komatsuna	ND		ND
5	28-Mar-11	Saitama	Not known	27-Mar-11	komatsuna	240		35
6	28-Mar-11	Gunma	Not known	27-Mar-11	mizuna	110		36
7	28-Mar-11	Gunma	Not known	27-Mar-11	leek	ND		ND
8	28-Mar-11	Gunma	Not known	27-Mar-11	cucumber	17		23
9	28-Mar-11	Chiba	Not known	24-Mar-11	pasteurized milk	29	2	2
10	28-Mar-11	Chiba	Not known	24-Mar-11	pasteurized milk	15	1	1
11	28-Mar-11	Chiba	Not known	24-Mar-11	pasteurized milk	11	1	1
12	28-Mar-11	Chiba	Ichihara-shi	27-Mar-11	komatsuna	890		204
13	28-Mar-11	Chiba	Futtsu-shi	27-Mar-11	komatsuna	160		11
14	28-Mar-11	Chiba	Mobara-shi	27-Mar-11	komatsuna	1,100		17
15	28-Mar-11	Chiba	Chosei-mura	27-Mar-11	mizuna	630		15
16	28-Mar-11	Yamagata	Mamurogawa-machi	28-Mar-11	aralia elata	ND		ND
17	28-Mar-11	Fukushima	Date-shi	26-Mar-11	poutry egg	44	ND	ND
18	28-Mar-11	Fukushima	Hirata-mura	27-Mar-11	poutry egg	45	ND	ND
19	28-Mar-11	Fukushima	Ishikawa-cho	26-Mar-11	poutry egg	14	ND	ND
20	28-Mar-11	Fukushima	Fukushima-shi	27-Mar-11	poutry egg	17	ND	ND
21	28-Mar-11	Fukushima	Asakawa-cho	27-Mar-11	poutry egg	22	7	5
22	28-Mar-11	Fukushima	Yamatsuri-machi	26-Mar-11	poutry egg	23	ND	ND
23	28-Mar-11	Fukushima	Hanawa-machi	26-Mar-11	poutry egg	28	ND	ND
24	28-Mar-11	Miyagi	Kawasaki-cho	25-Mar-11	spinach	294		5
25	28-Mar-11	Miyagi	Wakuya-cho	25-Mar-11	spinach	77		4
26	28-Mar-11	Miyagi	Watari-cho	25-Mar-11	garland chrysanthemum	624		6
27	28-Mar-11	Miyagi	Senda-shi	25-Mar-11	komatsuna	374		120

vels in gray-highlight exceed action levels set by the MHLW for withdrawal from markets

From: Brandon, Lou
Sent: Wednesday, April 13, 2011 8:34 AM
To: Nimitz, Ronald
Cc: Hoc, PMT12
Subject: RE: video of dose rates near Fukushima

Thanks Ron, pretty interesting.

From: Nimitz, Ronald
Sent: Tuesday, April 12, 2011 4:11 PM
To: Brandon, Lou
Subject: FW: video of dose rates near Fukushima

FYI

GPS provides some locations

From: Garry, Steven
Sent: Tuesday, April 12, 2011 12:32 PM
Subject: video of dose rates near Fukushima

Here's a 12 minute, YouTube video of a car (possibly a news crew) entering the evacuation zone with a dose rate meter that Manny Jimenez found. It shows steady state dose rates at 30 km is 0.1 mrem/hr and at 1.5 km is 11 mrem/hr.

Some of this might be upwind, downwind, etc. we don't know.

http://www.youtube.com/watch?v=yp9iJ3pPuL8

DU/266

From: Micro-Simulation Technology <info@microsimtech.com>
Sent: Wednesday, April 13, 2011 9:13 AM
To: micro-simulation technology
Subject: Fukushima spent fuel pool Fire Study
Attachments: Fuku4_SFP.doc; Paper_SFP.doc

To friends in nuclear industry:

Back in 2002 after the 911 event, a concern was raised on sabotage to spent fuel pools. We developed a simulator predicting the consequence following a loss of coolant and/or cooling event. It was presented at National Radiological Emergency Conference (NREP).

The Fukushima Unit 4 fire unfortunately turned the scenario into reality (instead by natural force). Here we used the tool PCTRAN/SFP to study the event as attached. It reproduced the sequence of pool heat-up, leakage via cracks, fuel exposure and cladding damage all the way to environmental release.

It appears that reliability of spent fuel pools is greatly overlooked. A supplemental spray system as drawn in our 2002 paper may be necessary. I'd appreciate very much to learn your comment. Thanks a lot in advance.

Sincerely,

Li-Chi Cliff Po, PhD
Micro-Simulation Technology
10 Navajo Court
Montville, New Jersey 07045
USA
1-973-402-9456
http://www.microsimtech.com

DS|267

PCTRAN/SFP Fukushima Daiichi Unit 4 Spent Fuel Pool Accident Analysis

Micro-Simulation Technology
April 10, 2011

The incident initial condition and event chronicle are based on the following report:

Tohoku Pacific Earthquake and the seismic damage to the NPPs

21 March 2011

Nuclear and Industrial Safety Agency
Japan

3-5. Report concerning incidents at Unit1, 2, 3 and 4 at the Fukushima Dai-ichi (I) NPS

● ***Unit 4 There are no fuel in the reactor pressure vessel due to replacement work of a shroud.***

- It was confirmed that a part of wall of the operation floor of the reactor building of Unit 4 was damaged on March 15th. A fire took place at Unit 4 at 9:38 on March 15th, but the fire was extinguished spontaneously.

- At 5:45 on March 16th, it was reported that a fire occurred at Unit 4; however, no fire was confirmed by TEPCO staff on the ground at 6:15 on March 16th.

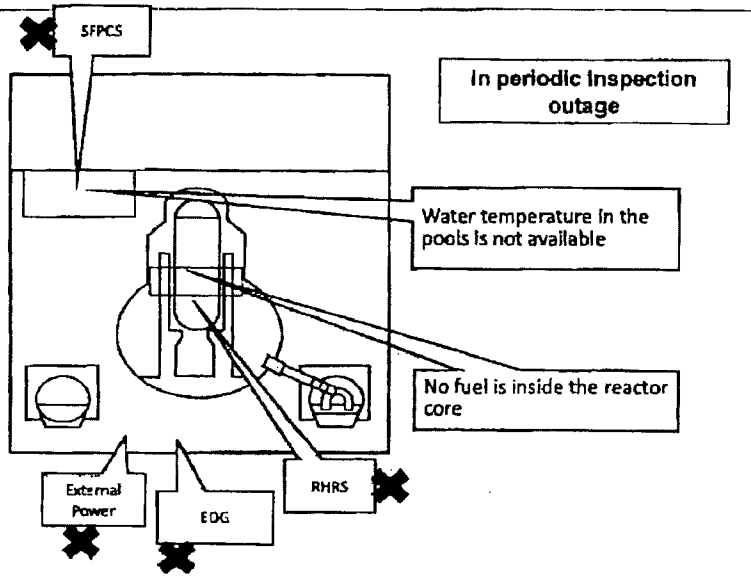
-The temperature of water in the spent fuel storage pool went up.

-Water spray over the spent fuel pool by Self Defence Force was started at around 18:30 March 20th and finished at 19:46 March 20th.

-Water spray over the spent fuel pool by Self Defence Force (13 fire engines) started at 06:37 March 21st and finished at 08:41 March 21st.

-The work for laying the electric cable to the power center has been completed. (around 15:00 March 21th)

Conditions of Fukushima Dai-ichi Nuclear Power Station Unit 4
(As of 15:30 March 21th, 2011)



Major events after the earthquake

In periodic inspection outage when the earthquake occurred.

14th 4:08 Water temperature in the Spent Fuel Pool, 84℃
15th 6:14 Damage of wall in the 4th floor confirmed
15th 9:38 Fire occurred in the 3rd floor (12:25 extinguished)
16th 5:45 Fire occurred. TEPCO couldn't confirm any fire on the ground. (7:26 extinguished)
20th around18:30-19:46 Water spray over the spent fuel pool by Self Defence Force
21th h 06:37-08:41 Water spray over the spent fuel pool by Self Defence Force

Current Conditions: No fuel is in the RPV. Water is evaluated to remain in the Pool (TEPCO)

Future Operation: Recovery of power supply

We assumed that Unit 4 was in refueling with the full core discharged into the spent fuel pool. The fuels have burn-up to 64 MWD/MTU and 15 days after shutdown. There are 560 assemblies. So the decay heat level was 15.47 MBtu/hr, or 4.53 MW (0.20 % of rated 2311 MW power). The pool has room to accommodate fuels of previous cycles. Since their exact amount is unknown to us and its contribution to the total decay heat is minimal, it is ignored in this study. The fuel pool cooling system was in operation to maintain the pool at 97 °F (36.1° C). The seawater for cooling was 50 °F (10 °C).

Right after the Scale 9 earthquake the AC power was lost. Without cooling to the pool the code immediately calculated the heat-up rate to be 6.4 °F/hr (3.5 °C/h). It would take about 17.8 hours to boiling (in the upper left "Time Estimate" panel of the simulator mimic).

We also assumed the earthquake has caused a crack to leak out 100 gpm (370 liters/min) water at the bottom of the pool. The projected time for fuel top exposure is 35.4 hours. Note the projected time is somewhat arbitrary, because we know neither the exact decay heat nor the crack size. Rather they are roughly consistent with the event chronicle to occur in 2 to 4 days.

Following is the PCTRAN/SFP mimic right after event initiation. Note all circulating pumps are tripped so there is no means for heat removal.

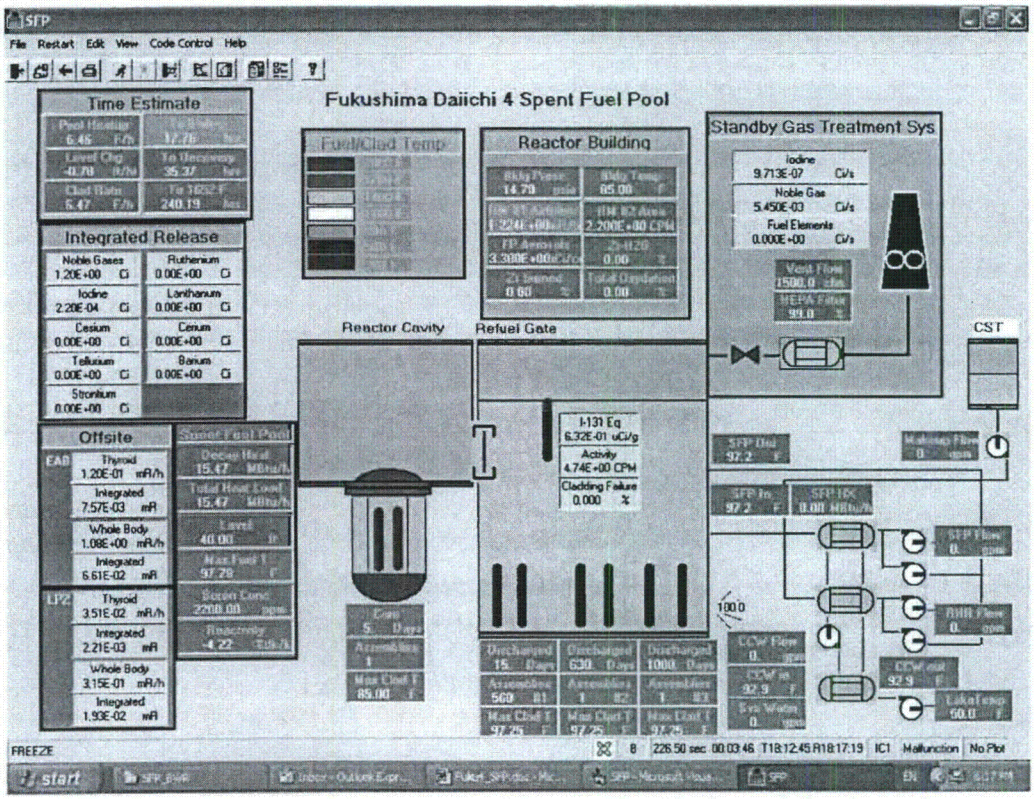


Fig. 1 PCTRAN/SFP at event initiation –Note full-core offload in the pool, the time estimate to boiling and fuel exposure at top left panel, all pumps are off on loss AC power.

Table 1 Sequence of events according to NISA of Japan report and PCTRAN/SFP simulation

Date Time	Time from start hours (seconds)	Event	PCTRAN/SFP Run
March 11 14: 46	0	Earthquake and station blackout	Loss of offsite power, Unit 4 full-core offload plus previous cycle spent fuels in the pool. 1. Loss of SFP cooling (trip all circulating pumps). 2. Earthquake caused a crack at the pool bottom to initiate a drain flow of 370 ltr/m.
March 14 4: 08	61.5 (221,400 s)	Water temperature in SFP 84°C	Water started boiling (212°F (100°C) at 16.7 hr (60,000 sec)
March 15 9: 38	90 (324,000 s)	Fire occurred	1. Top of fuel assemblies exposed to air at about 36 hr (130,000 s). 2. Hydrogen from Zr-water reaction and Zr fire total > 10% of claddings. 3. Fire in the reactor building became possible (not simulated)
March 15 12: 25	93 (334,800)	Fire extinguished	By turning on the spray nozzle on top of the simulator (simulating the helicopter spray) the fire could be extinguished; but not simulated in this run.

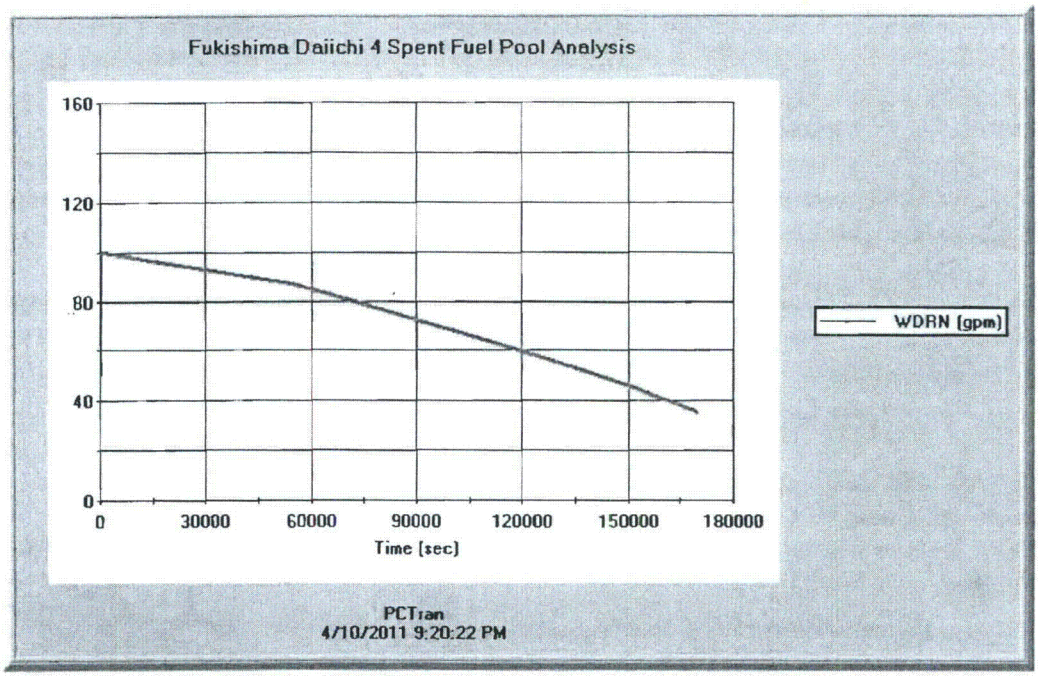


Fig. 2 Pool bottom drain flow rate.

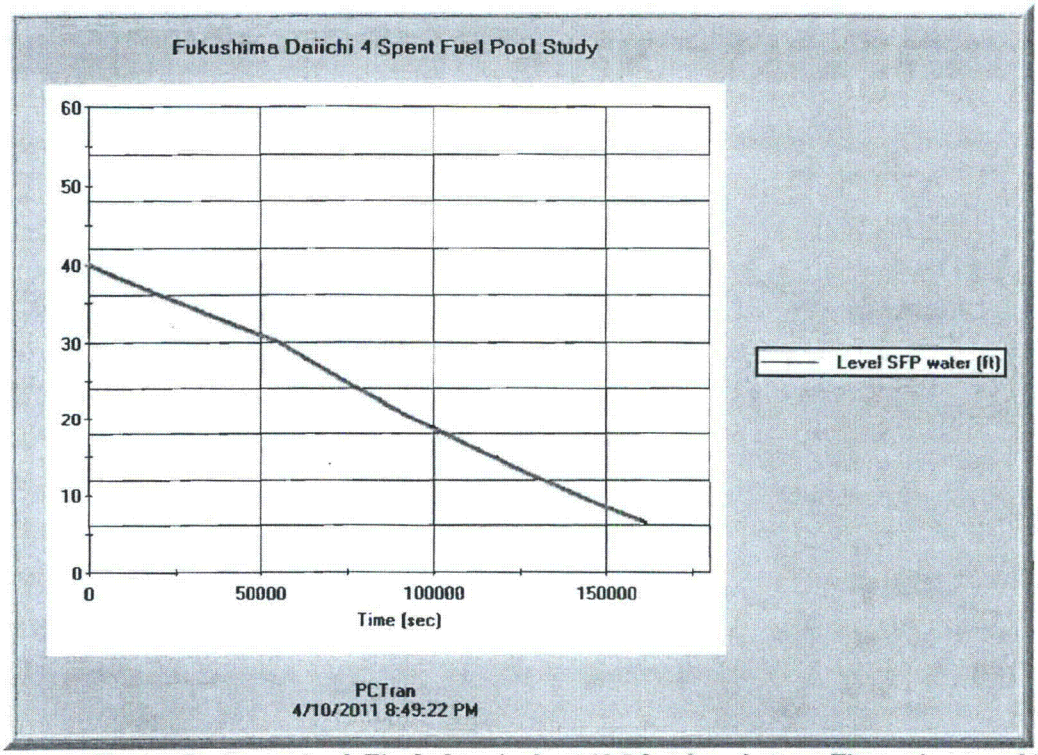


Fig. 3 Pool water level. The fuel top is about 12.5 feet from bottom. The top is exposed in about 130,000 seconds (36 hr).

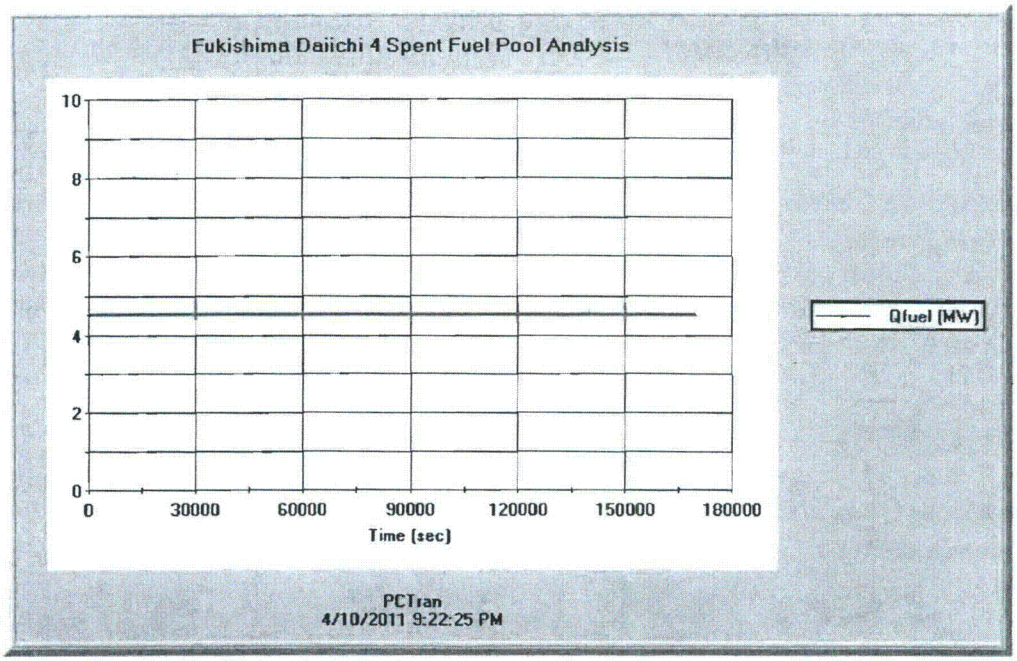


Fig. 4 Fuel decay heat.

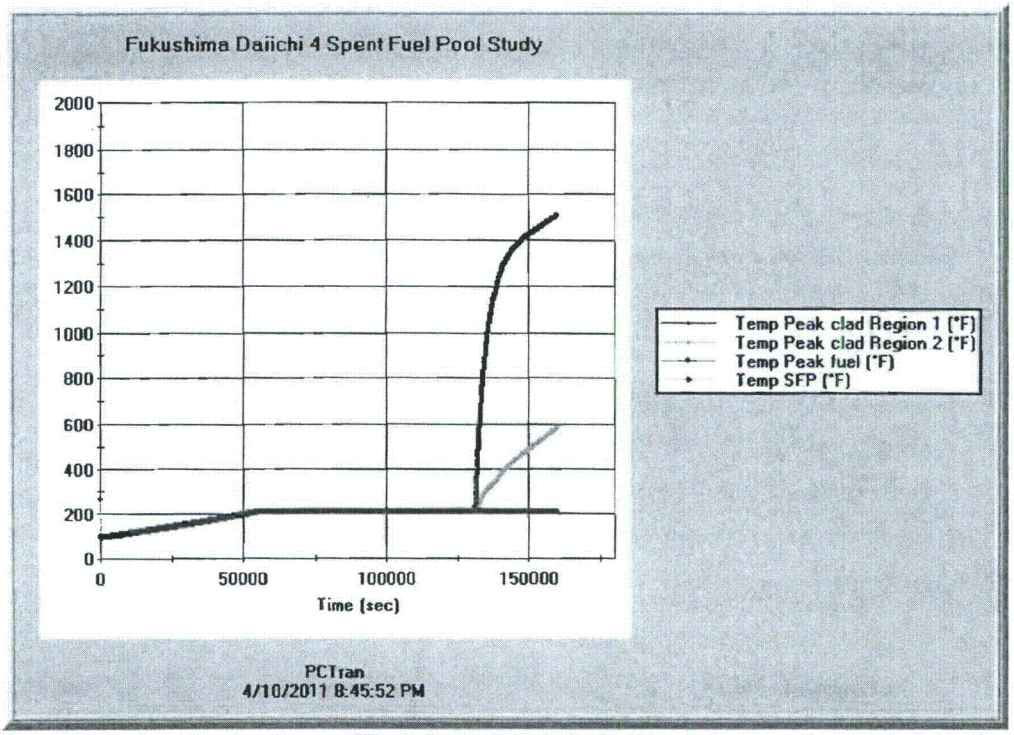


Fig. 5 Temperatures of Peak fuel, peak clad of off-loaded core and older fuels, and Pool water. The pool boiled in about 60,000 sec (16.7 hrs).

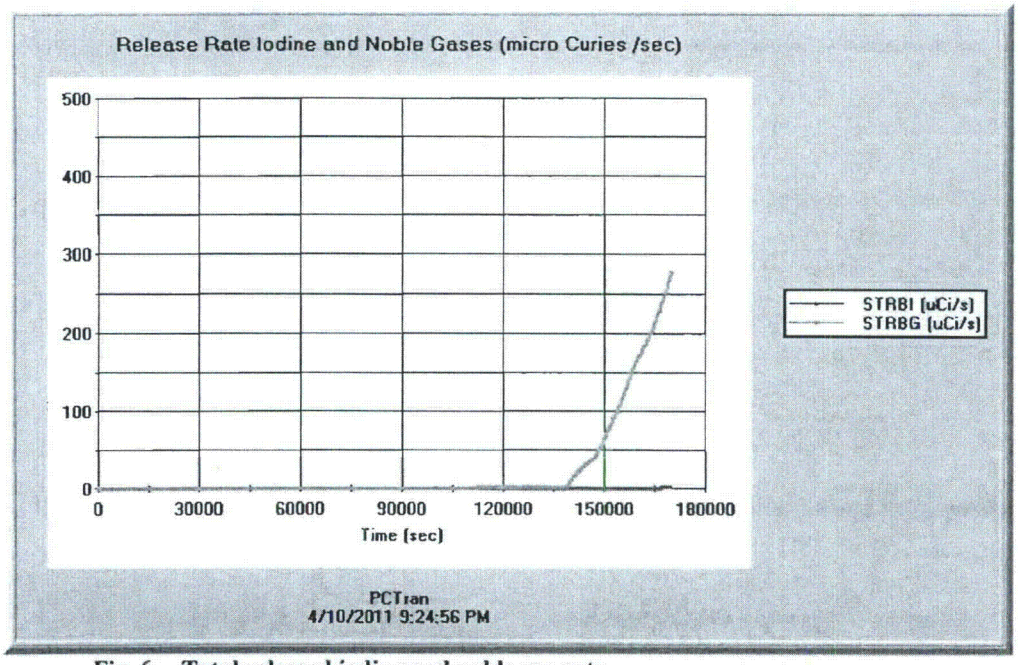


Fig. 6 Total released iodine and noble gas rate.

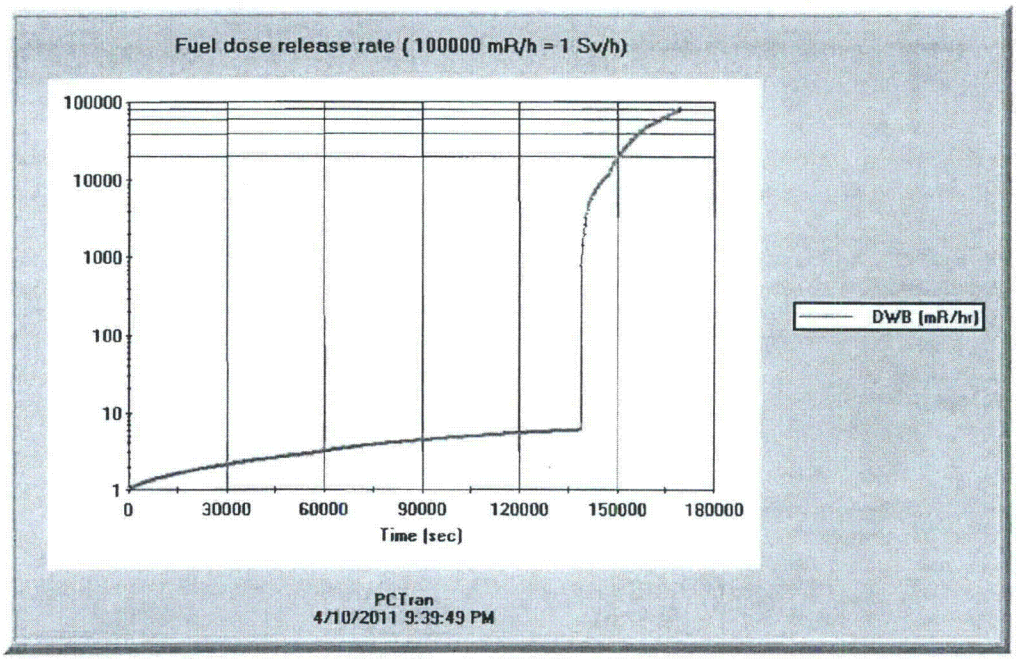


Fig. 7 Dose rate around the Reactor Building

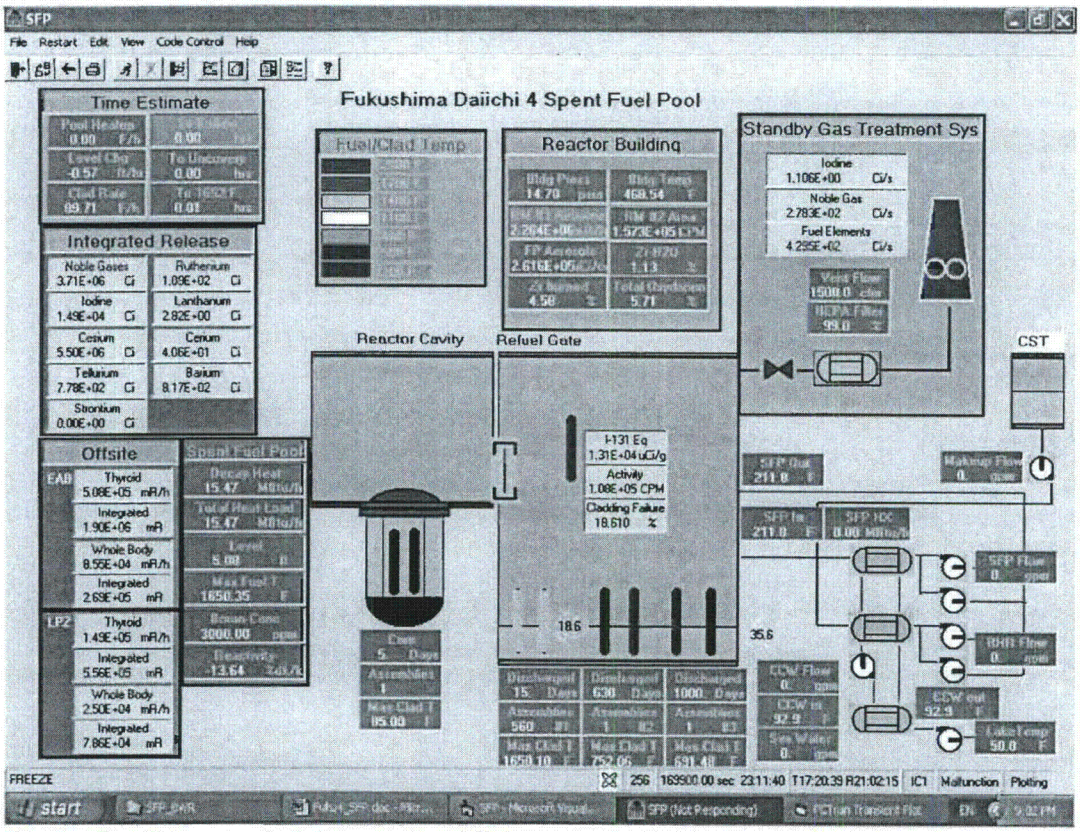


Fig. 8 Condition at end of the run about 170,000 seconds (47.2 hrs). Over 10% of fuel clad was oxidized by steam interaction and direct oxidation (burn). Hydrogen content in the building was combustible. A burn could start anytime. The fire was later extinguished by spraying water from top. They were not simulated in this run.

Conclusion

In our first try to simulate this event, we made a gross estimate of the pool fuel inventory and its decay heat level. We also assumed a bottom leak that would expose the fuel in a couple of days. However, no attempt was made to match the timings exactly as the event chronicle. PCTRAN/SFP has turned out that the fuel cladding started to heat up and reached burning condition in about 2 days. Subsequent spraying water from top should extinguish the fire and stop radiological release. The fission gas release rate and dose around the building are compatible with those estimated or monitored during the event.

Topic 13 New Technological Applications in REP
Abstract

WHAT ABOUT THE SPENT FUEL POOLS?

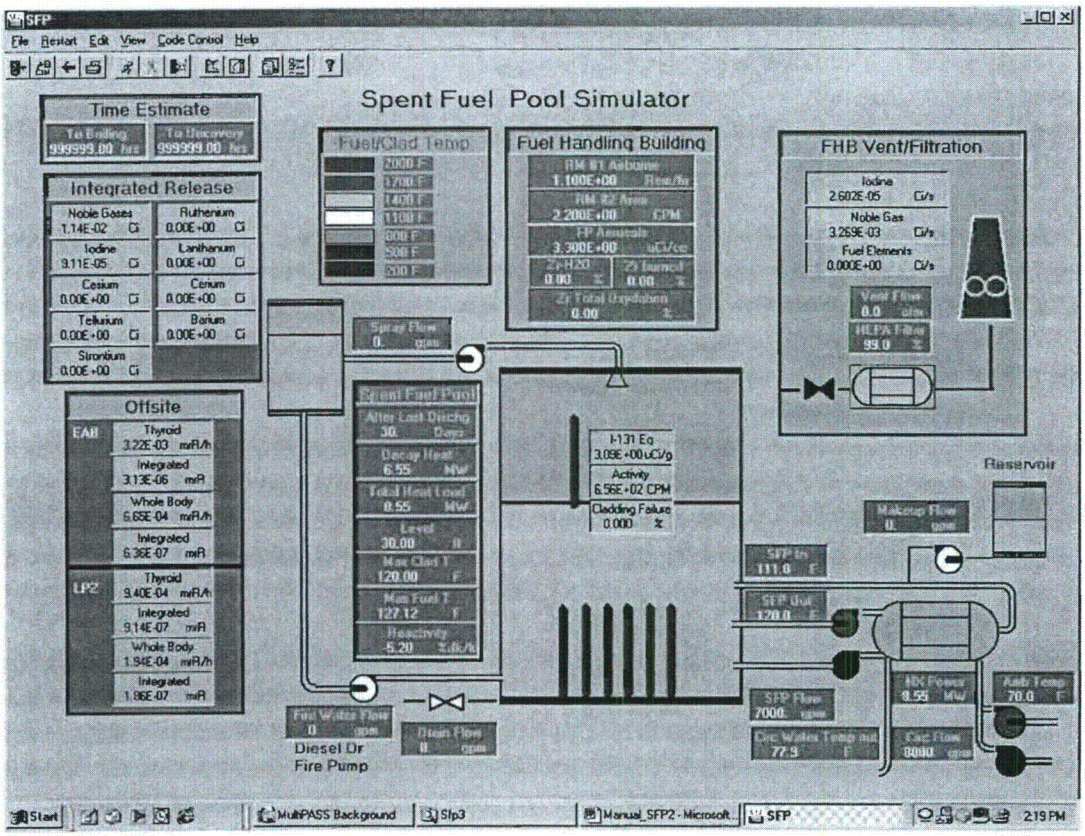
In the aftermath of September 11, concerns were raised about possible terrorist attack on a nuclear power plant, and in particular to its spent fuel pool (SFP). This is a more realistic threat and would cause greater harm than e.g. an aircraft crash into the containment. This is because the SFP building is not as strong as the containment, and it stores perhaps 4 times more radioactive materials.

The event of SFP draining or evaporation followed by zirconium fire has been previously analyzed in USNRC report NUREG –1738 titled "Technical Study of Spent Fuel Pool Accident Risk at Decommissioning Nuclear Power Plants". This type of event could also happen at plants in operation. Yet to date there is no real-time trainer or analytical tool specifically developed for SFP.

We at Micro-Simulation Technology have developed PCTRAN/SPF - a personal computer transient analyzer to simulate the thermal-hydraulic and radiological release of all possible pool accidents. The modeling is plant specific – with consideration of the fuel specifications, pool inventory of cycle burn-up, geometry, and cooling system design. Upon a loss of cooling or inventory event, the key time intervals to bulk boiling, fuel uncovering and clad fire can be projected. Also possible is a cask drop or boron dilution event that adds sufficient positive reactivity to reach critical levels.

The simulator can create accelerated runs for practical exercises. Shown below is the graphics display of PCTRAN/SPF. There is a circulation cooling system with heat exchangers relieving the decay heat to the environment. Regular AC powered and emergency diesel-driven pumps are provided for coolant makeup. Simple point-and-click will disable or enable any of the components. When the fuels are exposed and heated up, their temperatures will be indicated in color. In addition to fission gases in the gap, damaged fuel aerosols such as alkali metals, tellurium, barium, cerium, lanthanides, etc. will be traced. Their contribution to building radiation monitors and release path through the vent and wall leakage form the site boundary doses.

Using the tool for training or exercise will give the staff a quantitative feel and realistic appreciation of the event. Should an event occur in real life, the tool can make instant and precise projections of the time to pool boiling, fuel uncovery and dose release. It is practical for determination of protective actions such as notification, shielding and evacuation.


SFP
File Restart Edit View Code Control Help
Spent Fuel Pool Simulator
Time Estimate
To Boiling 999999.00 hrs
To Uncovery 999999.00 hrs
Integrated Release
Noble Gases 1.14E-02 Ci
Ruthenium 0.00E+00 Ci
Iodine 9.11E-05 Ci
Lanthanum 0.00E+00 Ci
Cesium 0.00E+00 Ci
Cerium 0.00E+00 Ci
Tellurium 0.00E+00 Ci
Barium 0.00E+00 Ci
Strontium 0.00E+00 Ci
Offsite
EAB
Thyroid 3.22E-03 mR/h
Integrated 3.13E-06 mR
Whole Body 6.65E-04 mR/h
Integrated 6.36E-07 mR
UPZ
Thyroid 9.40E-04 mR/h
Integrated 9.14E-07 mR
Whole Body 1.94E-04 mR/h
Integrated 1.86E-07 mR
Fuel/Clad Temp
2000 F
1700 F
1400 F
1100 F
900 F
500 F
200 F
Fuel Handling Building
RM #1 Airborne 1.100E+00 Rem/hr
RM #2 Area 2.200E+00 CPM
FP Aerosols 3.300E+00 uCi/cc
Zr/H2O 0.00 %
Zr Burnoff 0.00 %
Zr Total Oxydation 0.00 %
FHB Vent/Filtration
Iodine 2.602E-05 Ci/s
Noble Gas 3.269E-03 Ci/s
Fuel Elements 0.000E+00 Ci/s
Vent Flow 0.0 cfm
HEPA Filter 99.0 %
Spray Flow 0. gpm
Spent Fuel Pool
After Last Discha 30. Days
Decay Heat 6.55 MW
Total Heat Load 8.55 MW
Level 30.00 ft
Max Clad T 120.00 F
Max Fuel T 127.12 F
Reactivity -5.20 %dk/k
I-131 Eq 3.09E+00 uCi/g
Activity 6.56E+02 CPM
Cladding Failure 0.000 %
Reservoir
Makeup Flow 0. gpm
SFP In 111.8 F
SFP Out 120.0 F
SFP Flow 7000. gpm
HX Power 8.55 MW
Aux Temp 70.0 F
Circ Water Temp out 77.9 F
Circ Flow 8000 gpm
Fire Water Flow 0. gpm
Diesel Dr Fire Pump
Drain Flow 0. gpm
Start
MultiPASS Background
Sfp3
Manual_SFP2 - Microsoft...
SFP
2:19 PM

From: Dixon, John E. (CDC/ONDIEH/NCEH) <gyf7@cdc.gov>
Sent: Wednesday, April 13, 2011 11:30 AM
To: Mena, Rajah (CONTR); Graham, Ron; Keith, Sam (ATSDR/DTEM/ATB); Evans, Lynn (CDC/ONDIEH/NCEH); Allen, George T. (FDA/ORA/NE-FO); Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Ansari, Armin (CDC/ONDIEH/NCEH); Brandon, Lou; Brooks, Michael (ATSDR/DHAC/SRAB); Brozowski, George (EPA); Buzzell, Jennifer (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); Cherniack, James J. (FDA/ORA/NE-FO); Cleveland, Gordon (USDA); Connell, Carol (ATSDR/DHAC/SRAB); Cunningham, William C. (FDA/CFSAN); DeCair, Sara (EPA); Evans, Rachel T. (FDA/ORA/CE-FO); Funk, Renee (CDC/NIOSH/OD); Goodman, Roger (EPA); Hansen, Patricia A. (FDA/CFSAN); Hargrave, Scotty L. (FDA/ORA/SW-FO); Hornsby-Myers, Jennifer (CDC/NIOSH/OD); Howard King, Vinetta M. (FDA/OC/OCTC); Jablonowski, Gene (EPA); Jensen, John (USDA); Jones, Terri L. (FDA/ORA/P-FO); Liles, Darrell (EPA); Lotz, William G. (Greg) (CDC/NIOSH/DART); Lough, Scott (USDA); Maher, Carmen T. (FDA/OC/OCS); Miller, Charles W. (CDC/ONDIEH/NCEH); Morrison, Ellen F. (FDA/OC/OCTC); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); Noska, Mike (FDA); OLaughlin, Colleen (NEV); Pavek, John (USDA); Pemberton, Wendy (CONTR); Petch, Peter (USDA); Russo, Mark R. (FDA/OC/OCTC); Sincek, Jeffrey A. (FDA/ORA/CE-FO); Smallwood, Karen R. (FDA/ORA/SE-FO); Tupin, Ed (EPA); Veal, Lee (EPA); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Wiley, Albert (ORAU)
Subject: RE: Temporary and permanent reentry items to consider

Thanks Rajah. This is useful.

Regards,
John

From: Mena, Rajah (CONTR) [mailto:MenaRM@nv.doe.gov]
Sent: Wednesday, April 13, 2011 11:19 AM
To: Graham, Ron; Keith, Sam (ATSDR/DTEM/ATB); Evans, Lynn (CDC/ONDIEH/NCEH); Allen, George T. (FDA/ORA/NE-FO); Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Ansari, Armin (CDC/ONDIEH/NCEH); Brandon, Lou (NRC); Brooks, Michael (ATSDR/DHAC/SRAB); Brozowski, George (EPA); Buzzell, Jennifer (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); Cherniack, James J. (FDA/ORA/NE-FO); Cleveland, Gordon (USDA); Connell, Carol (ATSDR/DHAC/SRAB); Cunningham, William C. (FDA/CFSAN); DeCair, Sara (EPA); Dixon, John E. (CDC/ONDIEH/NCEH); Evans, Rachel T. (FDA/ORA/CE-FO); Funk, Renee (CDC/NIOSH/OD); Goodman, Roger (EPA); Hansen, Patricia A. (FDA/CFSAN); Hargrave, Scotty L. (FDA/ORA/SW-FO); Hornsby-Myers, Jennifer (CDC/NIOSH/OD); Howard King, Vinetta M. (FDA/OC/OCTC); Jablonowski, Gene (EPA); Jensen, John (USDA); Jones, Terri L. (FDA/ORA/P-FO); Liles, Darrell (EPA); Lotz, William G. (Greg) (CDC/NIOSH/DART); Lough, Scott (USDA); Maher, Carmen T. (FDA/OC/OCS); Miller, Charles W. (CDC/ONDIEH/NCEH); Morrison, Ellen F. (FDA/OC/OCTC); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); Noska, Mike (FDA); OLaughlin, Colleen (NEV); Pavek, John (USDA); Pemberton, Wendy (CONTR); Petch, Peter (USDA); Russo, Mark R. (FDA/OC/OCTC); Sincek, Jeffrey A. (FDA/ORA/CE-FO); Smallwood, Karen R. (FDA/ORA/SE-FO); Tupin, Ed (EPA); Veal, Lee (EPA); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Wiley, Albert (ORAU)
Subject: RE: Temporary and permanent reentry items to consider

As defined by FEMA:

Reentry: the provisions for the return of the public after evacuation, when the radiation risk has been reduced to acceptable levels.
Return: reoccupation of areas cleared for unrestricted residence or use by previously evacuated or relocated populations.

DJ/268

RaJah Mena
CMHT Assessment Scientist
Contractor to the United States Department of Energy
702-794-1671 Phone
(b)(6) *Pager*
MenaRM@nv.doe.gov

From: Graham, Ron [mailto:Ron.Graham@fsis.usda.gov]
Sent: Wednesday, April 13, 2011 7:44 AM
To: Keith, Sam (ATSDR/DTEM/ATB); Evans, Lynn (CDC/ONDIEH/NCEH); Allen, George T. (FDA/ORA/NE-FO); Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Ansari, Armin (CDC/ONDIEH/NCEH); Brandon, Lou (NRC); Brooks, Michael (ATSDR/DHAC/SRAB); Brozowski, George (EPA); Buzzell, Jennifer (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); Cherniack, James J. (FDA/ORA/NE-FO); Cleveland, Gordon (USDA); Connell, Carol (ATSDR/DHAC/SRAB); Cunningham, William C. (FDA/CFSAN); DeCair, Sara (EPA); Dixon, John E. (CDC/ONDIEH/NCEH); Evans, Rachel T. (FDA/ORA/CE-FO); Funk, Renee (CDC/NIOSH/OD); Goodman, Roger (EPA); Hansen, Patricia A. (FDA/CFSAN); Hargrave, Scotty L. (FDA/ORA/SW-FO); Hornsby-Myers, Jennifer (CDC/NIOSH/OD); Howard King, Vinetta M. (FDA/OC/OCTC); Jablonowski, Gene (EPA); Jensen, John (USDA); Jones, Terri L. (FDA/ORA/P-FO); Liles, Darrell (EPA); Lotz, William G. (Greg) (CDC/NIOSH/DART); Lough, Scott (USDA); Maher, Carmen T. (FDA/OC/OCS); Mena, Rajah (CONTR); Miller, Charles W. (CDC/ONDIEH/NCEH); Morrison, Ellen F. (FDA/OC/OCTC); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); Noska, Mike (FDA); OLaughlin, Colleen (NEV); Pavek, John (USDA); Pemberton, Wendy (CONTR); Petch, Peter (USDA); Russo, Mark R. (FDA/OC/OCTC); Sincek, Jeffrey A. (FDA/ORA/CE-FO); Smallwood, Karen R. (FDA/ORA/SE-FO); Tupin, Ed (EPA); Veal, Lee (EPA); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Wiley, Albert (ORAU)
Subject: RE: Temporary and permanent reentry items to consider

I am not sure there is a definition for temp and perm re-entry, at least not defined by FEMA; I was always under the impression re-entry is re-entry – short term entry to a contaminated area by emergency workers. We have to be careful developing new definitions that are not compatible with evaluation criteria for the FEMA/DHS, states, locals, and the industry.

Ron Graham
Senior Food Defense Analyst
FSIS Radiological Advisory Team

Food Defense Assessment Staff
Office of Data Integration and Food Protection
Food Safety and Inspection Service
US Department of Agriculture

Room 409, 3rd Floor
901 D Street, Southwest
Washington, DC 20024

Email: ron.graham@fsis.usda.gov
Office: 202-690-6450
BB: (b)(6)
Fax: 202-690 6459

From: Keith, Sam (ATSDR/DTEM/ATB) [mailto:ldk4@cdc.gov]
Sent: Wednesday, April 13, 2011 10:10 AM
To: Evans, Lynn (CDC/ONDIEH/NCEH); Allen, George T. (FDA/ORA/NE-FO); Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Ansari, Armin (CDC/ONDIEH/NCEH); Brandon, Lou (NRC); Brooks, Michael (ATSDR/DHAC/SRAB); Brozowski, George (EPA); Buzzell, Jennifer (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); Cherniack, James J. (FDA/ORA/NE-FO); Cleveland, Gordon (USDA); Connell, Carol (ATSDR/DHAC/SRAB); Cunningham, William C. (FDA/CFSAN); DeCair, Sara (EPA); Dixon, John E. (CDC/ONDIEH/NCEH); Evans, Rachel T. (FDA/ORA/CE-FO); Funk, Renee (CDC/NIOSH/OD); Goodman, Roger (EPA); Graham, Ron; Hansen, Patricia A. (FDA/CFSAN); Hargrave, Scotty L. (FDA/ORA/SW-FO); Hornsby-Myers, Jennifer (CDC/NIOSH/OD); Howard King, Vinetta M. (FDA/OC/OCTC); Jablonowski, Gene (EPA); Jensen, John (USDA); Jones, Terri L. (FDA/ORA/P-FO); Liles, Darrell (EPA); Lotz, William G. (Greg) (CDC/NIOSH/DART); Lough,

Scott (USDA); Maher, Carmen T. (FDA/OC/OCS); Mena, RaJah (DOE/FRMAC); Miller, Charles W. (CDC/ONDIEH/NCEH); Morrison, Ellen F. (FDA/OC/OCTC); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); Noska, Mike (FDA); O'Laughlin, Colleen (DOE/FRMAC); Pavek, John (USDA); Pemberton, Wendy (DOE/FRMAC); Petch, Peter (USDA); Russo, Mark R. (FDA/OC/OCTC); Sincek, Jeffrey A. (FDA/ORA/CE-FO); Smallwood, Karen R. (FDA/ORA/SE-FO); Tupin, Ed (EPA); Veal, Lee (EPA); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Wiley, Albert (ORAU)
Subject: Temporary and permanent reentry items to consider

Folks, please share any thoughts you have today on specific items (limited #) that you would want to be in place before allowing (1) temporary reentry and (2) permanent reentry into an evacuation zone.

Thanks,
Sam

From: Dixon, John E. (CDC/ONDIEH/NCEH) <gyf7@cdc.gov>
Sent: Wednesday, April 13, 2011 12:24 PM
To: Albert L. Wiley Jr (albert.wiley@orise.orau.gov); Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Ansari, Armin (CDC/ONDIEH/NCEH); Brooks, Michael (ATSDR/DHAC/SRAB); Buzzell, Jennifer (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); Cherniack, James J. (FDA/ORA/NE-FO); Connell, Carol (ATSDR/DHAC/SRAB); Cunningham, William C. (FDA/CFSAN/OCD); DeCair.Sara@epamail.epa.gov; Edward A. Tupin (tupin.edward@epa.gov); Evans, Lynn (CDC/ONDIEH/NCEH); Evans, Rachel T. (FDA/ORA/CE-FO); Funk, Renee (CDC/NIOSH/OD); Gene Jablonowski; George Brozowski; gordon.s.cleveland@aphis.usda.gov; Hansen, Patricia A. (FDA/CFSAN/OCD); Hargrave, Scotty L. (FDA/ORA/SW-FO); Hornsby-Myers, Jennifer (CDC/NIOSH/OD); John Jensen; Jones, Terri L. (FDA/ORA/P-FO); Keith, Sam (ATSDR/DTEM/ATB); liles.darrell@epa.gov; Lotz, William G. (Greg) (CDC/NIOSH/DART); Brandon, Lou; Lough, Scott (USDA); Maher, Carmen T. (FDA/OC/OCS); menarm@nv.doe.gov; michael.noska@fda.hhs.gov; Miller, Charles W. (CDC/ONDIEH/NCEH); Morrison, Ellen F. (FDA/OC/OCTC); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); O Laughlin, Colleen T.; Pavek, John - Washington, DC [John.Pavek@wdc.usda.gov]; Pemberton, Wendy (DOE/FRMAC); Peter.A.Petch@aphis.usda.gov; Roger Goodman; Ron.Graham@fsis.usda.gov; Sincek, Jeffrey A. (FDA/ORA/CE-FO); Smallwood, Karen R. (FDA/ORA/SE-FO); Whitcomb, Robert C. (CDC/ONDIEH/NCEH)
Cc: Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Miller, Charles W. (CDC/ONDIEH/NCEH); Ansari, Armin (CDC/ONDIEH/NCEH); Evans, Lynn (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); Keith, Sam (ATSDR/DTEM/ATB)
Subject: Sr-90 radiometric data
Attachments: image001.jpg; Sr-90 radiometric data.docx

All,

Because we are now hearing of Sr-90 being present due to the reactor incident in Japan, I know we will soon need the relevant radiometric data for this isotope at our finger tips.

Attached is the latest data based upon ICRP-60+ dosimetry models for all age groups. I hope this is useful.

Regards,

John

DJ/269

SR-90 RADIOMETRIC DATA – Source ICRP+ dosimetry

INHALATION DOSES

AGE	EFFECTIVE (CED)	TARGET ORGAN	DCF (Sv/Bq)
0-3 months	4.14 e-7	LUNG	3.34 e-6
I year	3.94 e-7	LUNG	3.21 e-6
5 years	2.69 e-7	LUNG	2.20 e-6
10 years	1.83 e-7	LUNG	1.49 e-6
15 years	1.60 e-7	LUNG	1.30 e-6
ADULT	1.57 e-7	LUNG	1.29 e-6

INGESTION DOSES

AGE	EFFECTIVE (CED)	TARGET ORGAN	DCF (Sv/Bq)
03 months	2.27 e-7	BONE SURFACE	2.27 e-6
1 year	7.24 e-8	BONE SURFACE	7.31 e-7
5 tears	4.68 e-8	BONE SURFACE	6.35 e-7
10 years	5.97 e-8	BONE SURFACE	1.05 e-6
15 years	7.89 e-8	BONE SURFACE	1.82 e-6
ADULT	2.77 e-8	BONE SURFACE	4.08 e-7

From: Jablonowski.Eugene@epamail.epa.gov
Sent: Wednesday, April 13, 2011 2:25 PM
To: Dixon, John E. (CDC/ONDIEH/NCEH); Albert L. Wiley Jr (albert.wiley@orise.orau.gov); Ansari, Armin (CDC/ONDIEH/NCEH); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Maher, Carmen T. (FDA/OC/OCS); Connell, Carol (ATSDR/DHAC/SRAB); Wood, Charles (CDC/ONDIEH/NCEH) (CTR); Miller, Charles W. (CDC/ONDIEH/NCEH); Liles.Darrell@epamail.epa.gov; Tupin.Edward@epamail.epa.gov; Morrison, Ellen F. (FDA/OC/OCTC); Hornsby-Myers, Jennifer (CDC/NIOSH/OD); Brozowski.George@epamail.epa.gov; Evans, Lynn (CDC/ONDIEH/NCEH); gordon.s.cleveland@aphis.usda.gov; Cherniack, James J. (FDA/ORA/NE-FO); Sincek, Jeffrey A. (FDA/ORA/CE-FO); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); John Jensen; Pavek, John - Washington, DC [John.Pavek@wdc.usda.gov]; Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Smallwood, Karen R. (FDA/ORA/SE-FO); Keith, Sam (ATSDR/DTEM/ATB); Brandon, Lou; Brooks, Michael (ATSDR/DHAC/SRAB); menarm@nv.doe.gov; michael.noska@fda.hhs.gov; O Laughlin, Colleen T.; Buzzell, Jennifer (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); Hansen, Patricia A. (FDA/CFSAN/OCD); Pemberton, Wendy (DOE/FRMAC); Peter.A.Petch@aphis.usda.gov; Evans, Rachel T. (FDA/ORA/CE-FO); Funk, Renee (CDC/NIOSH/OD); Goodman.Roger@epamail.epa.gov; Ron.Graham@fsis.usda.gov; DeCair.Sara@epamail.epa.gov; Hargrave, Scotty L. (FDA/ORA/SW-FO); Lough, Scott (USDA); Jones, Terri L. (FDA/ORA/P-FO); Lotz, William G. (Greg) (CDC/NIOSH/DART); Cunningham, William C. (FDA/CFSAN/OCD)
Subject: REP Program Manual & definitions
Attachments: REPP Program Manual (Draft).doc

Reentry: the provisions for the return of the public after evacuation, when the radiation risk has been reduced to acceptable levels.

Reentry recommendation: advice provided to the State by the CFA in conjunction with the SFO and appropriate Federal departments and agencies concerning State and local government guidance or recommendations that may be issued to the public for returning to an area affected by a radiological emergency.

Return: reoccupation of areas cleared for unrestricted residence or use by previously evacuated or relocated populations.

Eugene Jablonowski, Health Physicist
U.S. EPA Region 5 Emergency Response
77 W. Jackson Blvd. (SM-5J)
Chicago, IL 60604
(312) 886-4591 office
(b)(6) cell <-- NEW
(312) 692-2466 fax
jablonowski.eugene@epa.gov

DJ 270

Attachment REPP Program Manual (Draft).doc(3661824 bytes) cannot be converted to PDF format.

Attachment REPP Program Manual (Draft).doc(3661824 bytes) cannot be converted to PDF format.

From: Dixon, John E. (CDC/ONDIEH/NCEH) <gyf7@cdc.gov>
Sent: Wednesday, April 13, 2011 12:46 PM
To: Albert L. Wiley Jr (albert.wiley@orise.orau.gov); Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Ansari, Armin (CDC/ONDIEH/NCEH); Brooks, Michael (ATSDR/DHAC/SRAB); Buzzell, Jennifer (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); Cherniack, James J. (FDA/ORA/NE-FO); Connell, Carol (ATSDR/DHAC/SRAB); Cunningham, William C. (FDA/CFSAN/OCD); DeCair.Sara@epamail.epa.gov; Edward A. Tupin (tupin.edward@epa.gov); Evans, Lynn (CDC/ONDIEH/NCEH); Evans, Rachel T. (FDA/ORA/CE-FO); Funk, Renee (CDC/NIOSH/OD); Gene Jablonowski; George Brozowski; gordon.s.cleveland@aphis.usda.gov; Hansen, Patricia A. (FDA/CFSAN/OCD); Hargrave, Scotty L. (FDA/ORA/SW-FO); Hornsby-Myers, Jennifer (CDC/NIOSH/OD); John Jensen; Jones, Terri L. (FDA/ORA/P-FO); Keith, Sam (ATSDR/DTEM/ATB); liles.darrell@epa.gov; Lotz, William G. (Greg) (CDC/NIOSH/DART); Brandon, Lou; Lough, Scott (USDA); Maher, Carmen T. (FDA/OC/OCS); menarm@nv.doe.gov; michael.noska@fda.hhs.gov; Miller, Charles W. (CDC/ONDIEH/NCEH); Morrison, Ellen F. (FDA/OC/OCTC); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); O Laughlin, Colleen T.; Pavek, John - Washington, DC [John.Pavek@wdc.usda.gov]; Pemberton, Wendy (DOE/FRMAC); Peter.A.Petch@aphis.usda.gov; Roger Goodman; Ron.Graham@fsis.usda.gov; Sincek, Jeffrey A. (FDA/ORA/CE-FO); Smallwood, Karen R. (FDA/ORA/SE-FO); Whitcomb, Robert C. (CDC/ONDIEH/NCEH)
Cc: Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Miller, Charles W. (CDC/ONDIEH/NCEH); Ansari, Armin (CDC/ONDIEH/NCEH); Evans, Lynn (CDC/ONDIEH/NCEH); Wood, Charles (CDC/ONDIEH/NCEH) (CTR)
Subject: Radiometric data for Sr90
Attachments: image001.jpg; Sr90 radiometric data.docx

I am resending this with the type o's corrected.

Regards,
John

DJ|271

Attachment Sr90 radiometric data.docx(13270 bytes) cannot be converted to PDF format.

From: Jablonowski.Eugene@epamail.epa.gov
Sent: Wednesday, April 13, 2011 5:04 PM
To: Dixon, John E. (CDC/ONDIEH/NCEH); Albert L. Wiley Jr (albert.wiley@orise.orau.gov); Ansari, Armin (CDC/ONDIEH/NCEH); Whitcomb, Robert C. (CDC/ONDIEH/NCEH); Maher, Carmen T. (FDA/OC/OCS); Connell, Carol (ATSDR/DHAC/SRAB); Wood, Charles (CDC/ONDIEH/NCEH) (CTR); Miller, Charles W. (CDC/ONDIEH/NCEH); Liles.Darrell@epamail.epa.gov; Tupin.Edward@epamail.epa.gov; Morrison, Ellen F. (FDA/OC/OCTC); Hornsby-Myers, Jennifer (CDC/NIOSH/OD); Brozowski.George@epamail.epa.gov; Evans, Lynn (CDC/ONDIEH/NCEH); gordon.s.cleveland@aphis.usda.gov; Cherniack, James J. (FDA/ORA/NE-FO); Sincek, Jeffrey A. (FDA/ORA/CE-FO); Nemhauser, Jeffrey B. (CDC/ONDIEH/NCEH); John Jensen; Pavek, John - Washington, DC [John.Pavek@wdc.usda.gov]; Anderson, Jeri L. (CDC/NIOSH/DSHEFS); Smallwood, Karen R. (FDA/ORA/SE-FO); Keith, Sam (ATSDR/DTEM/ATB); Brandon, Lou; Brooks, Michael (ATSDR/DHAC/SRAB); menarm@nv.doe.gov; michael.noska@fda.hhs.gov; O Laughlin, Colleen T.; Buzzell, Jennifer (CDC/ONDIEH/NCEH); Charp, Paul (ATSDR/DHAC/SRAB); Hansen, Patricia A. (FDA/CFSAN/OCD); Pemberton, Wendy (DOE/FRMAC); Peter.A.Petch@aphis.usda.gov; Evans, Rachel T. (FDA/ORA/CE-FO); Funk, Renee (CDC/NIOSH/OD); Goodman.Roger@epamail.epa.gov; Ron.Graham@fsis.usda.gov; DeCair.Sara@epamail.epa.gov; Hargrave, Scotty L. (FDA/ORA/SW-FO); Lough, Scott (USDA); Jones, Terri L. (FDA/ORA/P-FO); Lotz, William G. (Greg) (CDC/NIOSH/DART); Cunningham, William C. (FDA/CFSAN/OCD)
Subject: EPA, DHS and DOE definitions and guidance on "Re-entry" and "Return"

Definitions and excerpts from the current "*Manual of Protective Action Guides and Protective Actions for Nuclear Incidents*" [1992 EPA 400-R-92-001]
http://www.epa.gov/rpdweb00/docs/er/400-r-92-001.pdf

- Recovery: The process of reducing radiation exposure rates and concentrations of radioactive material in the environment to levels acceptable for unconditional occupancy or use.
- **Reentry**: Temporary entry into a restricted zone under controlled conditions.
- Relocation: The removal or continued exclusion of people (households) from contaminated areas to avoid chronic radiation exposure.
- Restricted zone: An area with controlled access from which the population has been relocated.
- **Return**: The reoccupation of areas cleared for unrestricted residence or use.

7.5 Reentry
After the restricted zone is established, persons will need to reenter for a variety of reasons, including recovery activities, retrieval of property, security patrol, operation of vital services, and, in some cases, care and feeding of farm and other animals. It may be possible to quickly decontaminate access ways to vital institutions and businesses in certain areas so that they can be occupied by adults either for living (e.g., institutions such as nursing homes, and hospitals) or for employment. Clearance of these areas for such occupancy will require dose reduction to comply with occupational exposure limits (EP-87). Dose projections for individuals should take into account the maximum expected duration of exposure. Persons working in areas inside the restricted zone should operate under the controlled conditions normally established for occupational exposure (EP-87 aka U.S. Environmental Protection Agency Radiation Protection Guidance to Federal Agencies for Occupational Exposure. Federal Register, 52 2822; January 27, 1987).

Definitions from the "*Protective Action Guidance for Radiological Incidents*" (Public Review Draft September 2007), not to be cited or quoted (shown for comparison of what would likely have been in an updated 2007 PAG manual):

D/272

- Recovery: The process of reducing radiation exposure rates and concentrations of radioactive material in the environment to levels acceptable for unconditional occupancy or use.
- Reentry: Temporary entry into a relocation area under controlled conditions.
- Relocation: The removal or continued exclusion of people (households) from contaminated areas to avoid chronic radiation exposure.
- Relocation Area: An area from which residents should be relocated because radiation doses are expected to exceed the intermediate phase PAGs.
- Return: The reoccupation of areas previously designated as relocation areas because potential radiation doses are below the intermediate phase PAGs.

F.5 Criteria for Reentry into the Relocation Area
Persons may need to reenter the relocation area for a variety of reasons, including radiation monitoring, recovery work, animal care, property maintenance, and factory or utility operation. Some persons outside the relocation area, by nature of their employment or habits, may also receive higher than average radiation doses. Tasks that could cause such exposures include (1) changing of filters on air handling equipment (including vehicles); (2) handling and disposal of contaminated vegetation (e.g., grass and leaves); and (3) operation of control points for the relocation area.

Individuals who reenter parts of the relocation area where the dose would exceed 2 mrem in an hour or who perform tasks involving exposure rates that would cause their radiation dose to exceed that permitted by the PAGs, should do so in accordance with existing federal radiation protection guidance for occupationally exposed workers (EPA 1987). The basis for that guidance has been provided elsewhere (EPA 1987).

Two chapters that seem to be worth reviewing, but not cited or quoted:

- Chapter 3: Protective Action Guides for the Intermediate Phase
- Appendix F: Intermediate Phase Protective Action Guides Background Information

The DHS / FEMA: *Planning Guidance for Protection and Recovery Following Radiological Dispersal Device (RDD) and Improvised Nuclear Device (IND) Incidents* (2008, http://www.fema.gov/good_guidance/download/10260):

- Appendix 4 *Operational Guidelines for Implementation of Protective Action Guides and Other Activities in RDD or IND Incidents* discusses issues related to re-entry and temporary access.

DOE *Preliminary Report on Operational Guidelines Developed for Use in Emergency Preparedness and Response to a Radiological Dispersal Device Incident*
(2009,http://www.epa.gov/rpdweb00/docs/er/ogt_manual_doe_hs_0001_2_24_2009.pdf)

- Chapter 1.2.4 *Group D: Temporary Access to Relocation Areas for Essential Activities* provides an overview of opera guidelines for temporary access to relocation areas for essential activities by workers and members of the public.
- Chapter 7 provides operational guidelines to allow temporary access to relocation areas by the public or employees of businesses in those relocation areas, for a variety of reasons ranging from retrieval of records and equipment to retrieving pets.

Eugene Jablonowski, Health Physicist
U.S. EPA Region 5 Emergency Response
77 W. Jackson Blvd. (SM-5J)
Chicago, IL 60604
(312) 886-4591 office
(b)(6) cell <--- NEW

(312) 692-2466 fax
jablonowski.eugene@epa.gov

From: CMweb <cm-web-spt@aquinas.llnl.gov>
Sent: Friday, April 15, 2011 5:28 PM
Subject: CMweb book access granted (SPEEDI Data V)

CMweb Web User,

You have been granted access to the book titled,

SPEEDI Data V

To access this information, you will need to log in to the CMweb system by clicking on the link below:
https://cmweb.llnl.gov/web/share/shareHome.html?pk=bok_201100000231

Additional Information:

D/273

From: Brandon, Lou
Sent: Monday, April 18, 2011 1:01 PM
To: Rudisail, Steven
Cc: Bonser, Brian
Subject: RE: NSIR KI Procedure
Attachments: nrc exposure Control During Emergencies.doc

Yes, the HQ PMT Dose Analyst Procedure, Appendix A, I think (in Orlando, this wk). Also there is draft guidance (Bob Bores work) in the queue for IROC approval (attached), but this may be updated with lessons learned from Japan.

Lou

From: Rudisail, Steven
Sent: Monday, April 18, 2011 11:41 AM
To: Brandon, Lou
Cc: Bonser, Brian
Subject: FW: NSIR KI Procedure

Lou:

Isn't this just an attachment to the HQ PMT director procedure?

From: Bonser, Brian
Sent: Monday, April 18, 2011 11:05 AM
To: Rudisail, Steven
Subject: NSIR KI Procedure

Steve,

Please send me the web address for the NSIR KI procedure.

Brian R. Bonser
Chief, Plant Support Branch 1
Division of Reactor Safety, Region II
U.S. Nuclear Regulatory Commission
404-997-4653

DJ/274

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From: E.Buglova@iaea.org
Sent: Wednesday, April 20, 2011 11:25 AM
To: atheyconsulting@frontiernet.net
Cc: Brandon, Lou
Subject: FW: InterRAS
Attachments: interras_test_2011.doc

Dear George

Please, let me know what is the time schedule on your side to complete the InterRAS.

Many thanks in advance
Elena

From: Kantavari@haea.gov.hu [mailto:Kantavari@haea.gov.hu]
Sent: Wednesday, 20 April 2011 07:40
To: Athey Consulting
Cc: BUGLOVA, Elena
Subject: InterRAS

Dear George,

Please find attached my comments about the InterRAS.

All the best,
Anita

DJ/275

InterRAS TEST

2011. FEBRUARY – MARCH

CREATED BY ANITA KANTAVÁRI

SOFTWARE

InterRAS 1.0.0 (Draft Working Materials)

Published in January, 2011

Developed by Athey Consulting

INTRODUCTION

RESULTS OF EARLIER TESTS

Under the last testing program (August-October, 2010), there were 15 requests identified. These were collected in the following documents: test02.doc, test03.doc and test04.doc. The new version of the program was published in January, 2010 and the developer enclosed the changing list.

STRUCTURE OF THIS DOCUMENT

The document is classified the requests as: completed, opened and new requests.

COMPLETED REQUESTS

Below requests are originated from the: test02.doc, test03.doc and test04.doc. For these requests the solution in the new version are accepted.

1. FMDose: Added fields for user to optionally specify the "time of deposition" for samples.

2. FMDose: Changed so that breathing rate of 1.2 m^3/h is used for both early- and urgent-phase.

3. STDose: see #10 below

4a. STDose: Case summary now shows city, county, state, and country.

4b. STDose: Steaming rate is now shown on the plant parameter screen in units of kg/h

7. STDose: Updated the labels used for ET per Annum Early Phase on the result selection screen and on the numeric and graphic output displays.

9. STDose: updated the notes section of the Maximum Dose Values screens to display the provided text.

10. STDose: Implemented a field on the Start Calculations screen where the user can specify the number of days (1 – 9) of groundshine dose to be used in the calculation of ET. This change required a modification to the structure of the case saving format. The result is that any cases saved with the earlier draft cannot be recalled.

12. STDose: Made the change to results display to show 'Gy' instead of 'Gy-Eq' for the 4 AD acute doses.

13. STDose: Corrected the display of distances.

14. FMDose: display of OIL table and graphics has been disabled.

OPENED REQUEST

6. *"Have not generated new map backgrounds as there are still only the 3 German sites in the facility database as examples. We may try to get all the non-U.S. plants partially into the database but they will not have topography files or reactor specific data. If we do that we should also be able to generate accompanying map background files."*

   IAEA cannot give the reactor specific data in the close future. If we can get the map from the non-U.S. NPPs in the InterRAS, please, do it.

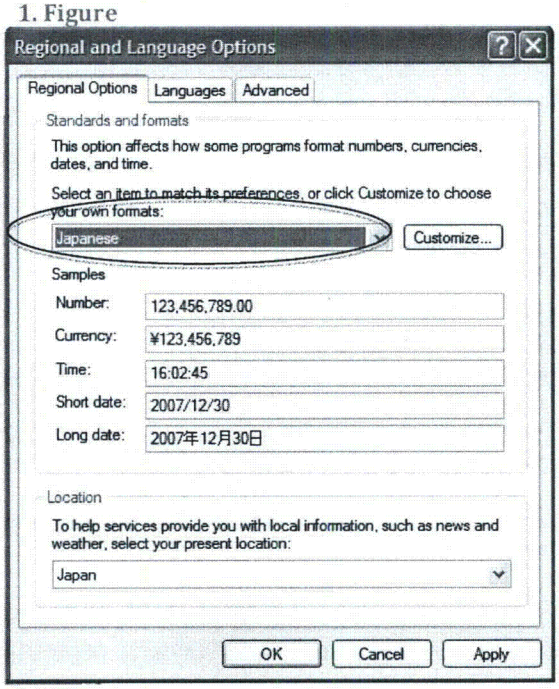
8. *InterRAS: Have updated the codes (except the Met Viewer) so that they should work correctly in using other Windows Regional Settings. IAEA should do more extensive testing across the various languages that need support.*

   The meteorological data viewer program has not yet been updated for other local settings yet. It is not required for basic use of the model as it is used only to graphically view the met data. It will be fixed for the final release.

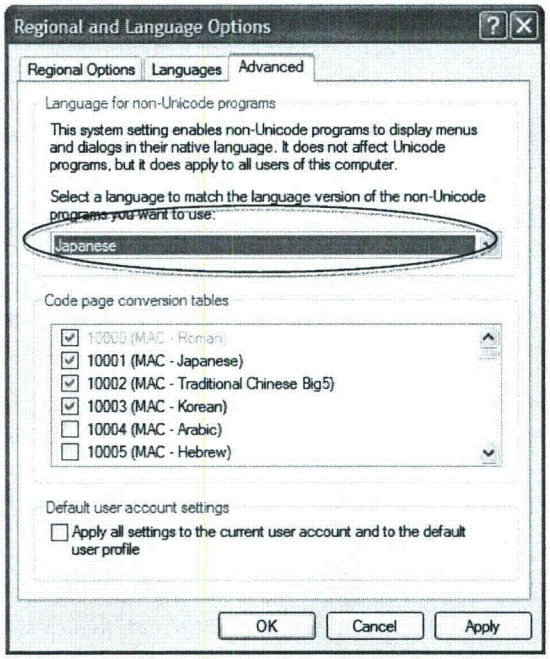
   InterRAS is sensitive for the change of two options in the Local and Language settings (Windows XP):

   - "Standards and formats" in the "Regional Options" tab,
   - "Language for non-Unicode programs" in the "Advanced" tap.

1. Figure



2. Figure



In the first series of the test, the **U.S English** option was chosen as "Language for non-Unicode programs" and the "Standards and formats" was varied. Some languages caused error (the number of the error message: 13 see the figureNo.3 and 4)

3. Figure

4. Figure

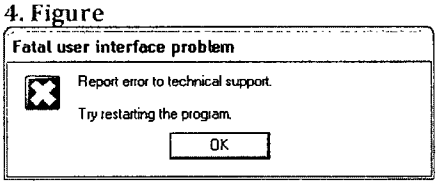


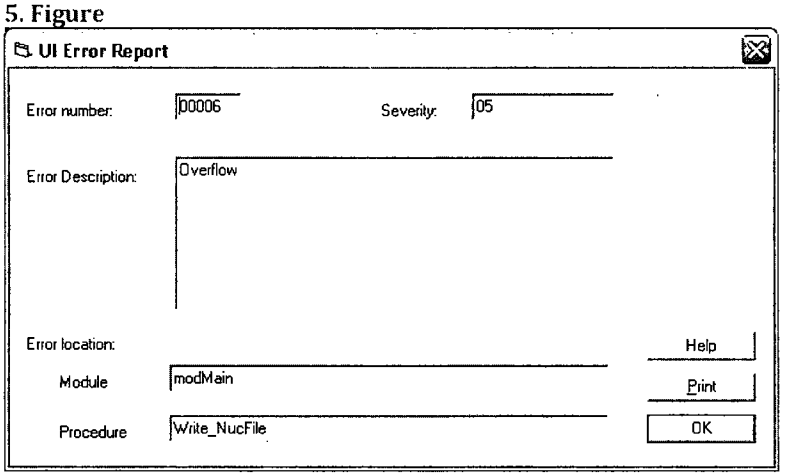
Table No. 1. summarizes the result of the first series of this test.

1. Table

Regional and local setting of Windows XP **Standards and Formats (on Regional Options tab)**	**Effect for the InterRAS**
English (United States)	running without error
English (United Kingdom)	running without error
Spanish (Mexican)	running without error
Russian	error message, (error number 13 see pictures number 1 and 2)
French	error message, (error number 13 see pictures number 1 and 2)
German (Germany)	running without error
Portuguese (Brazil)	running without error
Hungarian	error message, (error number 13 see pictures number 1 and 2)

In the second series of this test, only the "Language for non-Unicode programs" was changing. Some Language caused some error messages (the number of the error messages: 6 and 70 see the pictures No. 5 and 6.)

5. Figure



6. Figure

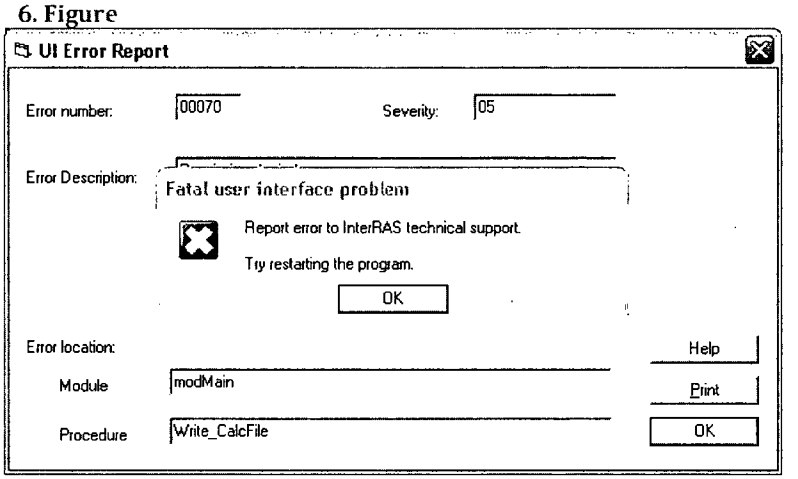


Table No. 2. summarizes the result of the second series of this test.

2. Table

Regional and local setting of Windows XP Language for non-Unicode programs(on Advanced tab)	Effect for the InterRAS
English (United States)	running without error
French	running without error
German	running without error
Hungarian	error messages (error numbers : 6 and 70)
Russian	error messages (error numbers : 6 and 70)

11. *"STDose: The first year total effective dose (NRC intermediate phase dose) in the STDose model is for preliminary consideration only as it is based on projected deposition (not measurements). As such, the calculation in STDose does not include corrections for building occupancy time or building shielding. Our testing shows good agreement in 1st year*

effective dose when taking deposition values from STDose and using them as sample input to FMDose as long as the FMDose calculations use time in building = 0."

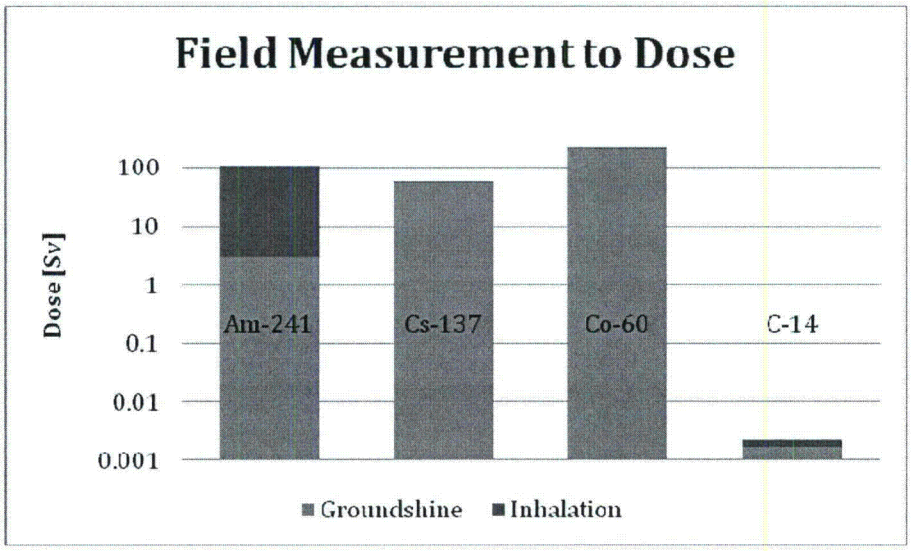
It is necessary to give a comment for the first year total effective dose in the STDose: "There is no correction for building occupancy time or building shielding."

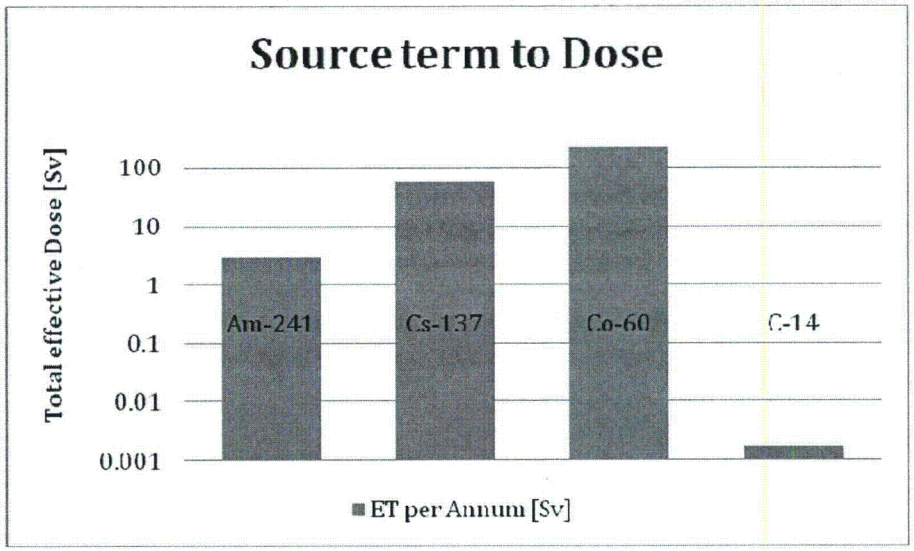
The comparison of the result of STDose and FMDose show that **the groundshine dose from the FMDose model** is the same with **total effective dose from STDose** model. Why is the effective dose not equivalent in the two parts of the InterRAS?

(You can see an example for this difference in the next table and diagram. If it is necessary, the save of this case can be sent to the developer.)

3. Table

		Source term to Dose	Field Measurement to dose		
Isotope	Ground concentration [kBq/m2]	ET per Annum [Sv]	Groundshine	Inhalation	Total
Am-241	4,51E+06	**2,94**	2,94	107	**110**
Cs-137	4,51E+06	**58,8**	58,7	0,0077	**58,7**
Co-60	4,51E+06	**236**	236	0,0519	**236**
C-14	4,51E+06	**1,73E-03**	1,72E-03	5,05E-04	**2,23E-03**





NEW REQUESTS

16. STDose: Legend of the Thyroid dose's map

    Please, change intervals on the legend refer to the suggested 50 mSv IAEA limit. It should show red colour above 50 mSv.

From: Kratchman, Jessica
Sent: Friday, April 22, 2011 1:02 PM
To: Marshall, Jane; Brandon, Lou
Subject: RE: No one in RST this weekend

OK. Thanks for following up.

Have a great weekend.

From: Marshall, Jane
Sent: Friday, April 22, 2011 11:41 AM
To: Kratchman, Jessica; Brandon, Lou
Subject: RE: No one in RST this weekend

Yep, you're now on call instead of responding.

From: Kratchman, Jessica
Sent: Friday, April 22, 2011 10:53 AM
To: Marshall, Jane; Brandon, Lou
Subject: RE: No one in RST this weekend

That is what the RST and LT told me during my shift.

Any word yet?

From: Marshall, Jane
Sent: Friday, April 22, 2011 7:20 AM
To: Kratchman, Jessica; Brandon, Lou
Subject: RE: No one in RST this weekend

Jessica-
As far as I know, that decision will not be made (going on-call) until later this morning. Can you tell me where you got that information? Either it's true and we need to let others (i.e., you) know not to come in or it's not true and we need to make sure folks do come in for their shifts.

Thanks,
Jane

From: Kratchman, Jessica
Sent: Friday, April 22, 2011 3:58 AM
To: Brandon, Lou
Cc: Marshall, Jane
Subject: No one in RST this weekend
Importance: High

Lou,

I am on the night shift for tomorrow night (Friday-Saturday), but the RST/ ET/ EST have gone to an **on-call schedule** for the **weekend** and will pick back up on Monday. Would you still like me to go in?

DJ\276

Thanks!

-Jessie

Jessica Kratchman
Emergency Preparedness Specialist
Nuclear Security and Incident Response
United States Nuclear Regulatory Commission
301-415-5112

From: Brandon, Lou
Sent: Tuesday, April 26, 2011 7:18 AM
To: Hart, Michelle
Subject: RE: more thoughts

Thanks Michelle.

From: Hart, Michelle
Sent: Monday, April 25, 2011 8:28 AM
To: Brandon, Lou
Subject: more thoughts

Lou,

(b)(5)

(b)(5)

Michelle

DJ\277

From: Sullivan, Randy
Sent: Wednesday, April 27, 2011 8:16 AM
To: Brandon, Lou
Subject: RE: Amber Waves C&O Read Ahead

Thanks Lou

Randolph Sullivan, CHP

From: Brandon, Lou
Sent: Tuesday, April 26, 2011 5:11 PM
To: Sullivan, Randy; Miller, Chris
Cc: Stransky, Robert; Grant, Jeffery
Subject: FW: Amber Waves C&O Read Ahead

Chris, see the second attachment. Amber waves, full FRMAC exercise (every three years) coming up in 2012, September 24-28.

Lou

Any idea? For Chris?

Randolph Sullivan, CHP

-----Original Message-----
From: Miller, Chris
Sent: Tuesday, April 26, 2011 10:14 AM
To: Sullivan, Randy; Milligan, Patricia; Thaggard, Mark
Subject: FRMAC ex

Is there a planned exercise where FRMAC will be deployed in the near future (12 mos.)? VT EMA was asking. Thx

---

From: Palmer, Brendan [mailto:Brendan.Palmer@orise.orau.gov]
Sent: Thursday, March 10, 2011 12:30 PM
To: (b)(6)
(b)(6)

DJ\278

(b)(6)

Subject: Amber Waves C&O Read Ahead

Amber Waves Planners – Attached are the slides which will be used during the March 16th Amber Waves C&O Conference. I have also attached the draft DOE/NNSA objectives. These documents will also be available in the Amber Waves folder on CM Web. As a reminder the conference will be held at the Kansas City Airport Hilton and registration will be open from 0815-0900. During the conference we will ask agency representatives to present their objectives or if objectives have not been developed, to discuss in general, what their intended scope of play will be. Please let me know if you have any questions.

Brendan Palmer
National Security & Emergency Management Programs
Oak Ridge Institute for Science and Education (ORISE)
Washington, DC
Brendan.Palmer@orise.orau.gov
Desk: 202.955.3658
Cell (b)(6)
Fax: 202.955.1063

Amber Waves Concept & Objectives Meeting

March 16, 2011

Kansas City, MO

1

Opening Remarks

- Welcome
- Administrative remarks
- Introductions

2

Agenda

TIME	Topic
0815-0900	Registration
0900-0915	Welcome/Overview
0915-0945	Exercise Purpose & Concept
0945-1100	Goals & Objectives
1100	Break
1100-1145	Technical Scenario Review
1145-1300	Lunch
1300-1415	Incident Response Structure; Deepwater horizon capture and introduce Steering committee
1415-1445	Planning Milestones
1445	Break
1445-1515	Working Group Structure
1515-1545	Open Discussion
1545-1615	Planner Due Outs

3

Welcome & C&O Overview

4

Today's Goals

- Discuss exercise concept, goals, and objectives
- Follow DHS Homeland Security Exercise and Evaluation Program (HSEEP) guidance for exercise development
  - Identify the planning timeline
  - Identify the Working Group Structure
- Assign tasks and deadlines for the next interagency meeting

5

Amber Waves 2012

Purpose & Concept

6

National Policies

- National Response Framework
  - Nuclear/Radiological Incident Annex
- National Incident Management System
- Stafford Act
- National Disaster Recovery Framework

Amber Waves 2012 Purpose and Concept

- Purpose
  - To demonstrate the capability of effectively managing the response to a domestic Radiological Dispersal Device (RDD) incident in urban and rural environments
- Concept
  - Tier II National-level exercise
  - Respond to a radiological incident in urban and rural environments
  - Deployment of the Federal Radiological Monitoring and Assessment Center (FRMAC) augmentation resources – including interagency coordination and integration

Interagency participation is critical for achieving the goals and objectives of this exercise

Amber Waves 2012 Purpose and Concept

- First 24 hrs of response to the incident will be executed as a discussion-based exercise to set the stage for full-scale exercise (FSE)
  - First responder activities
  - Initial consequence management actions
  - FBI crime investigation
  - Help identify start-ex conditions for the FSE
- STARTEX of FSE – 24 hrs post-incident to be conducted real-time over the course of multiple days (September 24-28, 2012)

Exercise Conduct Schedule

- Monday September 24, 2012
  - Controller Training
  - Player Training to include Start Ex conditions and facility/venue review
- Tuesday September 25, 2012
  - Play begins at N+24 hours
  - 0700-1900
- Wednesday September 26, 2012
  - 0700-1900
- Thursday September 27, 2012
  - 0700-1500
  - 1700 Player Hotwash
- Friday September 28, 2012
  - 1000 Executive Team Hotwash

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Off-Shift Activities

- There will be little to no night shift activities
  - Possible Laboratory play
- The beginning and end of each Exercise Day will feature a shift change turnover brief.

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Exercise Participants

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Anticipated Participants

- Iowa
  - Emergency Management & Homeland Security Division
  - Department of Public Health
  - University of Iowa Hygienic Laboratory
- Kansas
  - Division of Emergency Management and Homeland Security
  - Bureau of Environmental Health
  - Army National Guard
- Leavenworth County Emergency Management
- Unified Government of Wyandotte County
- Johnson County

Anticipated Participants

- Missouri
  - State Emergency Management Agency
  - Department of Health and Senior Services
- Kansas City Department of Health

Anticipated Participants (cont'd)

- Department of Agriculture
- Department of Defense
  - U.S. Northern Command
  - Defense Coordinating Officer
- Department of Health & Human Services
  - Centers for Disease Control and Prevention
  - Food & Drug Administration
- Environmental Protection Agency
  - Region VII
  - Office of Emergency Management
  - EPA ORIA/RERT
- Federal Bureau of Investigation
  - KC Field Office
  - WMDOU
  - HMROU
- Federal Emergency Management Agency
  - Region VII
  - CBRNE Branch
  - Incident Management Assistance Team
- National Guard Bureau
- Nuclear Regulatory Commission

Anticipated Participants (cont'd)

- National Nuclear Security Administration
  - Office of Emergency Operations
  - Office of Emergency Response
    - HQ Nuclear Incident Team
    - Aerial Measuring System (AMS)
    - Consequence Management Home Team (CMHT)
    - Consequence Management Response Team (CMRT)
    - National Atmospheric Release Advisory Capability (NARAC)
    - Radiation Emergency Assistance Center/Training Site (REAC/TS)
    - Radiological Assistance Program (RAP), Region II, IV, & V

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Goals & Objectives

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Interagency Goals

- Goal 1: Assess and evaluate the roles and responsibilities of affected organizations in response to a Radiological Dispersal Device
- Goal 2: Assess and evaluate ICS/NIMS plans and procedures for managing the consequences of a Radiological Dispersal Device incident in a multi-state, mixed urban/rural environment
- Goal 3: Evaluate capability of response elements to develop, utilize and successfully communicate radiological data and related products
- Goal 4: Assess the impact to Critical Infrastructure and Key Resources (CIKR) and prioritize the reestablishment of CIKR

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Objectives

- Amber Waves objectives should be S.M.A.R.T.
  - Specific
  - Measurable
  - Attainable
  - Realistic
  - Time Based
- Original DOE Objective: Evaluate the integration of FRMAC in Unified Command and Command Centers.
- Updated S.M.A.R.T. Objective: Integrate DOE personnel into critical incident management functions at incident command posts and Emergency Operations Centers within 24 hours of notification.

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Objective Quad Chart

Objective: (Example)	Supporting Tasks:
Integrate DOE personnel into critical incident management functions at Incident command posts and Emergency Operations Centers within 24 hours of notification.	1. Deploy a Senior Energy Official (SEO) and Incident Support personnel within 12hours of notification. 2. Integrate the FRMAC Director and the SEO into Unified Command at the ICP. 3. Integrate DOE LNOs into affected state and county EOCs within 24 hours. 4. Support Command & General Staff with ICS position trained personnel
Timeframe/location: All Supporting Tasks should be accomplished within 24 hours from notification. Locations involved: Incident Command Post, Emergency Operations Centers	**Plans, policies, procedures:** NIMS, NRIA, FRMAC Operations Manual, DOE Incident Management Handbook

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Kansas DHE Objective #1

- Test the KDHE procedures for population monitoring for a non-power plant radiological incident in partnership with a local health department and other volunteers in Kansas during a one day drill in conjunction with the Amber Waves exercise.
  - Determine location of population monitoring center.
  - Call-out of registered population monitoring volunteers from registry.
  - Coordination with other volunteer groups (CAART, KSART, CERT, Red Cross, etc.)
  - Partnership formed between volunteers and local health department staff, with KDHE support as needed.
  - Demonstrate that the center is set up and sufficient equipment, supplies, and personnel are obtained.
  - Successfully monitor and/or decontaminate all citizens who arrive requesting the service, with KDHE support as needed, or refer citizen to hospital for additional decontamination.
  - Successfully document and register all individuals who are monitored and/or decontaminated, and demonstrate long term tracking ability
  - Perform ongoing tracking of all supplies, requests for assistance, and personnel staffing
  - Perform tracking and handling of contaminated articles, items, equipment, and personal effects.
  - Address the issue of pets and animals.

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Kansas DHE Objective #2

- Test the ability of the KDHE radiological assets and personnel to successfully integrate with local, federal, and other Kansas, Iowa, and Missouri partners to perform radiological response activities in accordance with KDHE radiological emergency response procedures and characterize the impacted area. Integration should be complete by the end of Day 1 of the Amber Waves exercise.
  - Assign KDHE radiation staff to specific roles and responsibilities as defined in the KDHE radiological emergency response procedures and to each liaison role as requested by FRMAC as per the FRMAC Operations Plan.
  - KDHE Radiation Staff will establish communications and coordinate with partners at the agency DOC, State EOC, affected county EOC's, the Incident Command, and other states as applicable.
  - KDHE will coordinate the formation of joint field teams in partnership with federal assets available to successfully perform monitoring and sampling of the affected area in Kansas.
  - KDHE Radiation Staff will co-locate with the FRMAC and perform radiological assessment activities in coordination with federal partners.
  - KDHE still will perform decontamination as needed of field monitoring teams and their equipment

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Kansas DHE Objective #3

- Test the ability of the KDHE radiation staff to make timely and accurate protective action recommendations using data and information obtained by integrated response of KDHE, local, federal, and other Kansas, Iowa, and Missouri partners.
  - Perform dose assessments and develop maps from field data and other projections.
  - Share data between state/federal radiological responders and utilize their expertise/guidance to assist in making protective action recommendations.
  - Share data and recommendations with Iowa and Missouri radiation staff as applicable and requested.
  - Provide timely and accurate PARs to the Policy Group at the Kansas SEOC.

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Kansas DHE Objective #4

- Test the ability for the KDHE Radiochemistry Laboratory to work in partnership with the EPA Mobile Laboratories to coordinate the receipt and analysis of environmental samples and to provide electronic sample analysis data to KDHE radiological staff and the FRMAC within 24 hours of receipt of samples in accordance with KDHE radiological emergency response procedures.
  - Determine location for EPA Mobile Laboratories to be set up.
  - Determine process for sample receipt and division between laboratories.
  - Correctly use the chain of custody forms for tracking possession of samples.
  - Determine process for sharing of laboratory analysis data.
  - Perform sample analysis and provide data to KDHE Radiation Staff and FRMAC in a timely manner.

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Kansas DHE Objective #5

- Test the ability for KDHE staff to successfully serve three 12-hour days in the State EOC in support of the multi-state and federal response to a non-nuclear power plant radiological incident in accordance with KDHE radiological emergency response procedures and the Kansas Response Plan - ESF#10.
  - Provide staff for the Policy Group, ESF#10 functions, public information, and technical liaisons at the SEOC.
  - Ensure all technical radiological data and information is accurately explained and interpreted to the Policy Group, to all SEOC staff, and to any county EOCs as requested.
  - Provide PARs for protection of the Public Water Supply.
  - Serve in the Policy Group to assist in making Protective Action Decisions in support of the county(s).
  - Provide assistance in the development of press releases regarding radiological and public health issues.
  - Coordinate KDHE response activities with the KDHE DOC as applicable.

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Missouri DHSS – Objective #1

- Test the ability of the DHSS radiological personnel and equipment to successfully integrate with local, federal and other Missouri, Kansas, Iowa partners to perform radiological response activities in accordance with DHSS radiological emergency response procedures and characterize the affected area. Integration should be complete by the end of Day 1.
  - Assign DHSS radiation staff to specific roles and responsibilities as defined in the DHSS radiological emergency response procedures and to each liaison role as requested by FRMAC as per the FRMAC Operations Plan.
  - DHSS Radiation Staff will establish communications and coordinate with partners at the agency DOC, State EOC, affected county EOC's, the Incident Command, and other states as applicable.
  - DHSS will coordinate the formation of joint field teams in partnership with federal assets available to successfully perform monitoring and sampling of the affected area in Missouri.
  - DHSS Radiation Staff will co-locate with the FRMAC and perform radiological assessment activities in coordination with federal partners.
  - DHSS still will perform decontamination as needed of field monitoring teams and their equipment/vehicles in coordination with federal partners.

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Missouri DHSS – Objective #2

- Test the DHSS procedures for population monitoring for a non-power plant radiological incident in partnership with a local health department and other volunteers in Missouri during a one day drill in conjunction with the Amber Waves exercise.
  - Determine location of population monitoring center.
  - Coordination with volunteer group for population monitoring (MoRet, Red cross, others).
  - Partnership formed between volunteers and LPHA staff, with DHSS support as needed.
  - Demonstrate that the center is set up and sufficient equipment, supplies, and personnel are obtained.
  - Successfully monitor and/or decontaminate all citizens who arrive requesting the service, with DHSS support as needed, or refer citizen to hospital for additional decon.
  - Successfully document and register all individuals who are monitored and/or decontaminated, and demonstrate long term tracking ability.
  - Perform ongoing tracking of all supplies, requests for assistance, and personnel staffing.
  - Perform tracking and handling of contaminated articles, items, equipment, and personal effects.
  - Address the issue of pets and animals.

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Missouri DHSS – Objective #3

- Test the ability of the DHSS radiological team to make timely and accurate protective action recommendations using data and information obtained by integrated response of DHSS, federal, local and other Missouri, Kansas and Iowa partners.
  - Perform dose assessments and develop maps from field data and other projections.
  - Share data between state/federal radiological responders and utilize their expertise/guidance to assist in making protective action recommendations.
  - Share data and recommendations with Kansas and radiation staff as applicable and requested.
  - Provide timely and accurate PARs to the decision making group.

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Missouri DHSS – Objective #4

- Test the ability for the DHSS Laboratory to work in partnership with the EPA Mobile Laboratories to coordinate the receipt and analysis of environmental samples and to provide electronic sample analysis data to DHSS radiological staff and the FRMAC within 24 hours of receipt of samples in accordance with DHSS radiological emergency response procedures.
  - Determine the set-up location for EPA Mobile Laboratories.
  - Determine process for sample receipt and division between laboratories.
  - Correctly use the chain of custody forms for tracking possession of samples.
  - Determine process for sharing of laboratory analysis data.
  - Perform sample analysis and provide data to DHSS Radiation Staff and FRMAC in a timely manner.

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Missouri DHSS – Objective #5

- Test the ability of the DHSS staff to integrate with the Joint Information Center to develop and disseminate timely and accurate informational releases to the public.
  - Determine the location of the Joint Information Center.
  - Assist in the development of timely and accurate press/media releases regarding radiological and public health issues.

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Missouri DHSS – Objective #6

- Test the ability of the state SNS program to establish an RSS site and receive and distribute DTPA and related medical equipment to local facilities within 24 hours.
  - Secure location of RSS site
  - Activate Team members
  - Prepare the site for RSS operations
  - Receive, process and distribute requests

A-Team Objectives #1 & 2

- Demonstrate effective integration of the Advisory Team for Environment, Food and Health (the Advisory Team) into the Incident Command Structure of the exercise.
- Demonstrate effective use of the Consequence Management Home Team (CMHT) during the exercise. This will include dissemination of information obtained from the CMHT to Advisory Team members as they travel and arrive onsite and to Advisory Team members who participate at their home base.

A-Team Objectives #3, 4 & 5

- Demonstrate effective data flow between the FRMAC and the Advisory Team. Demonstrate effective flow of Advisory Team Advice and recommendations to the coordinating Agency.
- Demonstrate effective communication among the Advisory Team members, between Advisory Team members and their respective agency HQ staff, and between Advisory Team members and the coordinating agency.
- Demonstrate activation of the Advisory Team as described by the Nuclear/Radiological Incident Annex of the National Response Framework.

EPA RERT & Region 7 Objectives

RERT

- Evaluate ability to integrate EPA's assessment capability with other agencies
- Demonstrate EPA's ability to work within ICS in response to a major radiological incident
- Exercise EPA's role in ESF 15 at national and site-specific levels
- Improve operational readiness of EPA personnel and resources
- Field test the RadNet Deployables
- Field test monitoring equipment
- Field test mobile laboratory and command post

EPA RERT & Region 7 Objectives

RERT Continued

- Evaluate radiological survey teams
- Evaluate ability for field air sampling and deployable(s) left operating overnight in an urban environment
- Evaluate ability to transfer data from field measurements to main data base
- Successfully integrate data from RadNet into IMAAC/NARAC
- Test fixed lab capability to transmit results to FRMAC
- Demonstrate the establishment and operation of a Joint Information Center (JIC) with coordination between Federal, state and local agencies

EPA RERT & Region 7 Objectives

RERT Continued

- Demonstrate the development of Public Information messages, including the use of IMAAC plain language briefing products
- Demonstrate strategic use of appropriate messaging related to ethnic and religious groups

EPA Region 7

- Evaluate ability to integrate OSC's with other agencies
- Exercise EPA's role in ESF #5 at national and site-specific levels
- Exercise EPA's role in ESF #10 at national and site-specific levels

EPA RERT & Region 7 Objectives

EPA Region 7 Continued

- Help to identify potential disposal sites for radiation-contaminated debris
- Exercise the RERT Liaison and Advisor roles
- Exercise PIO role and integrate into JIC
- Exercise information flow to the Regional Office and keep Region 7 Management informed

EPA RERT & Region 7 Scope

Number of hours to play

- RERT = 12 hours
- Region 7 = 12 hours

Number of players

- RERT = about 45
- Region 7 = 8-10 staff (i.e. – RSC, RTFL, PIO, OSCs)

Resources to be stood up

- RERT = HQ EOC, JIC, JFO and IMT/ICS
- Sample control center, field teams, mobile and fixed (limited) analytical equipment, assessment teams, GIS teams, RadNet (fixed & deployable), ASPECT airplane, Special teams
- Region 7 = OSC in state EOC, one manager in EPA EOC plus RSC & RTFL, JIC, RERT Liaison & Advisor

FDA Objective

- Within 72 hours of incident notification, complete necessary tasks to assemble assets to assess the impact of the incident on FDA regulated products.
  - Activation of EOC and establishment of ICS
  - Integration with FRMAC
  - Integration of FDA RERC and DERC into FDA response
  - Deployment of FDA Rad Personnel

FEMA CBRNE Objective #1

- Examine the operational aspects of the FEMA NIRT program.
  - Evaluate the effectiveness and accuracy of current pre-scripted mission assignments for both DOE and EPA NIRT assets
  - Integration of DOE and EPA Aerial Monitoring System (AMS) assets
  - Integration of DOE ground measurement assets with state and local responders
  - Assure the two way flow of information between the FRMAC and Federal, State, and Local ground measurement assets.
  - Integration of NARAC/IMAAC products into decision making

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FEMA CBRNE Objective #2

- Exercise FEMA's role as the coordinating agency under the Nuclear/Radiological Incident Annex (NRIA) in the National Response Framework (NRF).
  - Deploy the National IMAT and exercise the roles, responsibilities, and overall coordination of the National IMAT with regional, state, and local assets
  - Demonstrate effective integration of FEMA assets into the Unified Command Group

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FEMA CBRNE Objective #3

- Evaluate activities that would occur at the Headquarters level during a radiological/nuclear incident.
  - Declaration of a major disaster through the Stafford act process.
  - Transition from the National Watch Center to the National Response Coordination Center

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FEMA Region 7 Objectives

Objective #1

- Evaluate FEMA VII response to a state request for assistance to an RDD event in Region VII
  - Deploy FEMA Liaison to the affected State EOC
  - Assess anticipated requirements for Federal support

Objective #2

- Evaluate FEMA Region VII's IMAT team integration with a National IMAT team
  - Deploy Region VII's IMAT within 2-6 hrs. from notification to establish an Incident Operating Facility (IOF)
  - Provide incident information to the National IMAT immediately upon their arrival

FEMA Region 7 Objectives

Objective #3

- Evaluate FEMA Region VII integration/response with other lead Federal agencies, i.e. FBI JOC and DOE FRMAC
  - Integrate FEMA LNO into the FBI JOC within 6 hrs from incident
  - Integrate FEMA LNO into the DOE FRMAC within 6 hrs from incident

Objective #4

- Evaluation of the alert, notification, deployment, reporting and coordination procedures of the RRCC
  - Immediately provide notification of the ENS system of the incident to OFAs, FEMA Region VII Sr. Leaders, and the Region VII IMAT team
  - Coordinate deployment of the FEMA State Liaison and the Regional IMAT team

DOE/NNSA Objectives

- See Handout

Technical Scenario

Draft Scenario

Harvey Clark

Incident Response Structure
Discussion

Incident Response Structure

- *Insert discussions points from March 15, DWH Seminar*
- Incident Management Steering Committee will be created to identify the response structure most appropriate for Amber Waves.
- The structure will be based on necessary command and coordination nodes (e.g. ICPs, ACPs, EOCs, JFOs) but will be constrained by budget, resources and the exercise timeline.
- The Committee will have limited membership and will be comprised of personnel identified by the Executive Team.

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Planning Milestones

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Planning Milestones

Formal Planning Meetings	Proposed Dates
Concept and Operations (C&O) Meeting	March 15-16, 2011
Initial Planning Conference (IPC)	June 7-8, 2011
Mid-term Planning Conference (MPC):	October 27-28, 2011
Master Scenario Events List (MSEL) Conference	March 27-28, 2012
Final Planning Conference (FPC)	July 18-19, 2012
Table Top Exercise (TTX)	July 17, 2012
Synchronization Conference	August 21-22, 2012
Exercise Conduct	September 24-28, 2012
After Action Conference	November 28 29, 2012

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IPC June 7-8, 2011

- Primary Focus
  - Ensure clearly defined and measurable capabilities, tasks and objectives
  - Incorporate relevant policies and procedures into the exercise design
  - Finalize extent of play from each participating entity
  - Finalize duration of the exercise
  - Select/customize appropriate Exercise Evaluation Guides (EEGs)
  - Working Group Break Outs

MPC October 27-28, 2011

- Primary Focus
  - Working Group sessions to discuss
    - Exercise organization and staffing concepts
    - Scheduling, logistics and administrative requirements
  - Review draft exercise documentation
    - Scenario
    - Exercise Plan (ExPlan)
    - Controller and Evaluator Handbook
  - Working Group Break Outs

MSEL Conference March 27-28, 2012

- Primary Focus
  - Identify all expected player actions and associated timelines
  - Identify simulation requirements
  - Develop contingency injects to ensure critical tasks are conducted
  - De-conflict competing or contradictory tasks

FPC July 18-19, 2012

- Primary Focus
  - Final forum for reviewing exercise processes and procedures
  - No changes to exercise design, scope or supporting documentation
  - Ensure all logistical requirements have been met
  - All outstanding issues have been identified and resolved
  - Review of final exercise documents and presentation materials
  - Working Group Break Outs

Synch Conference August 21-21, 2012

- Last opportunity to review products and adjudicate exercise conduct issues.

Working Groups

Working Group

- Primary Focus
  - Do the detailed work needed to optimize time spent at planning conferences.
  - Reports to an Working Group Chair and the Executive Team.
  - Virtual meetings (teleconferences, net meetings, etc.) are highly encouraged.
- Please register with your designated Working Group by the end of this meeting.

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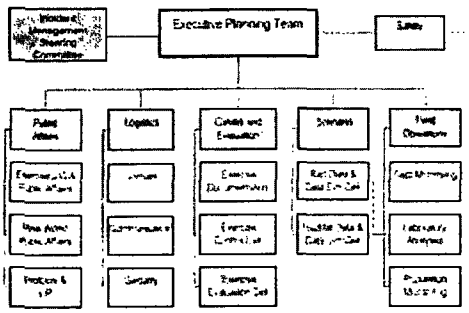
Proposed Working Groups



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Executive Planning Team

- Chair: Colleen O'Laughlin
- Responsibilities:
  - Develops TTX requirements
  - Approves the exercise conduct schedule
  - Responsible for guiding, evaluating and approving the plans of other working groups
  - Responsible for management commitments and for presenting results to respective agencies and organizations
  - Not intended to meet during major planning conferences

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Control and Evaluation

- Chair: Mirentxu Arrivillaga, DOE/ORISE
- Responsibilities:
  - Develops the Explan
  - Determines and develops Control and Evaluation requirements.
  - Develops Control Plan
  - Identifies simulation requirements
  - Maintains the MSEL
  - Develops an Evaluation and Assessment Plan used to produce Lessons Learned and an After Action Report
  - Maintains and completes controller manning document

Field Operations

- Chair: Rich Sorom, DOE/RSL
- Responsibilities:
  - Addresses Monitoring, Sampling and Laboratory Analysis issues
  - Determines material/equipment and simulation requirements which will be provided to Control & Evaluation and Logistsics WGs
  - Develops incident site layout and positioning of hot lines and contamination control points (as necessary)

Scenario

- Chair: Harvey Clark, DOE/RSL
- Responsibilities:
  - Develops scenario, event details, and response flow
  - Develops contamination models and ground truth documents pertaining to weapon type and composition
  - Develops radiological and HAZMAT data to be used during the exercise
  - Will manage the Data SIMCELL in coordination with the Control and Evaluation WG

Strategic Communications and Public Affairs

- Chair: Darwin Morgan, DOE
- Responsibilities:
  - Determines synthetic media requirements and level of SC & PA play
  - Develops plan to execute and exercise public affairs responsibilities
  - Determines space and communications requirements and provides to Logistics and Communications WGs respectively
  - Identifies requirements for real world media releases and events
  - Develops plan to invite, receive, lodge, and provide tours to VIPs

Logistics, Transportation, and Site Setup

- Chair: Terry Meissner, DOE/ORISE
- Responsibilities:
  - Establishes and fulfills logistical requirements to include:
    - Lodging, meals, and transportation, site setup
  - Develops plan to obtain, receive, and position equipment and materials
  - Develops in-processing plan in coordination with Security WG
  - Receives space and communications requirements from other working groups and develops plan to fulfill them
  - Develops security plan to include in-processing and badging requirements

Safety Steering Committee

Chair: TBD

- Develops safety plan in Coordination with Control and Evaluation WG.
- Responsible for real-world safety

Incident Management Steering Committee

- Chair: William Haley, DOE/ORISE
- Responsibilities:
  - Identifies critical elements of the response structure which should be established for the exercise
    - This will include both command and multi agency coordination
  - Will report all progress to the Executive Team
  - Determines site layout(s) to include placement of ICP(s), JOC, JIC(s), IOF/JFO, etc in coordination with the Logistics Working Group

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Training

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Training Requirements

- As part of the exercise development process there may be opportunities to conduct training and drills

Training

- Planners should identify training their agency can provide that would benefit the various Amber Waves training audiences.

Drills

- Notification drills, communications drills, and information sharing drills can be coordinated to prepare for exercise conduct.

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Due Outs

- Incident Management Steering Committee Membership: April 4
- Safety Committee Membership: April 4
- Final Objectives in new format: May 1
- Identify Training opportunities: May 1

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Questions

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From: Brandon, Lou
Sent: Thursday, April 28, 2011 8:05 AM
To: Schwartzman, Jennifer
Cc: George Athey
Subject: FW: InterRAS

Jennifer, are you in communication with Elena so that she is aware of any issues related to handing over the InterRAS program? If not, can you clarify to her what we're up against. I think we really need to get these valuable tools in the hands of an agency like IAEA who is serving the world with information. Let's find a way to accomplish this.

Thanks.

Lou

From: George Athey [mailto:atheyconsulting@frontiernet.net]
Sent: Thursday, April 28, 2011 6:44 AM
To: Brandon, Lou
Subject: FW: InterRAS

Lou -
Do you want to email Elena about possible delays in getting the code cleared for final distribution?

George

From: E.Buglova@iaea.org
Sent: Thursday, April 28, 2011 3:20 AM
To: atheyconsulting@frontiernet.net
Subject: RE: InterRAS

Dear George

Thank you. I would very much appreciate the completion as soon as possible. You can imagine that in light of Fukushima we have even more pressing needs to have the final version. Please, let me know if anything is required form my side.

Best
Elena

From: atheyconsulting@frontiernet.net [mailto:atheyconsulting@frontiernet.net]
Sent: Friday, 22 April 2011 19:05
To: BUGLOVA, Elena
Subject: RE: InterRAS

Dear Elena -

It will be early May before I have any time work on InterRAS. I will speak with Lou Brandon next week about scheduling the work. I will let you know when I have a more firm date for completion.

George

DJ/279

Athey Consulting
(304) 725-8834
atheyconsulting@frontiernet.net

From: E.Buglova@iaea.org [mailto:E.Buglova@iaea.org]
Sent: Wednesday, April 20, 2011 11:25 AM
To: atheyconsulting@frontiernet.net
Cc: Lou.Brandon@nrc.gov
Subject: FW: InterRAS

Dear George

Please, let me know what is the time schedule on your side to complete the InterRAS.

Many thanks in advance
Elena
[The entire original message is not included.]

From:	Sullivan, Randy
Sent:	Friday, April 29, 2011 11:47 AM
To:	Brandon, Lou
Cc:	LaVie, Steve; Kahler, Robert; Kratchman, Jessica
Subject:	Feedback
Attachments:	Feedback on Fukushima Response.docx

Thanks for the opportunity to provide feedback on our Fukushima response. If you have questions, please contact me.

Randolph Sullivan, CHP

DJ/280

Feedback on Fukushima Response

(b)(5)

(b)(5)

(b)(5)

(b)(5)

Subject:	Advisory Team Conference Calls for week of March 21-25, 2011
Location:	see call-in numbers below
Start:	Mon 3/21/2011 2:00 PM
End:	Mon 3/21/2011 3:00 PM
Show Time As:	Tentative
Recurrence:	Weekly
Meeting Status:	Not yet responded
Organizer:	Evans, Lynn (CDC/ONDIEH/NCEH)
Importance:	High

The Advisory Team for Environment, Food and Health (Advisory Team) was activated on March 18, 2011, in response to the Japan earthquakes and tsunami. Ed Tupin (EPA) was selected to be Chairperson of the activated Advisory Team during an Advisory Team conference call at 12:30 PM (EDT) on March 18. This meeting invitation is being sent at the request of Ed Tupin.

The Advisory Team will have **conference calls at 2:00 pm (EDT) daily, March 21-25**, 2011.

The purpose of the calls is to allow members to update each other on activities conducted by their parent agencies and to report on tasks being worked by the Advisory Team.

Please use the following call-in numbers:

Phone number: 866-561-4509
Pass code: (b)(6)

NOTE: It may be necessary to change the time for some of these calls so please monitor your email for change notices.

Thanks!
Lynn Evans

D. Lynn Evans, MS
CAPT, USPHS
Centers for Disease Control and Prevention
NCEH/EHHE/Radiation Studies Branch
Mail Stop F58
4770 Buford Highway NE
Atlanta, GA 30341-3717
Phone: (770) 488-3656
Fax: (770) 488-1539
Email: gfn6@cdc.gov

DJ/261

Subject:	Japan Incident Response AAR Planning Meeting
Location:	TBD
Start:	Tue 4/19/2011 2:00 PM
End:	Tue 4/19/2011 3:00 PM
Show Time As:	Tentative
Recurrence:	(none)
Meeting Status:	Declined
Organizer:	Crosson, Jonathan
Required Attendees:	Grant, Jeffery; Hasselberg, Rick; Brandon, Lou; Temple, Jeffrey; Stone, Rebecca; Kozal, Jason; Kowalczik, Jeffrey; Billings, Sally; Alter, Peter; Lojek, Anne
Optional Attendees:	Marshall, Jane

When: Tuesday, April 19, 2011 2:00 PM-3:00 PM (GMT-05:00) Eastern Time (US & Canada).
Where: TBD

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

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

Good morning,

We have begun planning the Japan Incident Response After Action Report feedback and data collection process. We would like to inform you of our projected data collection and hot wash process we will be conducting over the next several weeks. We would like to meet at 2:00 p.m. tomorrow (Tuesday, April 19). Please let us know if you cannot attend, as we would like to have all RPMs available to discuss this process.

DJ/282

To:	Huffert, Anthony; pmt12.hoc.gov
Cc:	Grant, Jeffery; Marshall, Jane
Subject:	Response to Tony Huffert Call from Japan
Attachments:	PMT Critical Functions.doc; PMT Org Chart.pdf; pmt objectives Millstone.doc; IRQ 055011 PMT Dose Analyst Qualfication Card.docx; IRQ 055004 PMT RAAD Qualfication Card.docx

Tony,

I received your phone call from Japan at 4:43 EDT, but I was on the street and did not hear the ring until too late. You left no call back number and returning the call just took me to a point where I needed to identify a voicemail box. So I couldn't return the call. I'm in Florida for the National Radiological Emergency Preparedness Conference and not in a good position to respond to your request. Nevertheless, I'll try to summarize, provide some resources, and request help from those at HQ.

The issues you identified:

1. You wanted a review of the PMT to compared and differentiate between USG and Japan
2. You wanted a Power Point on the PMT with requirements
3. You wanted curies released

I don't have a composite PMT PP presentation, although there is an NRC response presentation that we do for tours, and there are training programs being produced for the PMT which are not final yet. F

Emergency Response Coordinator
NRC/NSIR/DPR
Mail Stop: T4-L7
Washington, DC 20001
301-415-8013

DS/283

IRTQ 055004

APPENDIX A

QUALIFICATION CARD

PROTECTIVE MEASURES TEAM

RADIOLOGICAL ASSESSMENT ASSISTANT DIRECTOR

(RAAD)

Revision 1

REVISION LOG

Revision Number	Effective Date	Pages Affected	Description of Revision
0	12/29/06	All	Initial Issue
1	02/15/11	6	Update Base & Site Team Procedure Numbers

TABLE OF CONTENTS

1.0 PURPOSE

The purpose of the attached Training and Qualification Card is to document the completion of training and qualification activities associated with each incident response position.

2.0 SCOPE

The scope of this procedure covers required and supplemental training activities associated with the NRC Incident Response Training Program. This program concentrates on training topics and activities that enable technically competent NRC professionals to perform as members of the NRC incident response organization.

3.0 INSTRUCTIONS

3.1 Qualification Card

Refer to the attached Qualification Card. The qualification card identifies all required training courses and activities for this incident response position. Re-qualification requirements and frequencies are also addressed on the qualification card. If an individual has participated in a required training session or activity prior to the creation of the Qual Card, he/she will be given credit for previous attendance.

At the completion of the qualification process, your headquarters Team Coordinator or regional Emergency Response Coordinator (ERC) will notify the Incident Response Training Coordinator that you have been familiarized with the role and functions of the team position and are qualified.

3.2 Training Methodology

Response training can be conducted in various formats. These include:

- Classroom training
- Hands-on training
- Document read & sign
- LAN based or Internet based training
- Team training/meetings, or
- Participation in a drill, exercise or actual event

4.0 DEFINITIONS

A. General Response Training

Training conducted at headquarters and in the regional offices to establish and maintain a minimum level of familiarity with the NRC Incident Response Program, National Response Plan, and National Incident Management System.

B. Team-Specific Training Includes those training modules and topics targeted at all members of a specific team (i.e., HQ Reactor Safety Team or Regional Base Team-specific infrastructure, tools, procedures and management expectations).

C. Position-Specific Training

Includes those training modules and topics targeted at individuals assigned to (or qualifying for) a specific team position (i.e., Reactor Safety Team Director or Base Team Communicator) to prepare each individual to competently perform all assigned tasks listed in their team position procedures.

D. Supplemental Training

Includes those courses and activities

that provide additional knowledge, skills, or qualifications beyond the minimum training requirements for a particular response position.

5.0 REFERENCES

A. Management Directive 8.2 - NRC Incident Response Program

B. NUREG-0728 - NRC Incident Response Program

c. IRMC 0300 - Incident Response Training and Qualification Program

U. S. Nuclear Regulatory Commission Incident Response Program Initial Qualification Card For Protective Measures Team - Radiological Assessment Assistant Director (RAAD)		
Name:	**NRC ID #:**	
The following Procedures have been read:	Date Completed	Candidate Signature & Date
Protective Measures Team Procedure IRP 055001 PMT Director		
Protective Measures Team Procedure IRP 055002 PMT Deputy Director		
Protective Measures Team Procedure IRP 055003 PMT Coordinator		
Protective Measures Team Procedure IRP 055004 PMT Radiological Assessment Assistant Director		
Protective Measures Team Procedure IRP 055005 PMT Protective Measures Assessment Assistant Director		

Protective Measures Team Procedure IRP 055011 PMT Dose Analyst		
Protective Measures Team Procedure IRP 055020 PMT Safety and Safeguards Team Interface		
Executive Team Procedure IRP 052001 Executive Team Response		
Reactor Safety Team Procedure IRP 053002 RST Deputy Director		
Reactor Safety Team Procedure IRP 503012 RST-PMT Assessment Liaison		
Liaison Team Procedure IRP 057001 LT Director		
Base Team Procedure IRP 102010 Protective Measures Manager		
Site Team Procedure IRP 103010 Protective Measures Branch Leader		
The following Activities have been completed:	Date Completed	PMT Mentor Signature & Date
Operations Center walkthrough		
Exercise Observations of PMT RAAD Position		
Exercise or Drill Participation along side a qualified PMT RAAD		
E-library Navigation		
Use of HOC tools		
The Candidate has the following required training:	Date Completed	PMT Coordinator Signature & Date
General Response Training		
Team-Specific Training		
Position-Specific Training, PMT RAAD		
Response Technical Manual Training		
Emergency Response Data System (ERDS) Training		
Introduction to RASCAL		

Geographical Information System (GIS) Training		
Exercise participation:		
The Candidate has discussed the responsibilities of this position with a qualified PMT RAAD	Date Completed	PMT Mentor Signature & Date

I have completed requirements for PMT Radiological Assessment Assistant Director

_____ / _____

Protective Measures Team RAAD Candidate Date

I recommend candidate to participate as Radiological Assessment Assistant Director

_____ / _____

Protective Measures Team Member - PMT RAAD Date

This candidate is qualified as PMT Radiological Assessment Assistant Director

_____ / _____

Protective Measures Team Coordinator Date

Re-qualification Training Requirements: **This Responder has received re-training in the following:**	Team Coordinator Signature & Date
General Response Training	
Team-Specific Training / Activities	
Position-Specific Training / Activities	

I have completed the re-qualification requirements above for PMT RAAD

_____ / _____

Protective Measures Team RAAD Candidate

Date

This candidate has completed re-qualification as PMT RAAD

_____ / _____

Protective Measure Team Coordinator

Date

Supplemental Training Courses: **The Candidate has received supplemental training in the following:**	**Team Coordinator Signature & Date**

IRTQ 055011

APPENDIX A

QUALIFICATION CARD

PROTECTIVE MEASURES TEAM

DOSE ANALYST

Revision 1

REVISION LOG

Revision Number	Effective Date	Pages Affected	Description of Revision
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Refer to the attached Qualification Card. The qualification card identifies all required training courses and activities for this incident response position. Re-qualification requirements and frequencies are also addressed on the qualification card. If an individual has participated in a required training session or activity prior to the creation of the Qual Card, he/she will be given credit for previous attendance.

At the completion of the qualification process, your headquarters Team Coordinator or regional Emergency Response Coordinator (ERC) will notify the Incident Response Training Coordinator that you have been familiarized with the role and functions of the team position and are qualified.

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Response training can be conducted in various formats. These include:

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- Hands-on training
- Document read & sign
- LAN based or Internet based training
- Team training/meetings, or
- Participation in a drill, exercise or actual event

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Training conducted at headquarters and in the regional offices to establish and maintain a minimum level of familiarity with the NRC Incident Response Program, National Response Plan, and National Incident Management System.

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C. Position-Specific Training

Includes those training modules and topics targeted at individuals assigned to (or qualifying for) a specific team position (i.e., Reactor Safety Team Director or Base Team Communicator) to prepare each individual to competently perform all assigned tasks listed in their team position procedures.

D. Supplemental Training

Includes those courses and activities

that provide additional knowledge, skills, or qualifications beyond the minimum training requirements for a particular response position.

5.0 REFERENCES

Management Directive 8.2 - NRC Incident Response Program

NUREG-0728 - NRC Incident Response Program

c. IRMC 0300 - Incident Response Training and Qualification Program

U. S. Nuclear Regulatory Commission
Incident Response Program

Initial Qualification Card
For
Protective Measures Team - Dose Analyst

Name:

NRC ID #:

The following Procedures have been read:	Date Completed	Candidate Signature and Date
Protective Measures Team Procedure IRP 055011 PMT Dose Analyst		
Protective Measures Team Procedure IRP 055004 PMT Radiological Assessment Assistant Director (RAAD)		
Protective Measures Team Procedure IRP 055017 PMT Meteorologist		

Protective Measures Team Procedure IRP 055013 PMT ERDS Operator		
Protective Measures Team Procedure IRP 055020 PMT Reactor Safety and Safeguards Interfaces		
Base Team Procedure IRP 102013 Dose Assessor		
Site Team Team Procedure IRP 103014 Dose Assessor		
The following Activities have been completed:	Date Completed	PMT Mentor Signature & Date
Operations Center walkthrough		
Exercise Observations of PMT Dose Analyst Position		
Exercise or Drill Participation along side a qualified PMT Dose Analyst		
E-library Navigation		
Use of HOC tools		
The Candidate has the required* training:	Date Completed	PMT Coordinator Signature & Date
General Response Training		
Team-Specific Training		
Position-Specific Training, PMT Dose Analyst		
Response Technical Manual Training		
Emergency Response Data System (ERDS) Training		
Introduction to RASCAL*		
Geographical Information System (GIS) Training		
Exercise participation:		
The Candidate has discussed the responsibilities of this position with a qualified PMT Dose Analyst:	Date Completed	PMT Mentor Signature & Date

I have completed the requirements above for PMT Dose Analyst

_____/_____

Protective Measures Team Dose Analyst Candidate Date

I recommend this candidate to participate as PMT Dose Analyst

_____/_____

Protective Measures Team Member - PMT Dose Analyst Date

This candidate is qualified to participate as PMT Dose Analyst

_____/_____

Protective Measures Team Coordinator Date

Re-qualification Training Requirements: **This Responder has received re-training in the following:**	Team Coordinator *Signature & Date*
General Response Training	
Team-Specific Training / Activities	
Position-Specific Training / Activities	

I have completed the re-qualification requirements above for PMT Dose Analyst

_____/_____

Protective Measures Team Dose Analyst Candidate

Date

This candidate has completed re-qualification as PMT Team Dose Analyst

_____/_____

Protective Measure Team Coordinator

Date

Supplemental Training Courses: **The Candidate has received supplemental training in the following:**	Team Coordinator Signature & Date

CRITICAL RESPONSE FUNCTIONS AND CRITICAL RESPONSE POSITIONS

PROTECTIVE MEASURES TEAM (PMT)

Critical Function	Critical Sub-Functions	Team Position
1. Perform an independent assessment of the licensee's protective action recommendations.	Obtain and analyze information needed to perform dose assessments.	Radiological Assessment Assistant Director ERDS Operator HPN Communicator RST Interface Meteorologist Accident Specialist Communications Coordinator Counterpart Communicator Chronology Writer
	Perform a dose assessment utilizing RASCAL or other appropriate tool(s).	Radiological Assessment Assistant Director RASCAL Operators(2)
	Determine appropriate protective actions based on the dose assessment.	Protective Actions Assistant Director GIS Operator Advisory Team for environment, food, health
	Exchange technical information with the licensee agencies.	HPN Communicator State Interface Counterpart Communicator
	Coordinate protective measures assessment activities with regional base team and site team.	Counterpart Communicator
	Prioritize questions to optimize available resources for communications.	Deputy Director

Critical Response Function	Critical Sub Functions	Team Positions
2. Advise the ET on whether the State protective action decision adequately protects public health and safety.	Obtain and analyze information needed to perform dose assessments.	Radiological Assessment Assistant Director ERDS Operator HPN Communicator RST Interface Meteorologist Accident Specialist Communications Coordinator Counterpart Communicator Chronology Writer
	Perform a dose assessment utilizing RASCAL or other appropriate tool(s).	Radiological Assessment Assistant Director RASCAL Operators(2)
	Determine appropriate protective actions based on the dose assessment.	Protective Actions Assistant Director GIS Operator Advisory Team for environment, food, health
	Exchange technical information with the State agencies.	State Interface Counterpart Communicator
	Coordinate protective measures assessment activities with regional base team and site team.	Counterpart Communicator
	Prioritize questions to optimize available resources for communications.	Deputy Director

Critical Response Function	Critical Sub Functions	Team Positions
3. Provide assessment results to the ET.	Brief the ET.	Director Deputy Director
	Monitor ET discussions for questions, concerns, and commitments.	Director ET Monitor

Critical Response Function	Critical Sub Functions	Team Positions
4. Provide oversight and management to the PMT.	Manage and assess overall team performance.	PMT Director PMT Deputy Director PMT Coordinator
	Supplement PMT staff resources as necessary. Schedule long term staffing as necessary.	PMT Coordinator
	Coordinate team turnovers and support for the Site Team.	PMT Director PMT Deputy Director PMT Coordinator

Critical Response Function	Critical Sub Functions	Team Positions
5. Coordinate NRC dose assessment with IMAAC.	Provide RASCAL source term to IMAAC.	RST Deputy Director
	Compare RASCAL and IMAAC dose assessments.	Radiological Assessment Assistant Director RASCAL Dose Assessors(2)

Critical Response Function	Critical Sub Functions	Team Positions
6. Provide information for NRC public announcements.	Provide information to the ET.	Director Deputy Director
	Provide information to the Public Affairs Officers on the Liaison Team.	Director Deputy Director Protective Actions Assistant Director Radiological Assessment Assistant Director
	Review media/press announcements/releases for accuracy.	Director Deputy Director Protective Actions Assistant Director Radiological Assessment Assistant Director

PMT Objectives

Millstone Exercise, 10/19/10

Demonstrate the ability of the PMT to evaluate protective action recommendations provided by the licensee to the State and other Federal agencies. The PMT will ensure adequate assessments of potential radiological consequences from an event. The following is a summary of the main objectives:

1. The PMT effectively supports and coordinates with other HQ response teams.
2. The PMT demonstrates the ability to independently assess and determine appropriate protective actions associated with a potential or actual radiological release.
3. PMT support and communication links are established with the licensee, the Region, and State.
4. The PMT evaluates Protective Action Recommendations (PARs) made by the licensee and briefs the ET on the related State and local PA decisions for public health and safety.
5. The PMT successfully coordinates its activities with the Interagency Modeling and Atmospheric Assessment Center (IMAAC).
6. The PMT successfully coordinates with the interagency Advisory Team.
7. The PMT effectively documents relevant event information and makes this information available to the response organization using WebEOC.

Expanded Objectives (corresponding to numbers above):

The following PMT criteria will help determine each objective's success:

1. The PMT effectively supports and coordinates with other HQ response teams including the Reactor Safety Team, the Safeguards Team, and the Liaison Team (LT).
    a. PMT staffed, activated and functional in a timely manner
    b. PMT provides orienting GIS maps to the Liaison Team via WebEOC
    c. PMT assists the LT with public safety communication perspectives, if needed
    d. PMT establishes contact with other NRC HQ response teams
    e. RST display data for the PMT is projected, as needed, on a PMT display screen
    f. RST regular status updates are acquired for the PMT and dose analysts

2. The PMT demonstrates the ability to independently assess, to anticipate and/or determine appropriate protective actions associated with a potential or actual radiological release(s) and provide prompt (as practical) and accurate information to the ET. (This objective's promptness is dependant on detailed scenario information being available, including unambiguous weather forecast and radiological data that can be confirmed and validated.)
    a. Dose analysts characterize potential offsite impacts promptly (30 min once provided assessment data) with RASCAL
    b. Dose analysts maximize efficiencies with teamwork and, at times, parallel initiatives
    c. The Response Technical Manual (RTM) is recognized as a cross check resource
    d. EPA protective action guidelines for evacuation and sheltering are clear to the PMT
    e. The PMT periodically briefs and queries itself for current information availability
    f. Critical assessment data is channeled to the RAAD (& chronologist) by communicators
    g. eLibrary is recognized and used as an information resource
    h. Dose assessments are validated by consistency with other scenario data (if practical)
    i. Dose assessments are compared and contrasted with licensee dose projections, if available
    j. Miscommunications and errors are captured, corrected, and communicated, timely
    k. Procedures are referenced and logs are updated, if and when necessary

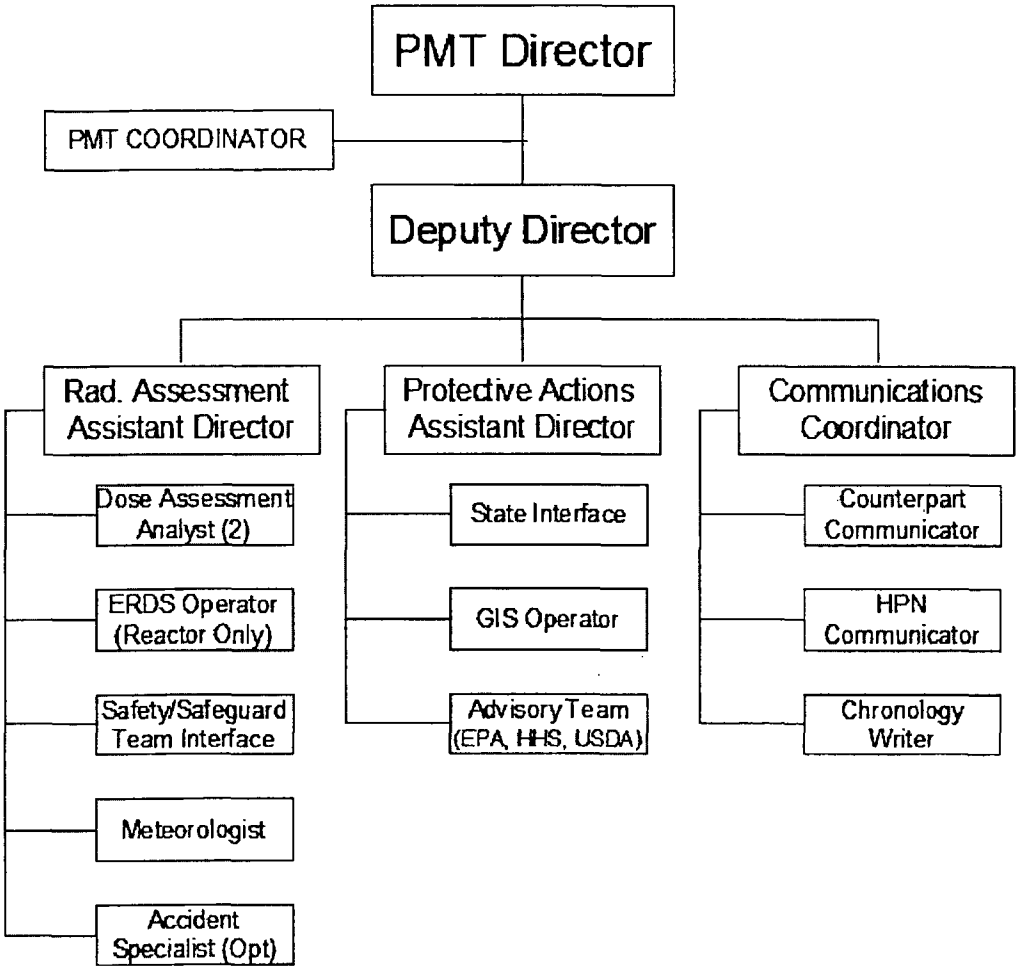
3. Effective PMT communication links are established with the licensee, the Region, the State and other agencies, as appropriate. HQ PMT State communications are indirectly bridged through Regional contacts with communications on the LT bridge line. WebEOC use is encouraged.
    a. An orientation call with the Region is conducted; file sharing protocols established
    b. HPN communicator requests data (licensee Notification forms) and periodic updates
    c. Counterpart communicator assists in GIS and assessment file transfer and receipt
    d. IMAAC communications are initiated and maintained by dose analysts, RAAD, or DOE liaison
    e. The PMT coordinates with the Base Team as NRC HQs transitions to take the lead
    f. Base, HQ, and Site Team interactions evidence teamwork, fluidity, and mutual support
    g. State or other requests for assessment confirmation or assistance are supported
    h. WebEOC is adopted and used by key PMT members to facilitate NRC communications

4. The PMT evaluates Protective Action Recommendations (PARs) made by the licensee and confirms to the ET that the PARs, and State or local PA decisions, are appropriate for public health and safety. Regional coordination is encouraged to enhance reports to the ET. Otherwise, the PMT will communicate the basis for significant differences in assessments between any parties and any related concerns.
    a. The PMT confirms (or not) a licensees PAR within 30 minutes of receipt (the PMT often obtains assessment data later than the licensee or State)
    b. The PMT brief provides current status and likely future (plan) orientation of the State
    c. The State Interface (and other) forms are regularly updated and available to the Director
    d. PARs and PADs are clearly communicated in detail to the ET, identifying impacted areas

5. The PMT successfully coordinates its activities with the Interagency Modeling and Atmospheric Assessment Center (IMAAC) and FRMAC Consequence Management Home Team (CMHT) by providing a RASCAL source term and approving IMAAC's results, time permitting, for wider distribution.
    a. The PMT establishes IMAAC and CMHT contact and periodically updates and coordinates with them
    b. A source term file (and RASCAL file if small) are provided to IMAAC (with met if canned)
    c. Regions are informed and provided with preliminary IMAAC results
    d. The PMT works with IMAAC for plot corrections or improvements, if necessary
    e. Regions are promptly informed of IMAAC product approval for distribution to States

6. The PMT successfully coordinates with the Advisory Team (if playing exercise)
    a. PAR, PAD assessments include consideration and involvement of the Advisory Team

7. The PMT effectively documents relevant event information and makes this information available to the response organization through utilization of WebEOC.
    a. The PMT Chronologist posts relevant information from the PMT communicators and captures relevant postings from the various team logs into the Chronology
    b. The GIS Analyst posts finished GIS products in WebEOC
    c. The Dose Assessors post finished RASCAL graphics and files to WebEOC


PMT Director
PMT COORDINATOR
Deputy Director
Rad. Assessment Assistant Director
Protective Actions Assistant Director
Communications Coordinator
Dose Assessment Analyst (2)
ERDS Operator (Reactor Only)
Safety/Safeguard Team Interface
Meteorologist
Accident Specialist (Opt)
State Interface
GIS Operator
Advisory Team (EPA, HHS, USDA)
Counterpart Communicator
HPN Communicator
Chronology Writer

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