

**From:** JapanEmbassy\_TaskForce  
**To:** (b)(6)  
(b)(6) NITOPS@nnsa.doe.gov; JapanEmbassy\_TaskForce; (b)(6)  
(b)(6) binson; Uises, Anthony; CAT S; Cherry, Ronald C; cmht@nnsa.doe.gov; Craig  
(b)(6) RT Liaison; HQO Hoc; Trapp, James; John Okon; Mears, Jeremy M; Morales, Russell A;  
Paul Guss; Hoc, PMT12; PMT01 Hoc; Theodore Shaw; Uchida, Koichi  
**Subject:** 1636 Speedi Data  
**Date:** Friday, March 18, 2011 3:39:51 AM  
**Attachments:** FUKUSHIMA1 air dose0117-18h01.gif  
FUKUSHIMA1 air dose0118-19h01.gif  
FUKUSHIMA1 air dose0116-17h01.gif  
FUKUSHIMA1 wind016h01.gif  
FUKUSHIMA1 air concentration0117-18h01.gif  
FUKUSHIMA1 air concentration0118-19h01.gif  
FUKUSHIMA1 air concentration0116-17h01.gif

See attached 1636 Speedi Data

This email is UNCLASSIFIED

Lynda Hinds  
Staff Assistant to Ambassador John V. Roos U.S. Embassy  
1-10-5 Akasaka, Minato-ku  
Tokyo 107-8420  
Tel. (03) 3224- 5370

Twitter.com/AmbassadorRoos

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

**From:** nustec [mailto:spd01@nustec.or.jp]  
**Sent:** Friday, March 18, 2011 4:36 PM  
**To:** (b)(6)

(b)(6)

NITOPS@nnsa.doe.gov; JapanEmbassy\_TaskForce; (b)(6)  
**Subject:** 3/18 16時SPEEDI単位量放出図形イメージの

関係者各位

お世話になっております。  
原子力安全技術センター SPEEDI担当です。  
3/18 16時のSPEEDI単位量放出図形のイメージデータを送付致します。  
ご確認のほど、よろしくお願い致します。

44/108



空気吸収線量率

空気吸収線量率

日時 = 2011/03/18 18:00 -  
 2011/03/18 19:00  
 気象データ = G P V + 観測値  
 (2011/03/18 16:00) まで

福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 核種名 = 希ガス

【凡例】

空気吸収線量率等値線 ( $\mu\text{Gy/h}$ )

- 1 =  $5.00 \times 10^{-16}$  —————
- 2 =  $1.00 \times 10^{-16}$  - - - - -
- 3 =  $5.00 \times 10^{-17}$  - - - - -
- 4 =  $1.00 \times 10^{-17}$  - - - - -
- 5 =  $5.00 \times 10^{-18}$  - - - - -

最大線量率 =  $7.020 \times 10^{-16} \mu\text{Gy/h}$   
 放出地点から ( 1.5, -3.7 ) km (\*印)

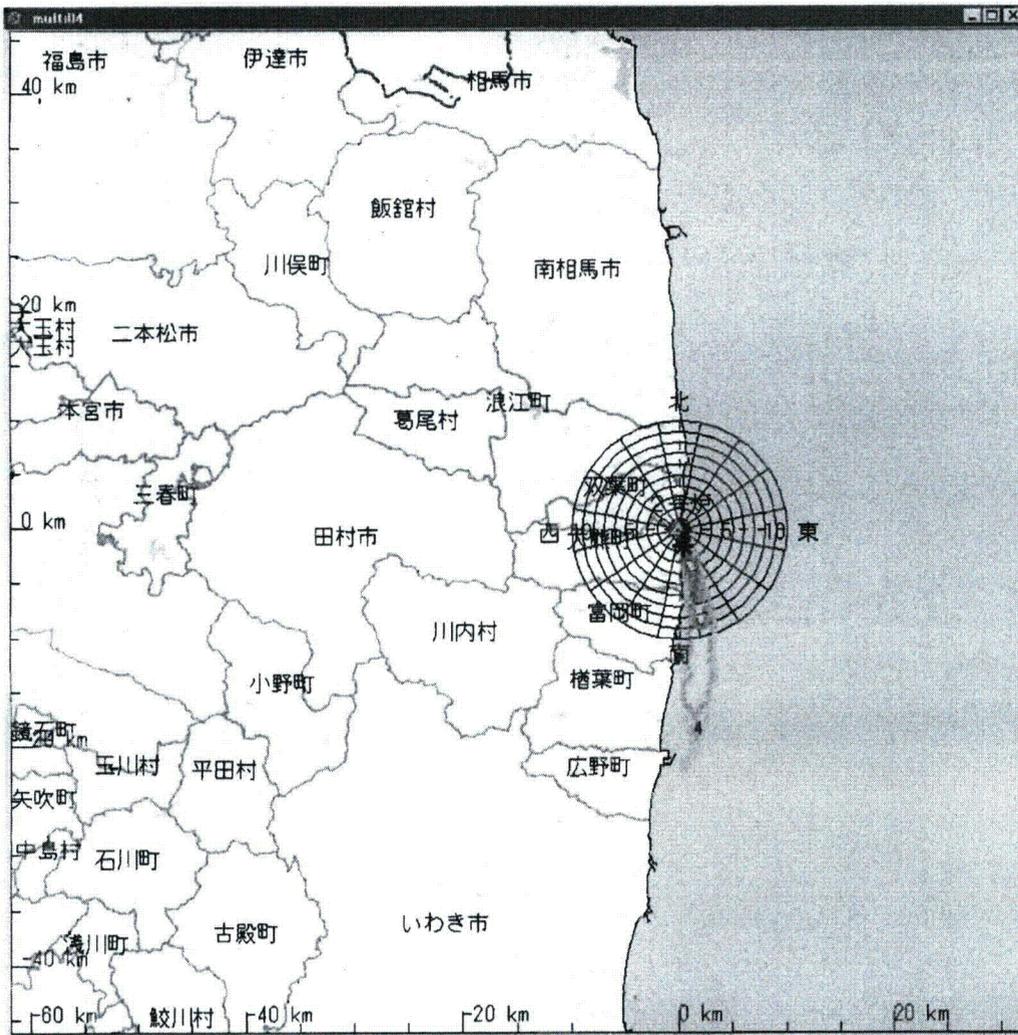
計算モデル名 = PRWDA21

使用モデル名 = 通常モデル

【計算条件】

計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/MTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/18 16:00  
 放出モード = 単位量放出

16時定期福島1-2号



空気吸収線量率

空気吸収線量率

日時 = 2011/03/18 16:00 -  
 2011/03/18 17:00  
 気象データ = G P V + 観測値  
 (2011/03/18 16:00) まで

福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 核種名 = 希ガス

【凡例】

空気吸収線量率等値線 ( $\mu\text{Gy/h}$ )

- 1 =  $5.00 \times 10^{-16}$  \_\_\_\_\_
- 2 =  $1.00 \times 10^{-16}$  .....
- 3 =  $5.00 \times 10^{-17}$  - - - - -
- 4 =  $1.00 \times 10^{-17}$  - - - - -
- 5 =  $5.00 \times 10^{-18}$  - - - - -

最大線量率 =  $8.957 \times 10^{-16}$   $\mu\text{Gy/h}$   
 放出地点から ( 0.5, -1.7 ) km (\* EP)

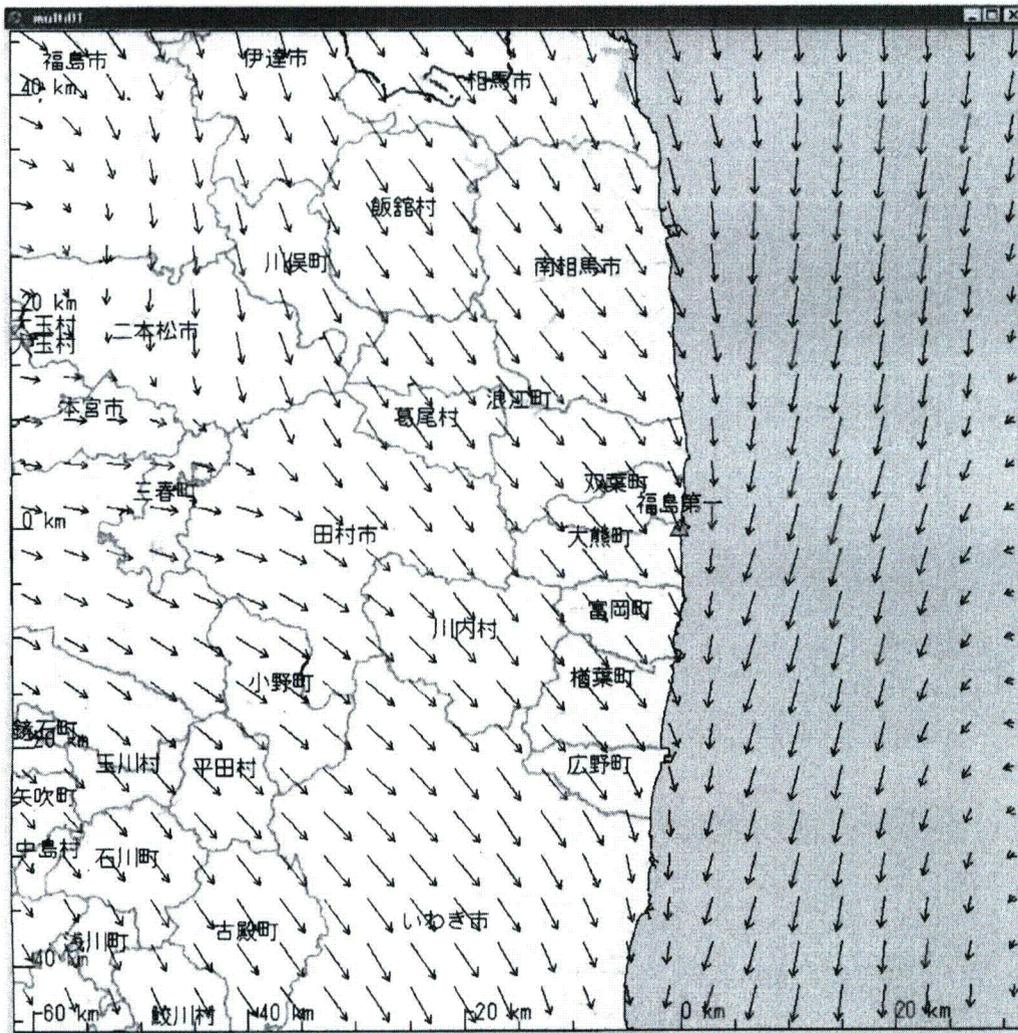
計算モデル名 = PRWDA21

使用モデル名 = 通常モデル

【計算条件】

計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/MTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/18 16:00  
 放出モード = 単位量放出

16時定期福島1-2号



風速場(地上高)

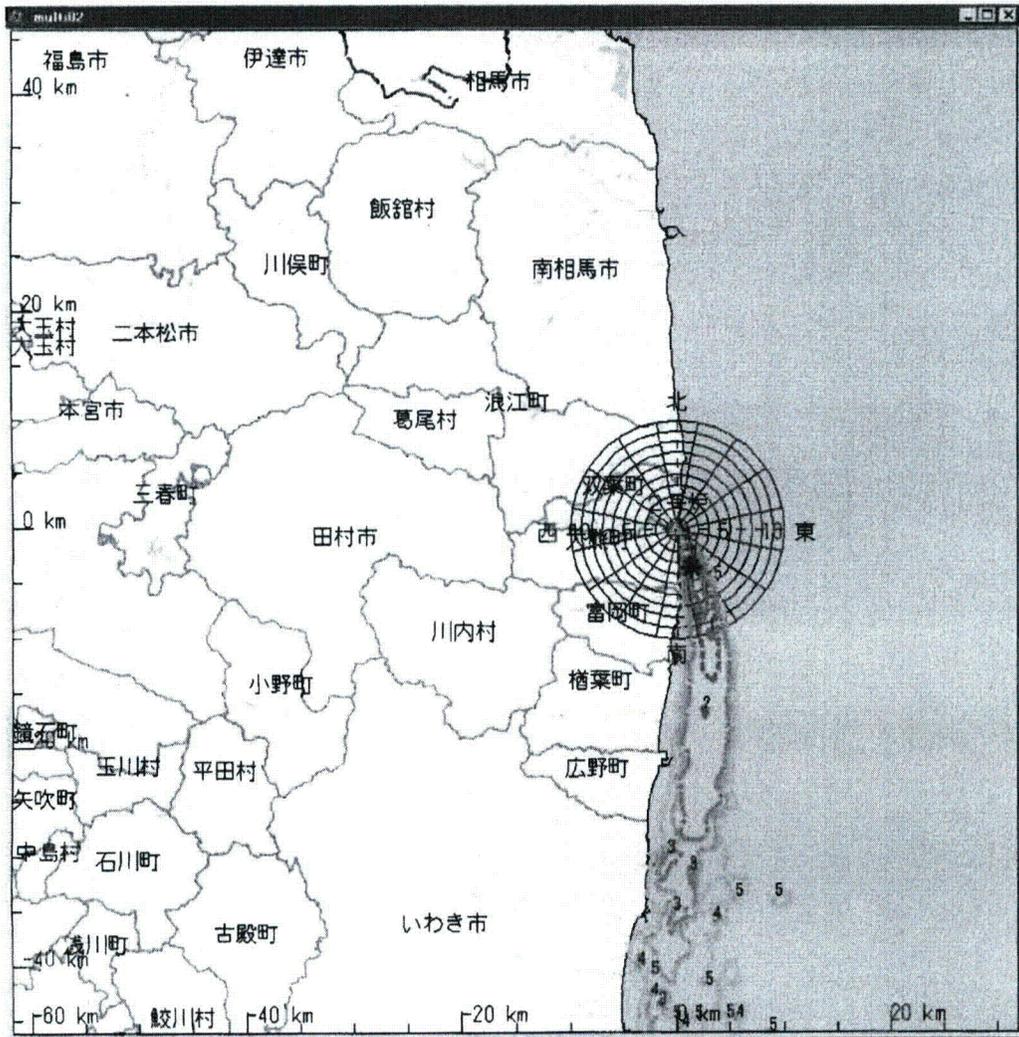
風速場(地上高)

日時 = 2011/03/18 16:00  
 気象データ = GPV + 観測値  
 (2011/03/18 16:00) まで

福島第1 広域図  
 サイト中心 : 141°02'10" - 37°25'12"  
 領域 : 92km X 92km  
 表示高度 = 120.00 m  
 サイト中心付近の風 : 北北西 8.5 m/s  
 大気安定度 : D型

計算モデル名 = PHYSIC  
 計算メッシュ幅 水平方向 = 2.00 km

【凡例】  
 標準風速 (標準領域の場合の長さ)  
 → : 10 m/s



大気中濃度(ヨウ素)(地上高)

大気中濃度(ヨウ素) (地上高)

日時 = 2011/03/18 17:00 -  
 2011/03/18 18:00  
 気象データ = G P V + 観測値  
 (2011/03/18 16:00) まで

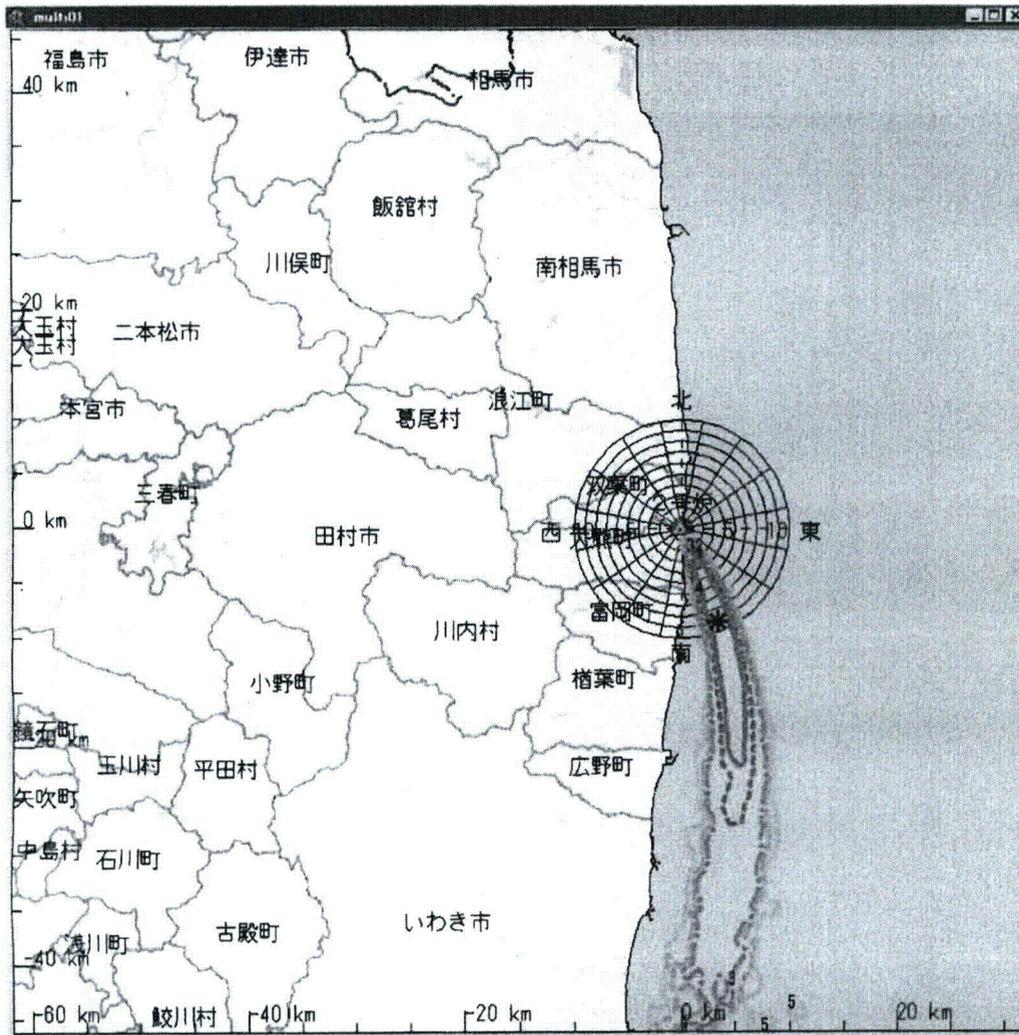
福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 表示高度 = 1.00 m

【凡例】  
 大気中濃度等値線 (Bq/m<sup>3</sup>)

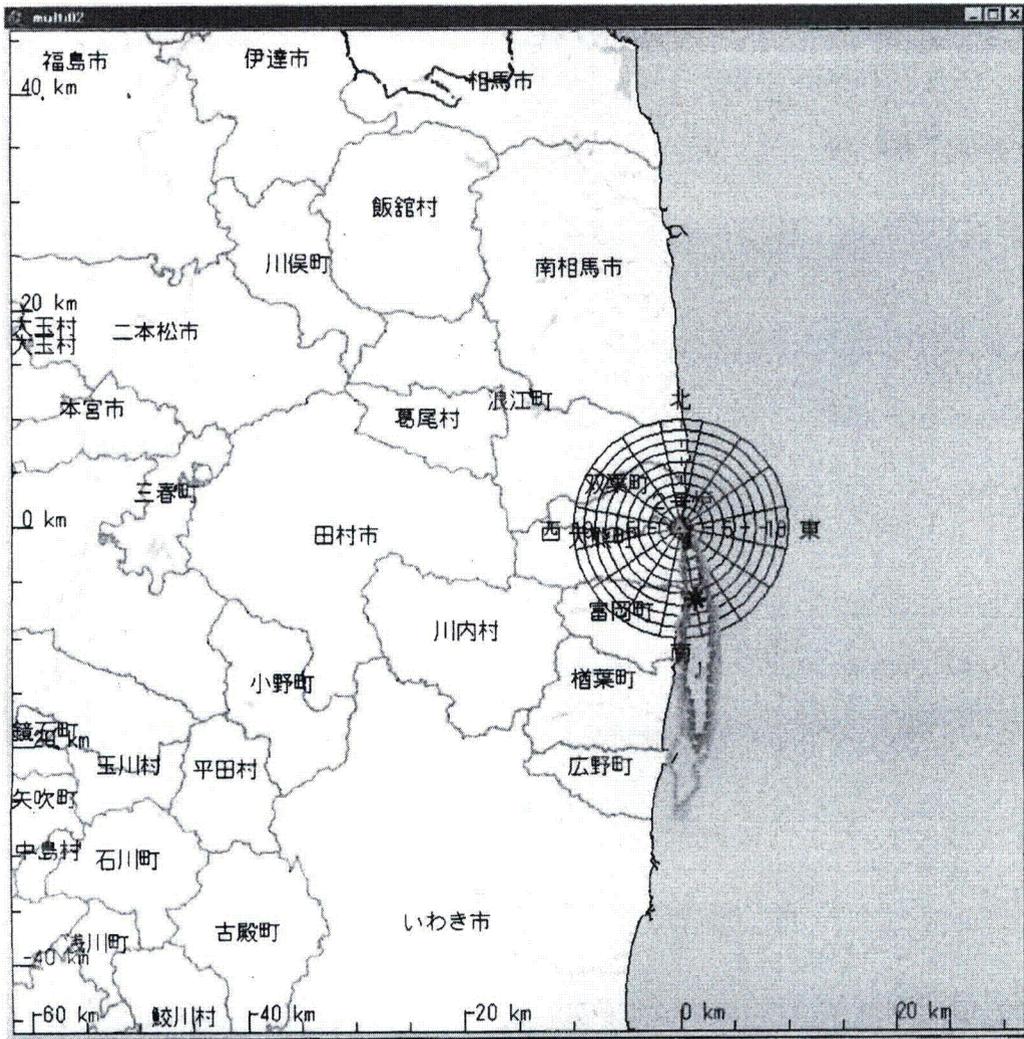
- 1=  $1.00 \times 10^{-11}$  \_\_\_\_\_
- 2=  $5.00 \times 10^{-12}$  - - - - -
- 3=  $1.00 \times 10^{-12}$  - - - - -
- 4=  $5.00 \times 10^{-13}$  - - - - -
- 5=  $1.00 \times 10^{-13}$  - - - - -

最大濃度 =  $1.724 \times 10^{-11}$  Bq/m<sup>3</sup>  
 放出地点から ( 1.5, -3.7 ) km (\*印)

計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル  
 【計算条件】  
 計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/MTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/18 16:00  
 放出モード = 単位置放出  
 放出核種・放出率(積算) : Bq/h (Ba)  
 ヨウ素 :  $1.00 \times 10^0$  ( $1.00 \times 10^0$ )



大気中濃度(ヨウ素)(地上高) |  
**大気中濃度(ヨウ素) (地上高)**  
 日時 = 2011/03/18 18:00 -  
 2011/03/18 19:00  
 気象データ = G P V + 観測値  
 (2011/03/18 16:00) まで  
  
 福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 表示高度 = 1.00 m  
  
 【凡例】  
 大気中濃度等値線 (Bq/m<sup>3</sup>)  
 1 = 1.00 × 10<sup>-11</sup> \_\_\_\_\_  
 2 = 5.00 × 10<sup>-12</sup> .....  
 3 = 1.00 × 10<sup>-12</sup> -----  
 4 = 5.00 × 10<sup>-13</sup> -----  
 5 = 1.00 × 10<sup>-13</sup> -----  
  
 最大濃度 = 4.181 × 10<sup>-11</sup> Bq/m<sup>3</sup>  
 放出地点から ( 3.5, -8.7 ) km (\*印)  
  
 計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル  
 【計算条件】  
 計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/MTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/18 16:00  
 放出モード = 単量放出  
 放出核種・放出率(積算): Bq/h (Bq)  
 ヨウ素 : 1.00 × 10<sup>0</sup> (1.00 × 10<sup>0</sup>)  
  
 16時定期福島1-2号



大気中濃度(ヨウ素)(地上高)

大気中濃度(ヨウ素) (地上高)

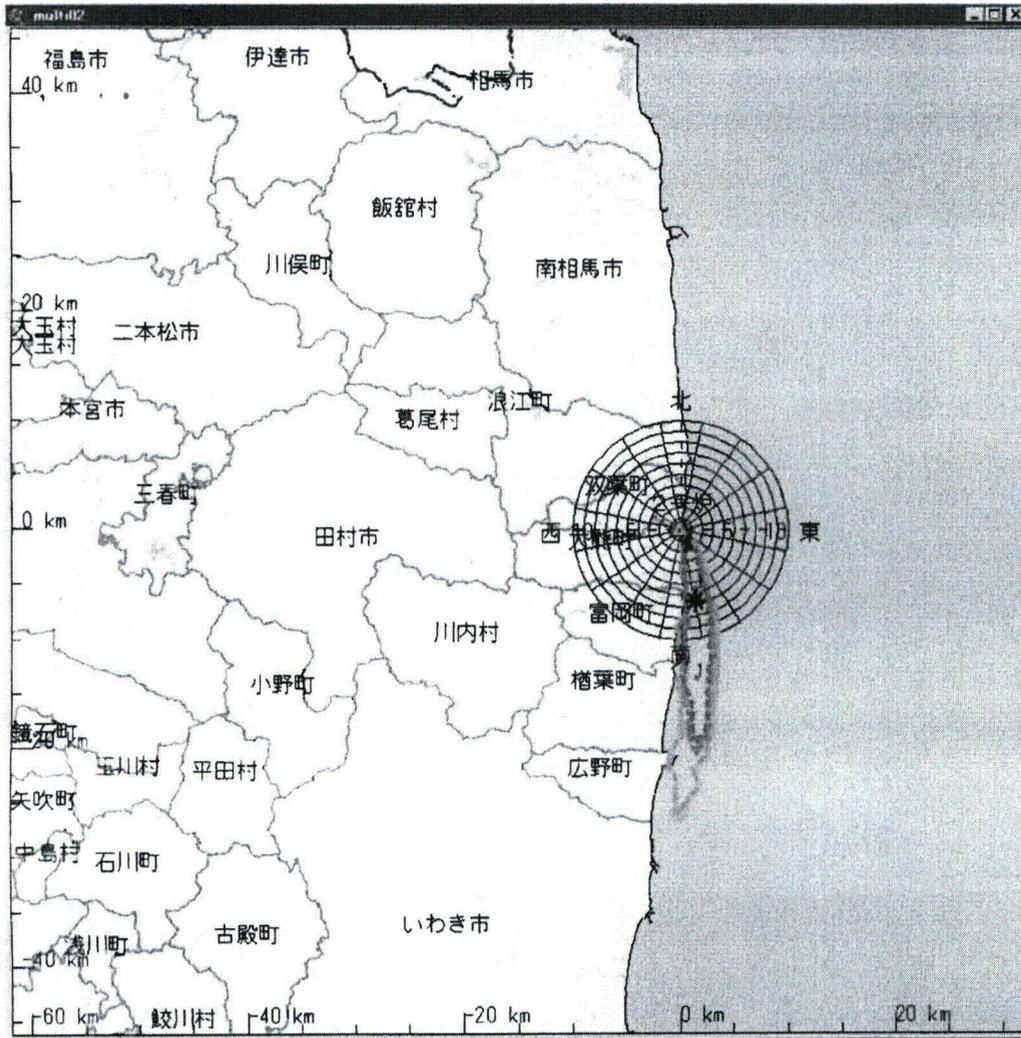
日時 = 2011/03/18 16:00 -  
 2011/03/18 17:00  
 気象データ = G P V + 観測値  
 (2011/03/18 16:00) まで

福島第1 2号炉 広域図  
 放出地点 : 14°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 表示高度 = 1.00 m

- 【凡例】  
 大気中濃度等値線 (Bq/m<sup>3</sup>)
- 1=  $5.00 \times 10^{-12}$  —————
  - 2=  $1.00 \times 10^{-12}$  - - - - -
  - 3=  $5.00 \times 10^{-13}$  - - - - -
  - 4=  $1.00 \times 10^{-13}$  - - - - -
  - 5=  $5.00 \times 10^{-14}$  - - - - -

最大濃度 =  $5.390 \times 10^{-12}$  Bq/m<sup>3</sup>  
 放出地点から ( 1.5, -8.7 ) km (\*印)

計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル  
 【計算条件】  
 計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/MTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/18 16:00  
 放出モード = 単位量放出  
 放出核種・放出率(積算): Bq/h (Bq)  
 ヨウ素 :  $1.00 \times 10^0$  ( $1.00 \times 10^0$ )



大気中濃度(ヨウ素)(地上高)

大気中濃度(ヨウ素)(地上高)

日時 = 2011/03/18 16:00 -  
 2011/03/18 17:00  
 気象データ = G P V + 観測値  
 (2011/03/18 16:00) まで

福島第1 2号炉 広域図  
 放出地点 : 14°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 表示高度 = 1.00 m

【凡例】  
 大気中濃度等値線 (Bq/m<sup>3</sup>)

- 1=  $5.00 \times 10^{-12}$  \_\_\_\_\_
- 2=  $1.00 \times 10^{-12}$  - - - - -
- 3=  $5.00 \times 10^{-13}$  - - - - -
- 4=  $1.00 \times 10^{-13}$  - - - - -
- 5=  $5.00 \times 10^{-14}$  - - - - -

最大濃度 =  $5.390 \times 10^{-12}$  Bq/m<sup>3</sup>  
 放出地点から ( 1.5, -6.7 ) km (\*印)

計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル  
 【計算条件】  
 計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/MTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/18 16:00  
 放出モード = 単位置放出  
 放出核種・放出率(積算) : Bq/h (Ba)  
 ヨウ素 :  $1.00 \times 10^0$  ( $1.00 \times 10^0$ )

**From:** JapanEmbassy\_TaskForce  
**To:** spd01@nustec.or.jp; (b)(6)  
(b)(6)  
(b)(6) NITOPS@nnsa.doe.gov; JapanEmbassy\_TaskForce; (b)(6)  
(b)(6) Alex Robinson; Uises, Anthony; CAT 5; Cherry, Ronald C; cmht@nnsa.doe.gov; Craig Haas; Curry Wright; DART Liaison; HQO Hoc; Trapp, James; John Okon; Mears, Jeremy M; Morales, Russell A; Paul Guss; Hoc, PMT12; PMT01 Hoc; Theodore Shaw; Uchida, Koichi  
**Subject:** 1730 Speedi Data  
**Date:** Friday, March 18, 2011 4:36:17 AM  
**Attachments:** FUKUSHIMA1 air dose0118-19h01.gif  
FUKUSHIMA1 air dose0119-20h01.gif  
FUKUSHIMA1 air dose0117-18h01.gif  
FUKUSHIMA1 wind(17h01).gif  
FUKUSHIMA1 air concentration0117-18h01.gif  
FUKUSHIMA1 air concentration0118-19h01.gif  
FUKUSHIMA1 air concentration0119-20h01.gif

1730 Speedi Data attached

This email is UNCLASSIFIED

Lynda Hinds  
Staff Assistant to Ambassador John V. Roos U.S. Embassy  
1-10-5 Akasaka, Minato-ku  
Tokyo 107-8420  
Tel. (03) 3224- 5370

Twitter.com/AmbassadorRoos

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

**From:** nustec [mailto:spd01@nustec.or.jp]  
**Sent:** Friday, March 18, 2011 5:30 PM  
**To:** (b)(6)

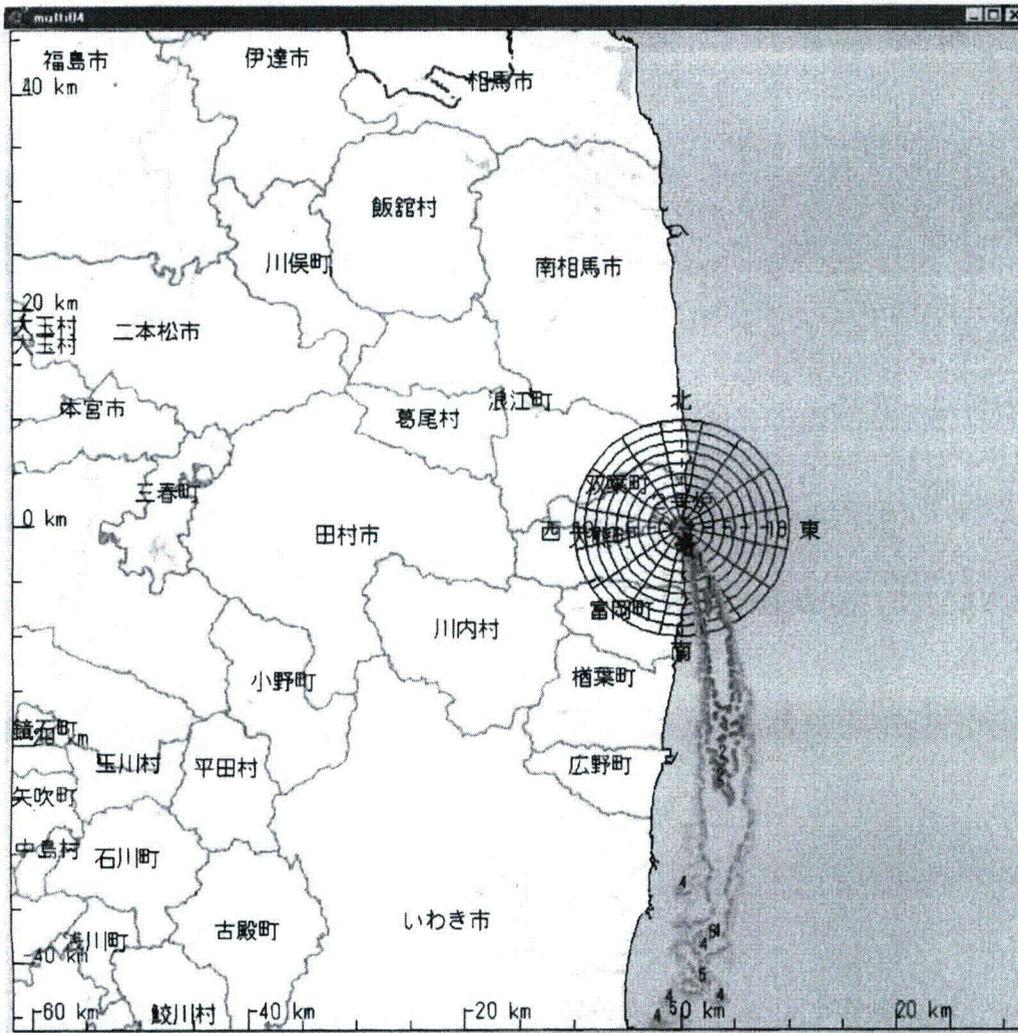
(b)(6)

NITOPS@nnsa.doe.gov; JapanEmbassy\_TaskForce; (b)(6)  
**Subject:** 3/18 17時SPEEDI単位量放出図形イメージ

関係者各位

お世話になっております。  
原子力安全技術センター SPEEDI担当です。  
3/18 17時のSPEEDI単位量放出図形のイメージデータを送付致します。  
ご確認のほど、よろしくお願い致します。

11/11/109



空気吸収線量率

空気吸収線量率

日時 = 2011/03/18 19:00 -  
 2011/03/18 20:00  
 気象データ = G P V + 観測値  
 (2011/03/18 17:00) まで

福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 核種名 = 希ガス

【凡例】

空気吸収線量率等値線 ( $\mu\text{Gy/h}$ )

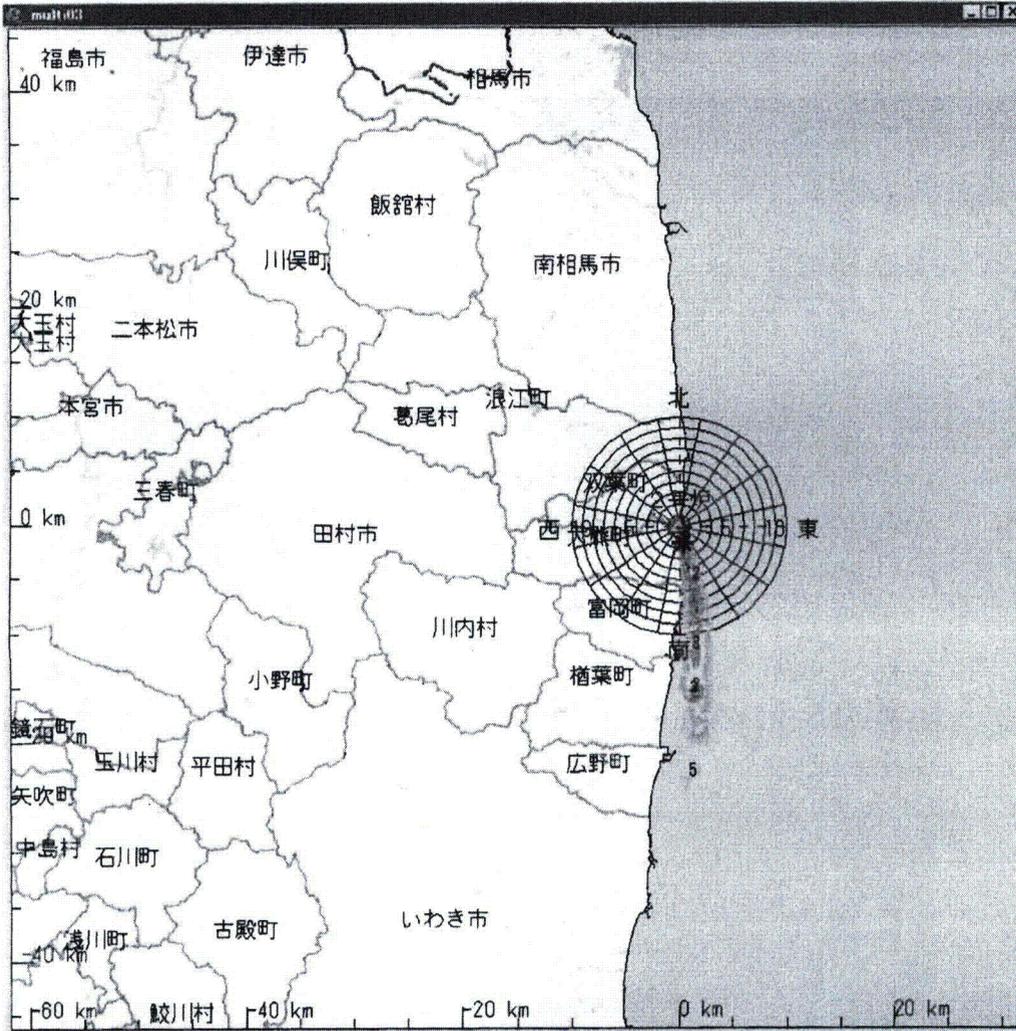
- 1 =  $5.00 \times 10^{-16}$  —————
- 2 =  $1.00 \times 10^{-16}$  - - - - -
- 3 =  $5.00 \times 10^{-17}$  - - - - -
- 4 =  $1.00 \times 10^{-17}$  - - - - -
- 5 =  $5.00 \times 10^{-18}$  - - - - -

最大線量率 =  $8.338 \times 10^{-16} \mu\text{Gy/h}$   
 放出地点から (0.5, -1.7) km (\*印)

計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル

【計算条件】

計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/MTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/18 17:00  
 放出モード = 単位量放出



空気吸収線量率 |

空気吸収線量率

日時 = 2011/03/18 17:00 -  
 2011/03/18 18:00  
 気象データ = G P V + 観測値  
 (2011/03/18 17:00) まで

福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 核種名 = 希ガス

【凡例】

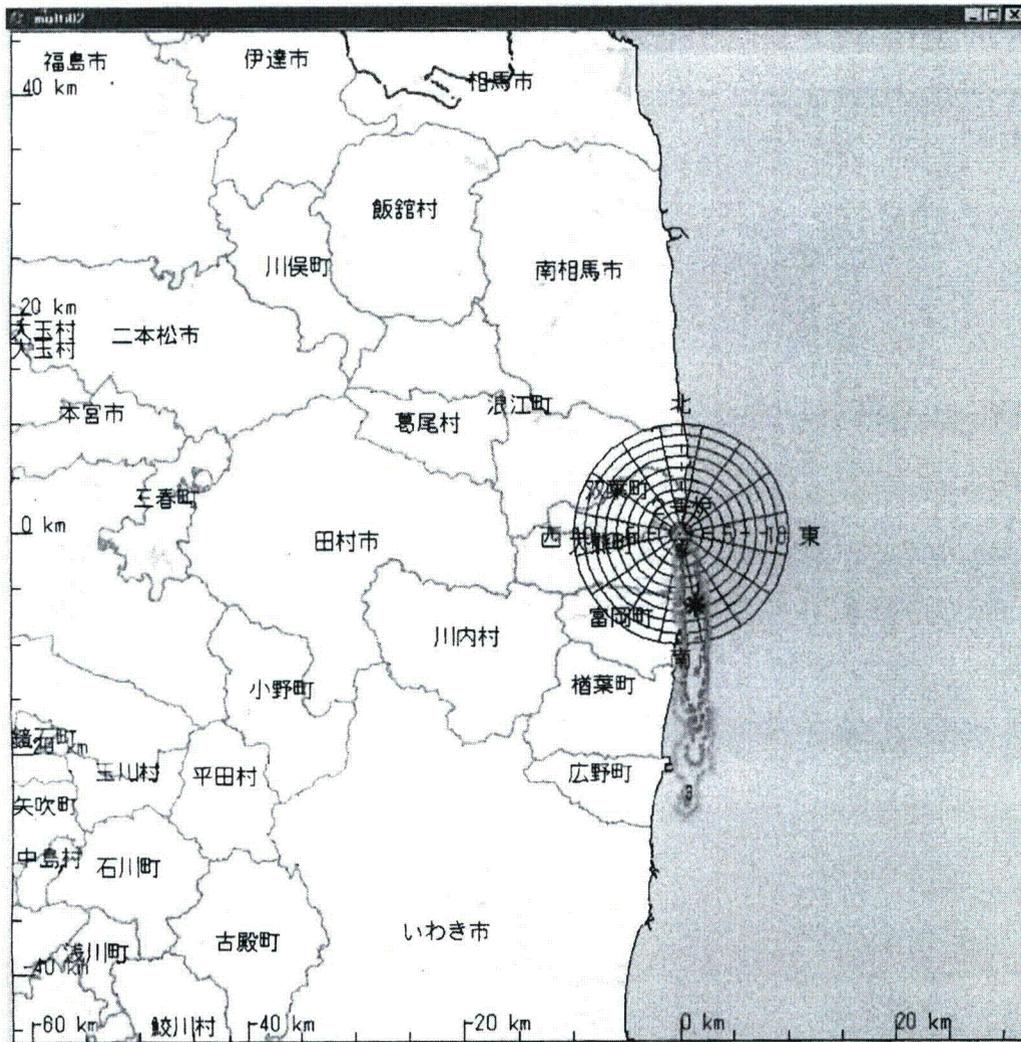
空気吸収線量率等値線 ( $\mu\text{Gy/h}$ )

- 1 =  $5.00 \times 10^{-16}$  \_\_\_\_\_
- 2 =  $1.00 \times 10^{-16}$  - - - - -
- 3 =  $5.00 \times 10^{-17}$  - - - - -
- 4 =  $1.00 \times 10^{-17}$  - - - - -
- 5 =  $5.00 \times 10^{-18}$  - - - - -

最大線量率 =  $8.259 \times 10^{-16} \mu\text{Gy/h}$   
 放出地点から ( 0.5, -1.7) km (\*印)

計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル  
 【計算条件】  
 計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/WTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/18 17:00  
 放出モード = 単位量放出





大気中濃度(ヨウ素)(地上高)

大気中濃度(ヨウ素)(地上高)

日時 = 2011/03/18 17:00 -  
 2011/03/18 18:00  
 気象データ = G P V + 観測値  
 (2011/03/18 17:00) まで

福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 表示高度 = 1.00 m

【凡例】

大気中濃度等値線 (Ba/m<sup>3</sup>)

- 1 =  $5.00 \times 10^{-12}$  \_\_\_\_\_
- 2 =  $1.00 \times 10^{-12}$  - - - - -
- 3 =  $5.00 \times 10^{-13}$  - - - - -
- 4 =  $1.00 \times 10^{-13}$  - - - - -
- 5 =  $5.00 \times 10^{-14}$  - - - - -

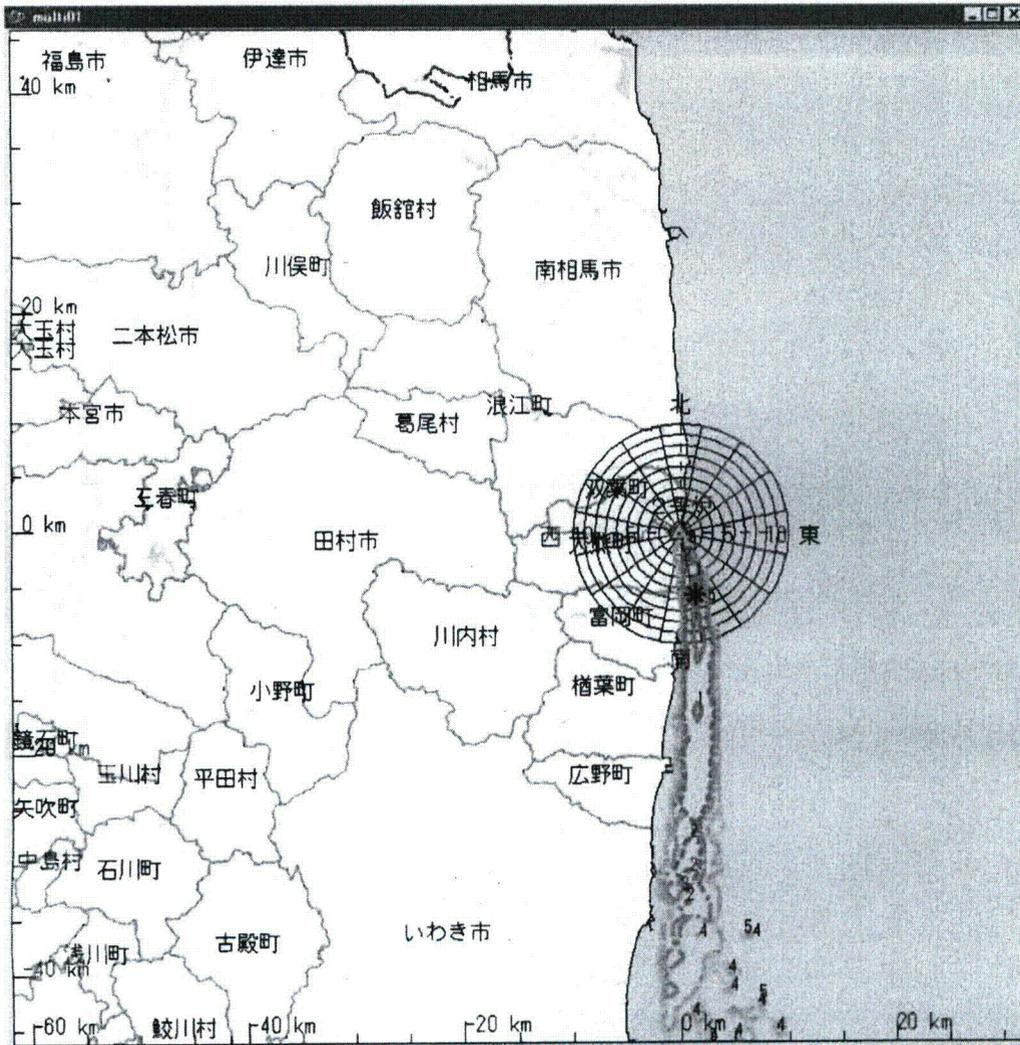
最大濃度 =  $6.459 \times 10^{-12}$  Ba/m<sup>3</sup>  
 放出地点から ( 1.5, -6.7 ) km (\*印)

計算モデル名 = PRWDA21

使用モデル名 = 通常モデル

【計算条件】

- 計算メッシュ幅 水平方向 = 1.00 km
- 放出高 = 120.0m
- 燃焼度 = 20000 MWD/WTU
- 原子炉停止時刻 = 2011/03/11 16:00
- 放出開始時刻 = 2011/03/18 17:00
- 放出モード = 単位置放出
- 放出核種・放出率(積算): Ba/h (Ba)
- ヨウ素 :  $1.00 \times 10^0$  ( $1.00 \times 10^0$ )



大気中濃度(ヨウ素)(地上高)

大気中濃度(ヨウ素) (地上高)

日時 = 2011/03/18 18:00 -

2011/03/18 19:00

気象データ = G.P.V + 観測値

(2011/03/18 17:00) まで

福島第1 2号炉 広域図

放出地点 : 141°02'08" - 37°25'18"

領域 : 92km X 92km

表示高度 = 1.00 m

【凡例】

大気中濃度等値線 (Bq/m<sup>3</sup>)

1 =  $5.00 \times 10^{-12}$

2 =  $1.00 \times 10^{-12}$

3 =  $5.00 \times 10^{-13}$

4 =  $1.00 \times 10^{-13}$

5 =  $5.00 \times 10^{-14}$

最大濃度 =  $8.297 \times 10^{-12}$  Bq/m<sup>3</sup>

放出地点から ( 1.5, -5.7 ) km (\* E/D)

計算モデル名 = PRWDA21

使用モデル名 = 通常モデル

【計算条件】

計算メッシュ幅 水平方向 = 1.00 km

放出高 = 120.0m

燃焼度 = 20000 MWD/MTU

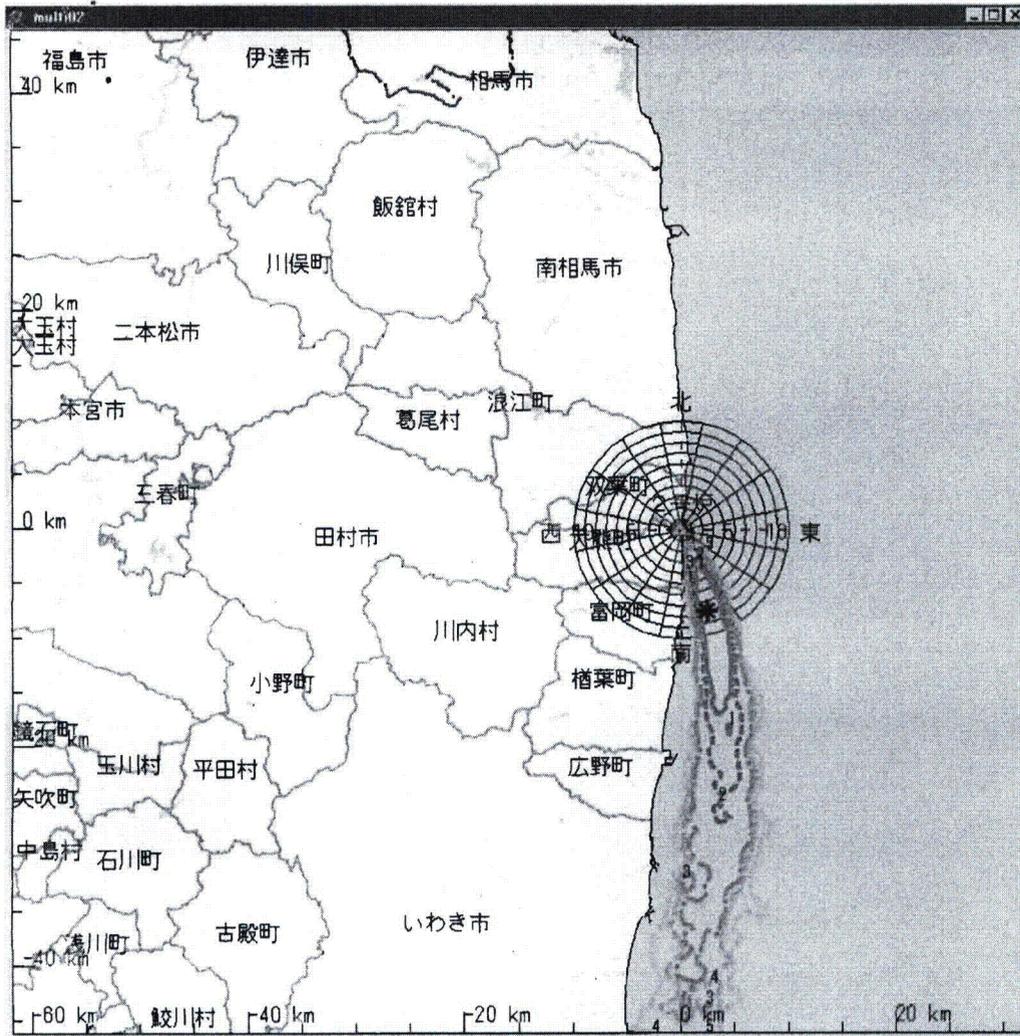
原子炉停止時刻 = 2011/03/11 16:00

放出開始時刻 = 2011/03/18 17:00

放出モード = 単位量放出

放出核種・放出率(積算): Bq/h (Bq)

ヨウ素 :  $1.00 \times 10^0$  ( $1.00 \times 10^0$ )



大気中濃度(ヨウ素)(地上高)

大気中濃度(ヨウ素)(地上高)

日時 = 2011/03/18 19:00 -  
 2011/03/18 20:00  
 気象データ = G P V + 観測値  
 (2011/03/18 17:00) まで

福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 表示高度 = 1.00 m

【凡例】  
 大気中濃度等値線 (Ba/m<sup>3</sup>)

- 1=  $1.00 \times 10^{-11}$  \_\_\_\_\_
- 2=  $5.00 \times 10^{-12}$  - - - - -
- 3=  $1.00 \times 10^{-12}$  - - - - -
- 4=  $5.00 \times 10^{-13}$  - - - - -
- 5=  $1.00 \times 10^{-13}$  - - - - -

最大濃度 =  $3.724 \times 10^{-11}$  Ba/m<sup>3</sup>  
 放出地点から ( 2.5, -7.7) km (\*印)

計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル

【計算条件】  
 計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/MTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/18 17:00  
 放出モード = 単位量放出  
 放出核種・放出率(積算) : Ba/h (Ba)  
 ヨウ素 :  $1.00 \times 10^0$  ( $1.00 \times 10^0$ )

17時定期福島1-2号

**From:** JapanEmbassy\_TaskForce  
**To:** (b)(6)  
(b)(6)  
NITOPS@nnsa.doe.gov; JapanEmbassy\_TaskForce; (b)(6)  
(b)(6); Inson; Ulises, Anthony; CAT S; Cherry, Ronald C.; RT Liaison; HOO Hoc; Trapp, James; John Okon; Mears, Jeremy M; Morales, Russell A; Paul Guss; Hoc, PMT12; PMT01 Hoc; Theodore Shaw; Uchida, Koichi  
**Subject:** 18MAR 1830 Speedi Data  
**Date:** Friday, March 18, 2011 5:35:48 AM  
**Attachments:** FUKUSHIMA1 031818.zip

18MAR 1830 Speedi Data attached

This email is UNCLASSIFIED

Lynda Hinds  
Staff Assistant to Ambassador John V. Roos U.S. Embassy  
1-10-5 Akasaka, Minato-ku  
Tokyo 107-8420  
Tel. (03) 3224- 5370

Twitter.com/AmbassadorRoos

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

**From:** nustec [mailto:spd01@nustec.or.jp]  
**Sent:** Friday, March 18, 2011 6:30 PM  
**To:** (b)(6)  
(b)(6)  
NITOPS@nnsa.doe.gov; JapanEmbassy, TaskForce; (b)(6)  
**Subject:** 3/18 18時SPEEDI単位量放出図形イメージ

関係者各位

お世話になっております。  
原子力安全技術センター SPEEDI担当です。  
3/18 18時のSPEEDI単位量放出図形のイメージデータを送付致します。  
ご確認のほど、よろしくお願い致します。

44/110

**From:** NITOPS  
**To:** "hoo.hoc@nrc.gov"; "PMT02.Hoc@nrc.gov"; "pmt01.hoc@nrc.gov"; CMHT; "narac@llnl.gov"  
**Subject:** FW: 24:00 SPEEDI Data  
**Date:** Friday, March 18, 2011 12:50:45 PM  
**Attachments:** EUKUSHIMA1.031900.zip

---

FYI  
NITOPS

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

From: JapanEmbassy, TaskForce [mailto:JapanEmbassyTaskForce@state.gov]

Sent: Friday, March 18, 2011 12:07 PM

To: (b)(6)

(b)(6)

(b)(6)

Alex Robinson; Anthony Ulses; Cat 5; Cherry, Ron; CMHT; Craig Haas; Curry Wright; DART Liaison; HOO; James Trapp; John Okon; Latrice Davis; Mears, Jeremy M; Morales, Russell A; Paul Guss; PMT 01; PMT12.hoc@nrc.gov; Reach Back; Scott Peeke; Theodore Shaw; Uchida, Koichi  
Subject: 24:00 SPEEDI Data

Attached please find the 24:00 SPEEDI Data.

SBU

This email is UNCLASSIFIED

Naomi Walcott  
Emergency Action Officer  
Japan Emergency Command Center  
U.S. Embassy Tokyo

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

From: nustec [mailto:spd01@nustec.or.jp]

Sent: Saturday, March 19, 2011 12:36 AM

To: (b)(6)

(b)(6)

NITOPS@nnsa.doe.gov; JapanEmbassy, TaskForce; (b)(6)

Subject: 3/19 00時SPEEDI単位量放出図形イメージ

関係者各位

お世話になっております。  
原子力安全技術センター SPEEDI担当です。  
3/19 00時のSPEEDI単位量放出図形のイメージデータを送付致します。  
ご確認のほど、よろしくお願い致します。

11/11/11

**From:** JapanEmbassy\_TaskForce  
**To:** [sod01@nustec.or.jp](mailto:sod01@nustec.or.jp); (b)(6)  
(b)(6)  
(b)(6) Alex Robinson; Uises, Anthony; CAT 5; Cherry, Ronald C; [cmh@nnsa.doe.gov](mailto:cmh@nnsa.doe.gov); Craig Haas; Curry Wright; DART Liaison; HQO Hoc; Trapp, James; John Okon (b)(6)  
Mears, Jeremy M; Morales, Russell A; Paul Guss; Hoc, PMT12; PMT01 Hoc (b)(6)  
(b)(6) Theodore Shaw; Uchida, Koichi  
**Subject:** 0500 SPEEDI Data, unzipped  
**Date:** Friday, March 18, 2011 6:17:14 PM  
**Attachments:** FUKUSHIMA1 air concentration@07-08h@1.gif  
FUKUSHIMA1 air dose@05-06h@1.gif  
FUKUSHIMA1 air dose@06-07h@1.gif  
FUKUSHIMA1 air dose@07-08h@1.gif  
FUKUSHIMA1 wind@05h@1.gif  
FUKUSHIMA1 air concentration@06-07h@1.gif  
FUKUSHIMA1 air concentration@05-06h@1.gif

0500 SPEEDI Data.

SBU

This email is UNCLASSIFIED

Jerome Ryan  
Political Officer  
U.S. Embassy Tokyo  
1-10-5, Akasaka 1-Chome, Minato-Ku, Tokyo 107  
tel:(81)(03)3224-5343  
fax:(81)(03)3224-5322  
<http://japan.usembassy.gov/>

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

**From:** nustec [<mailto:sod01@nustec.or.jp>]  
**Sent:** Saturday, March 19, 2011 5:53 AM  
**To:** (b)(6)

(b)(6)

NITOPS@nnsa.doe.gov; JapanEmbassy, TaskForce; (b)(6)  
**Subject:** 3/19 05時SPEEDI単位量放出図形イメージの送付

関係者各位

お世話になっております。  
原子力安全技術センター SPEEDI担当です。  
3/19 05時のSPEEDI単位量放出図形のイメージデータを送付致します。  
ご確認のほど、よろしくお願い致します。

44/112



空気吸収線量率

**空気吸収線量率**  
 日時 = 2011/03/19 05:00 - 2011/03/19 06:00  
 気象データ = G P V + 観測値 (2011/03/19 05:00) まで

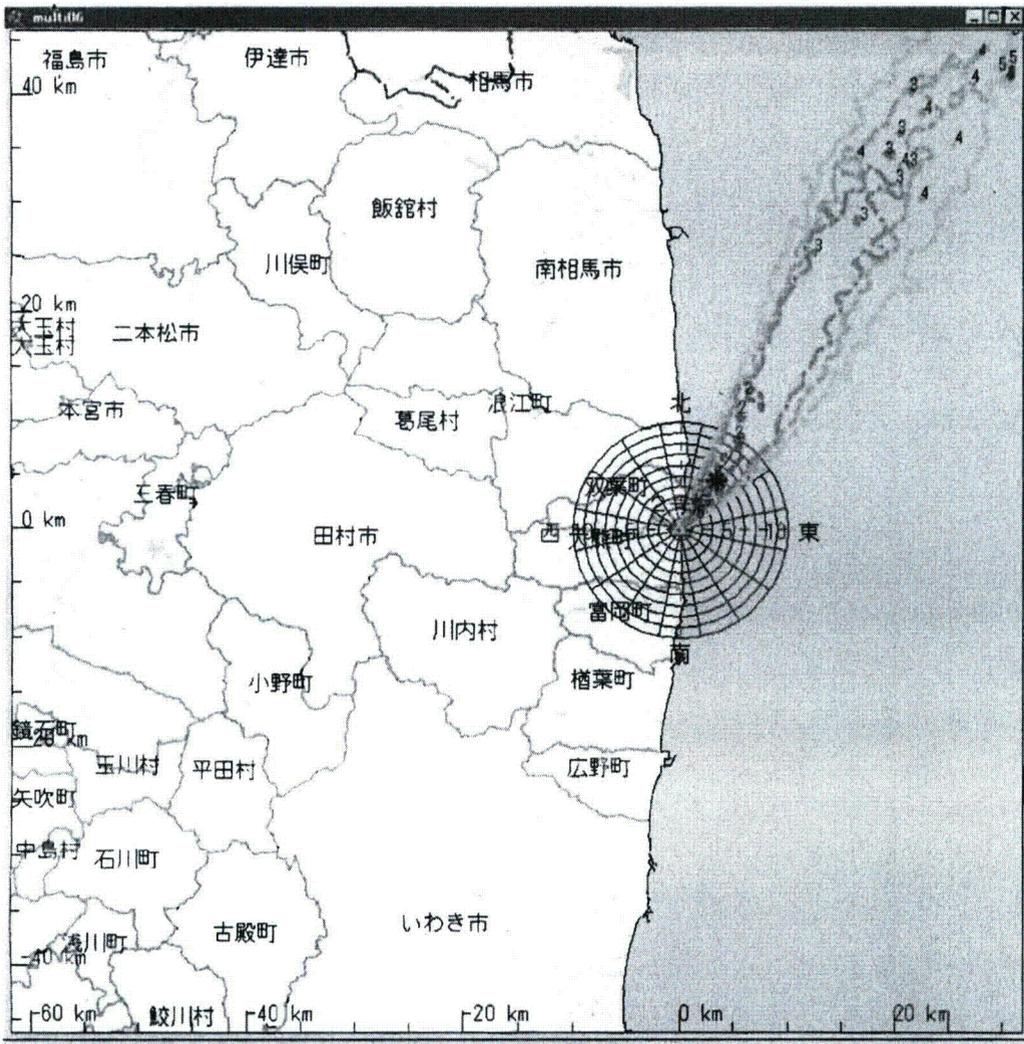
福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 核種名 = 希ガス

- 【凡例】
- 空気吸収線量率等値線 ( $\mu\text{Gy/h}$ )
- 1 =  $1.00 \times 10^{-15}$  \_\_\_\_\_
  - 2 =  $5.00 \times 10^{-16}$  -----
  - 3 =  $1.00 \times 10^{-16}$  - - - - -
  - 4 =  $5.00 \times 10^{-17}$  - - - - -
  - 5 =  $1.00 \times 10^{-17}$  - - - - -

最大線量率 =  $1.203 \times 10^{-15} \mu\text{Gy/h}$   
 放出地点から ( 1.5, 2.3 ) km (\*印)

計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル  
 【計算条件】  
 計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/MTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/19 05:00  
 放出モード = 単位量放出

05時定期福島1-2号炉



空気吸収線量率

空気吸収線量率

日時 = 2011/03/19 06:00 -  
 2011/03/19 07:00  
 気象データ = G P V + 観測値  
 (2011/03/19 05:00) まで

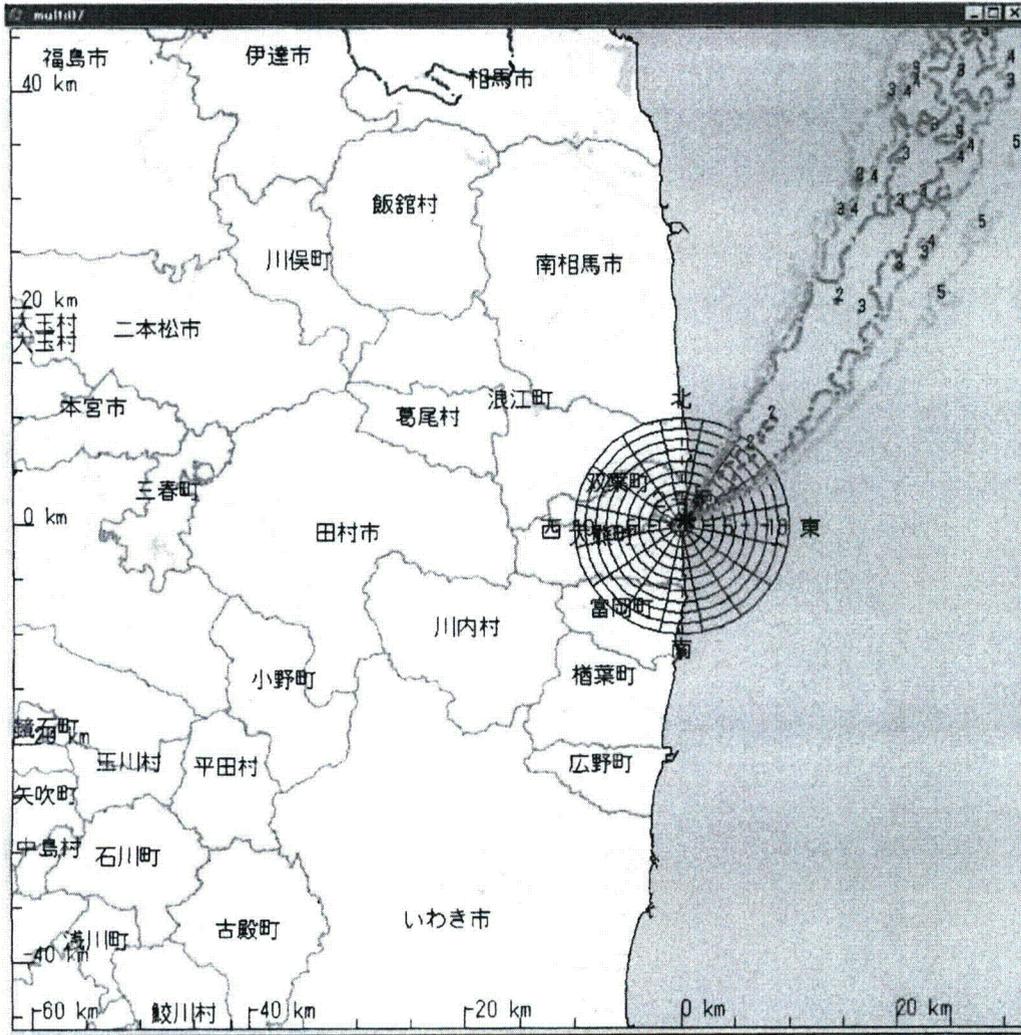
福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域名 : 92km X 92km  
 核種名 = 希ガス

- 【凡例】  
 空気吸収線量率等値線 (μGy/h)
- 1=  $1.00 \times 10^{-15}$  \_\_\_\_\_
  - 2=  $5.00 \times 10^{-16}$  - - - - -
  - 3=  $1.00 \times 10^{-16}$  - - - - -
  - 4=  $5.00 \times 10^{-17}$  - - - - -
  - 5=  $1.00 \times 10^{-17}$  - - - - -

最大線量率 =  $1.273 \times 10^{-15}$  μGy/h  
 放出地点から ( 3.5, 4.3) km (\*印)

計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル  
 【計算条件】  
 計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/MTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/19 05:00  
 放出モード = 単位量放出

05時定期福島1-2号炉



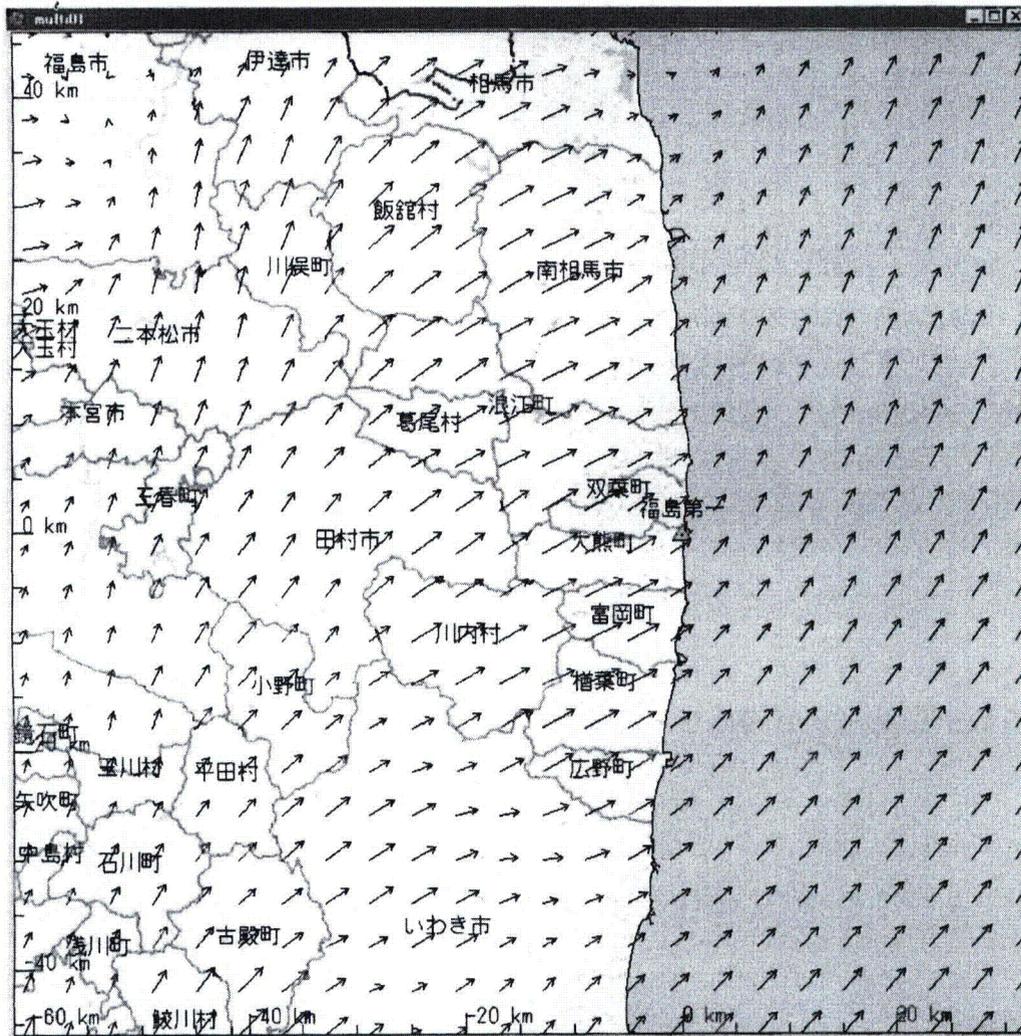
**空気吸収線量率**  
 日時 = 2011/03/19 07:00 - 2011/03/19 08:00  
 気象データ = G P V + 観測値 (2011/03/19 05:00) まで  
 福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 核種名 = 希ガス

**【凡例】**  
 空気吸収線量率等値線 (μGy/h)  
 1 =  $1.00 \times 10^{-15}$  —————  
 2 =  $5.00 \times 10^{-16}$  - - - - -  
 3 =  $1.00 \times 10^{-16}$  - - - - -  
 4 =  $5.00 \times 10^{-17}$  - - - - -  
 5 =  $1.00 \times 10^{-17}$  - - - - -

最大線量率 =  $2.571 \times 10^{-15}$  μGy/h  
 放出地点から ( 0.5, 0.3 ) km (\* 印)

計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル  
**【計算条件】**  
 計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/WTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/19 05:00  
 放出モード = 単位量放出

05時定期福島1-2号炉



風速場(地上高)

風速場 (地上高)

日時 = 2011/03/19 05:00  
 気象データ = G P V + 観測値  
 (2011/03/19 05:00) まで

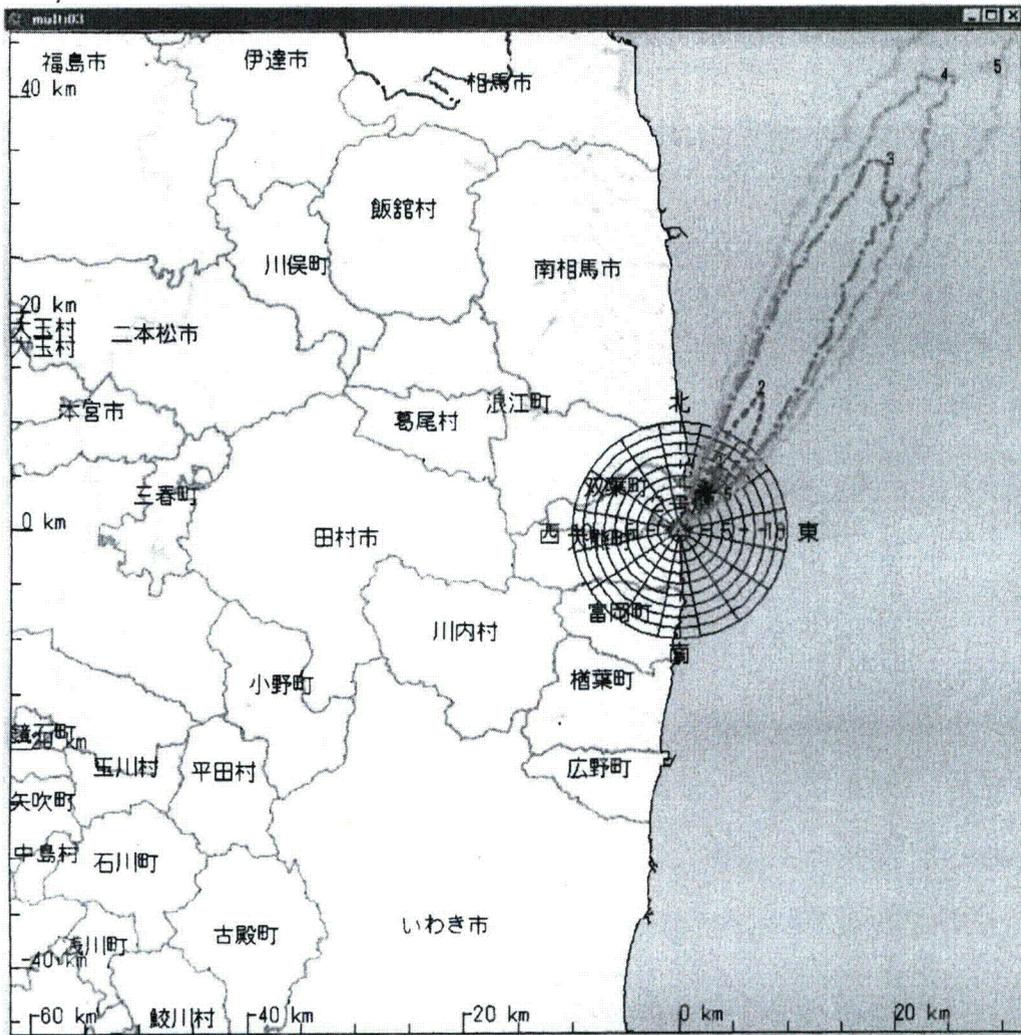
福島第1 広域図

サイト中心 : 141°02'10" - 37°25'12"  
 領域 : 92km X 92km  
 表示高度 = 120.00 m  
 サイト中心付近の風 : 南西 8.8 m/s  
 大気安定度: D型

計算モデル名 = PHYSIC  
 計算メッシュ幅 水平方向 = 2.00 km

【凡例】  
 標準風速 (標準領域の場合の長さ)  
 → = 10 m/s

06時定期福島1-2号炉



大気中濃度(ヨウ素)(地上高)

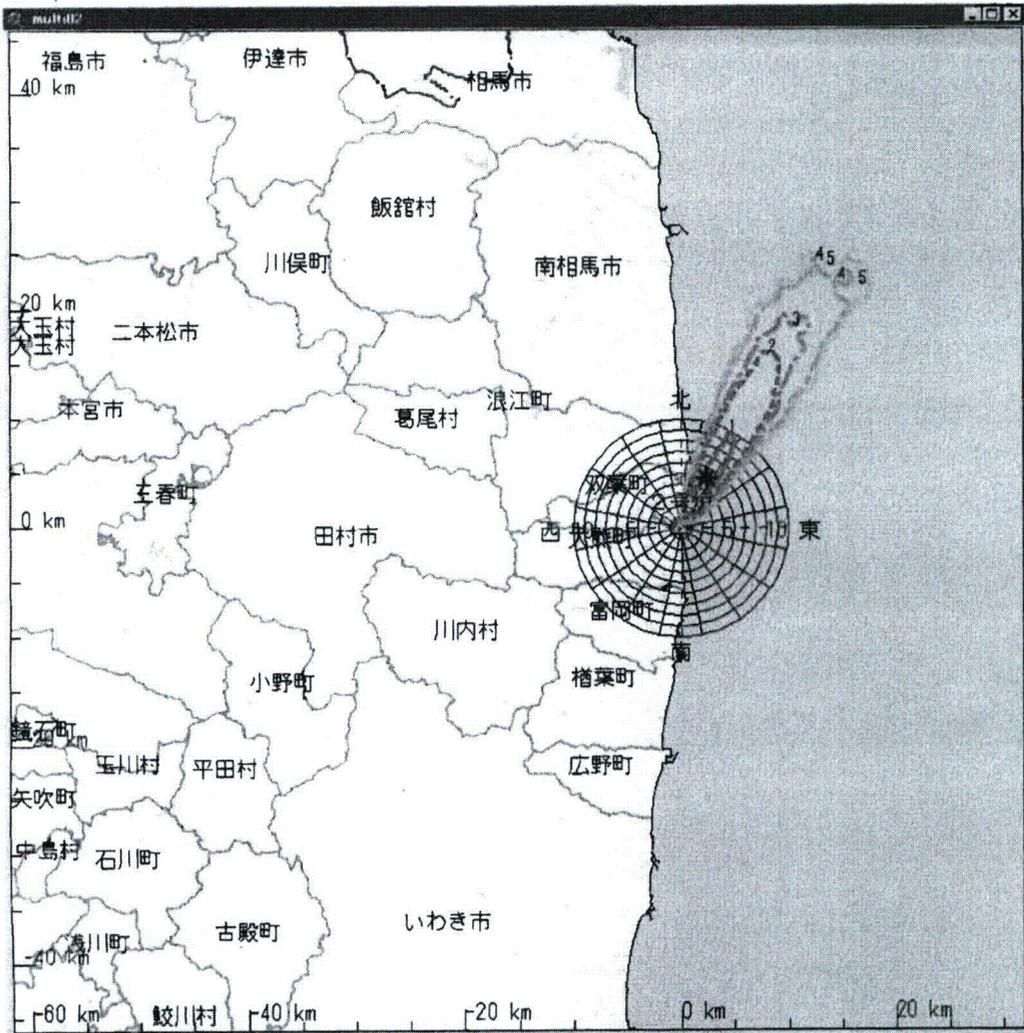
大気中濃度(ヨウ素)(地上高)  
 日時 = 2011/03/19 06:00 -  
 2011/03/19 07:00  
 気象データ = G P V + 観測値  
 (2011/03/19 05:00) まで

福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 表示高度 = 1.00 m

- 【凡例】  
 大気中濃度等値線 (Ba/m<sup>3</sup>)  
 1 =  $1.00 \times 10^{-10}$   
 2 =  $5.00 \times 10^{-11}$   
 3 =  $1.00 \times 10^{-11}$   
 4 =  $5.00 \times 10^{-12}$   
 5 =  $1.00 \times 10^{-12}$

最大濃度 =  $1.157 \times 10^{-10}$  Ba/m<sup>3</sup>  
 放出地点から ( 2.5, 3.3 ) km (\*印)

計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル  
 【計算条件】  
 計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/MTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/19 05:00  
 放出モード = 単位置放出  
 放出核種・放出率(積算) : Ba/h (Ba)  
 ヨウ素 :  $1.00 \times 10^0$  ( $1.00 \times 10^0$ )



大気中濃度(ヨウ素)(地上高)

大気中濃度(ヨウ素)(地上高)  
 日時 = 2011/03/19 05:00 -  
 2011/03/19 06:00  
 気象データ = GPV + 観測値  
 (2011/03/19 05:00) まで

福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 表示高度 = 1.00 m

- 【凡例】  
 大気中濃度等値線 (Ba/m<sup>3</sup>)
- 1 =  $5.00 \times 10^{-11}$  —————
  - 2 =  $1.00 \times 10^{-11}$  - - - - -
  - 3 =  $5.00 \times 10^{-12}$  - - - - -
  - 4 =  $1.00 \times 10^{-12}$  - - - - -
  - 5 =  $5.00 \times 10^{-13}$  - - - - -

最大濃度 =  $9.603 \times 10^{-11}$  Ba/m<sup>3</sup>  
 放出地点から ( 2.5, 4.3 ) km (\*印)

計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル  
 【計算条件】  
 計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/MTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/19 05:00  
 放出モード = 単位置放出  
 放出核種・放出率(積算) : Ba/h (Ba)  
 ヨウ素 :  $1.00 \times 10^0$  ( $1.00 \times 10^0$ )

05時定期福島1-2号炉



大気中濃度(ヨウ素)(地上高)

大気中濃度(ヨウ素)(地上高)  
 日時 = 2011/03/19 05:00 -  
 2011/03/19 06:00  
 気象データ = G P V + 観測値  
 (2011/03/19 05:00) まで

福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 表示高度 = 1.00 m

- 【凡例】  
 大気中濃度等値線 (Ba/m3)  
 1 =  $5.00 \times 10^{-11}$  —————  
 2 =  $1.00 \times 10^{-11}$  .....  
 3 =  $5.00 \times 10^{-12}$  - - - - -  
 4 =  $1.00 \times 10^{-12}$  - - - - -  
 5 =  $5.00 \times 10^{-13}$  - - - - -

最大濃度 =  $9.603 \times 10^{-11}$  Ba/m3  
 放出地点から ( 2.5, 4.3 ) km (\* E印)

計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル  
 【計算条件】  
 計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/MTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/19 05:00  
 放出モード = 単位量放出  
 放出核種・放出率(積算): Ba/h (Ba)  
 ヨウ素 :  $1.00 \times 10^0$  ( $1.00 \times 10^0$ )

05時定期福島1-2号炉

**From:** JapanEmbassy\_TaskForce  
**To:** spd01@nustec.or.jp (b)(6)  
(b)(6)  
(b)(6) NITOPS@nnsa.doe.gov; JapanEmbassy\_TaskForce; (b)(6)  
(b)(6) Alex Robinson; Ulises Anthony; CAT 5; Cherry, Ronald C.; crmc@nnsa.doe.gov; Craig Haas; Curry Wright; DART Liaison; HOO Hoc; Trapp, James; John Okon; (b)(6)  
Mears, Jeremy M; Morales, Russell A; Paul Guss; Hoc, PMT12; PMT01 Hoc  
(b)(6) Theodore Shaw; Uchida, Koichi  
**Subject:** 0600 SPEEDI Data  
**Date:** Friday, March 18, 2011 6:22:27 PM  
**Attachments:** FUKUSHIMA1 air concentration006-07h01.gif  
FUKUSHIMA1 air concentration008-09h01.gif  
FUKUSHIMA1 air concentration007-08h01.gif  
FUKUSHIMA1 air dose008-09h01.gif  
FUKUSHIMA1 air dose006-07h01.gif  
FUKUSHIMA1 air dose007-08h01.gif  
FUKUSHIMA1 wind006h01.gif

0600 SPEEDI Data, unzipped.

SBU  
This email is UNCLASSIFIED

Jerome Ryan  
Political Officer  
U.S. Embassy Tokyo  
1-10-5, Akasaka 1-Chome, Minato-Ku, Tokyo 107  
tel:(81)(03)3224-5343  
fax:(81)(03)3224-5322  
<http://japan.usembassy.gov/>

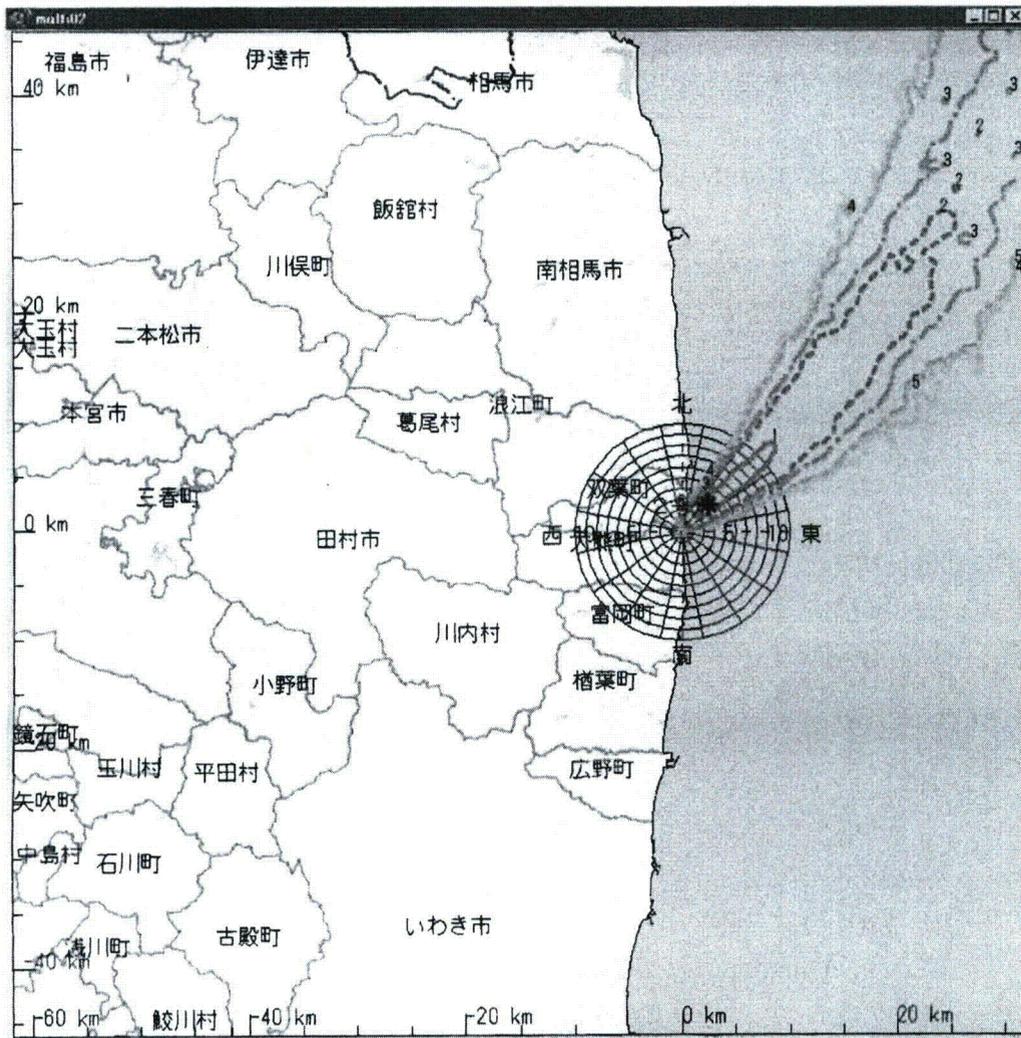
-----Original Message-----

**From:** nustec [mailto:spd01@nustec.or.jp]  
**Sent:** Saturday, March 19, 2011 6:35 AM  
**To:** (b)(6)  
(b)(6)  
NITOPS@nnsa.doe.gov; JapanEmbassy\_TaskForce; (b)(6)  
**Subject:** 3/19 06時SPEEDI単位量放出図形イメージ

関係者各位

お世話になっております。  
原子力安全技術センター SPEEDI担当です。  
3/19 06時のSPEEDI単位量放出図形のイメージデータを送付致します。  
ご確認のほど、よろしくお願い致します。

HH/113



大気中濃度(ヨウ素)(地上高)

大気中濃度(ヨウ素)(地上高)

日時 = 2011/03/19 08:00 -  
 2011/03/19 09:00  
 気象データ = GPV + 観測値  
 (2011/03/19 06:00) まで

福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 表示高度 = 1.00 m

【凡例】

大気中濃度等値線 (Bq/m<sup>3</sup>)

- 1 =  $5.00 \times 10^{-11}$  —————
- 2 =  $1.00 \times 10^{-11}$  - - - - -
- 3 =  $5.00 \times 10^{-12}$  - - - - -
- 4 =  $1.00 \times 10^{-12}$  - - - - -
- 5 =  $5.00 \times 10^{-13}$  - - - - -

最大濃度 =  $7.806 \times 10^{-11}$  Bq/m<sup>3</sup>  
 放出地点から ( 2.5, 2.3 ) km (\*印)

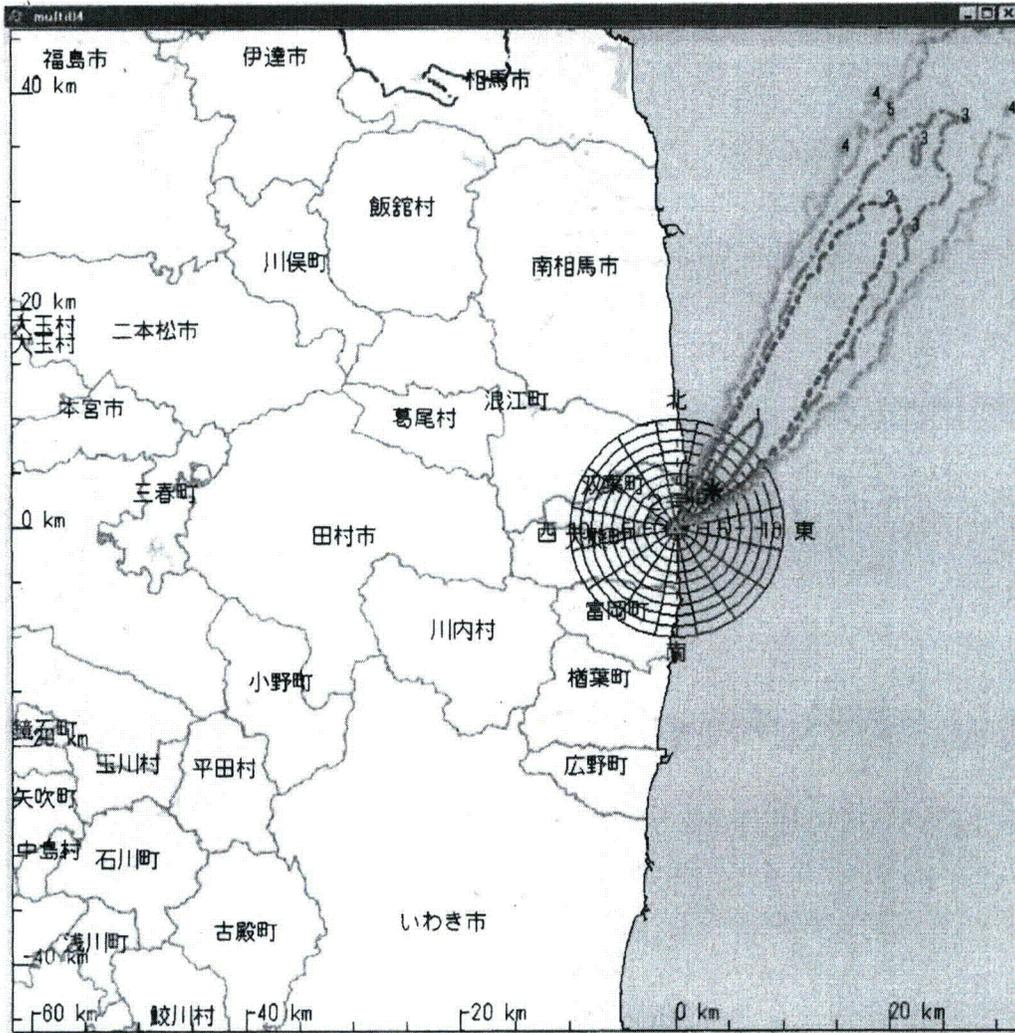
計算モデル名 = PRWDA21

使用モデル名 = 通常モデル

【計算条件】

計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/WTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/19 06:00  
 放出モード = 単位量放出  
 放出核種・放出率(積算): Bq/h (Ba)  
 ヨウ素 :  $1.00 \times 10^0$  ( $1.00 \times 10^0$ )

06時定期福島1-2号炉



大気中濃度(ヨウ素)(地上高)

大気中濃度(ヨウ素)(地上高)

日時 = 2011/03/19 07:00 -  
 2011/03/19 08:00  
 気象データ = GPV+観測値  
 (2011/03/19 06:00) まで

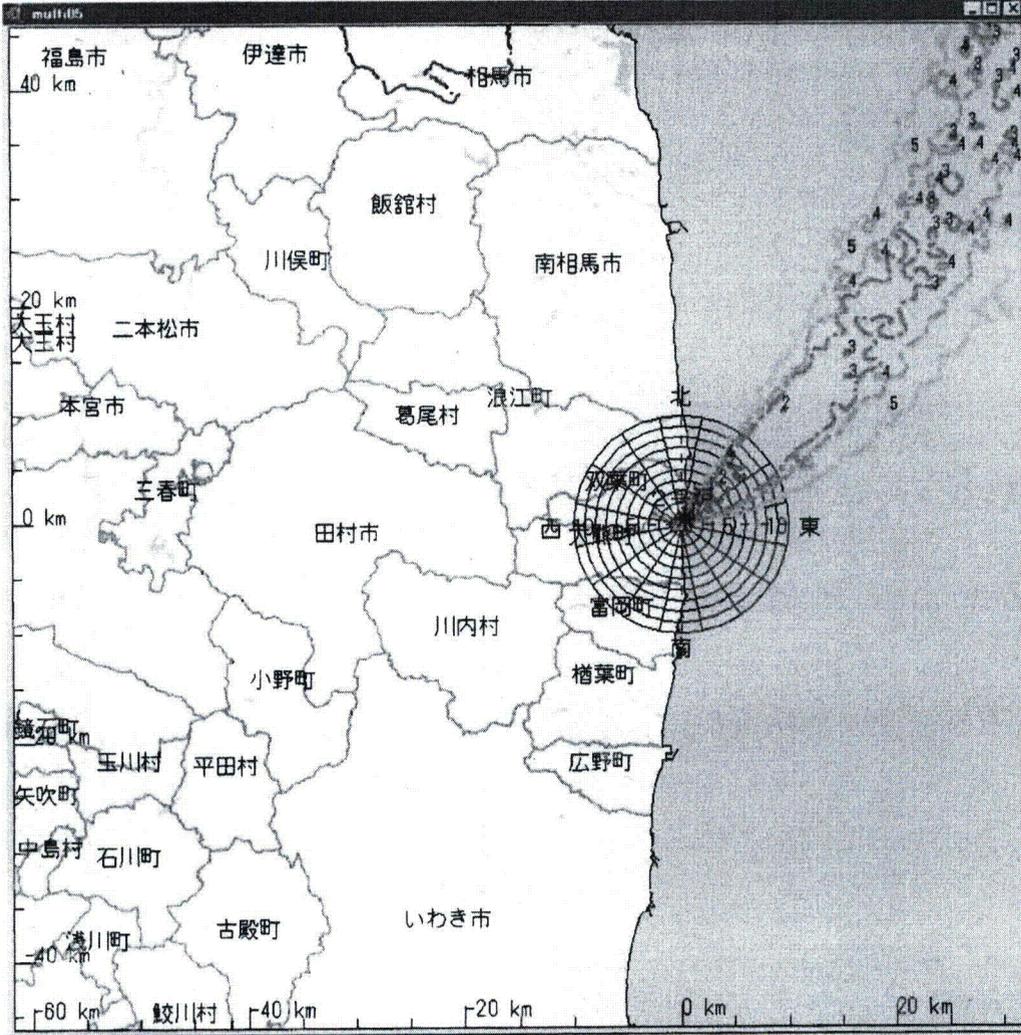
福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 表示高度 = 1.00 m

- 【凡例】  
 大気中濃度等値線 (Ba/m<sup>3</sup>)
- 1 =  $5.00 \times 10^{-11}$  \_\_\_\_\_
  - 2 =  $1.00 \times 10^{-11}$  - - - - -
  - 3 =  $5.00 \times 10^{-12}$  - - - - -
  - 4 =  $1.00 \times 10^{-12}$  - - - - -
  - 5 =  $5.00 \times 10^{-13}$  - - - - -

最大濃度 =  $9.175 \times 10^{-11}$  Ba/m<sup>3</sup>  
 放出地点から ( 3.5, 3.3 ) km (\* E1)

計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル  
 【計算条件】  
 計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/MTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/19 06:00  
 放出モード = 単位置放出  
 放出核種・放出率(積算) : Ba/h (Ba)  
 ヨウ素 :  $1.00 \times 10^0$  ( $1.00 \times 10^0$ )

06時定期福島1-2号炉



空気吸収線量率

日時 = 2011/03/19 08:00 - 2011/03/19 09:00  
 気象データ = G P V + 観測値 (2011/03/19 06:00) まで

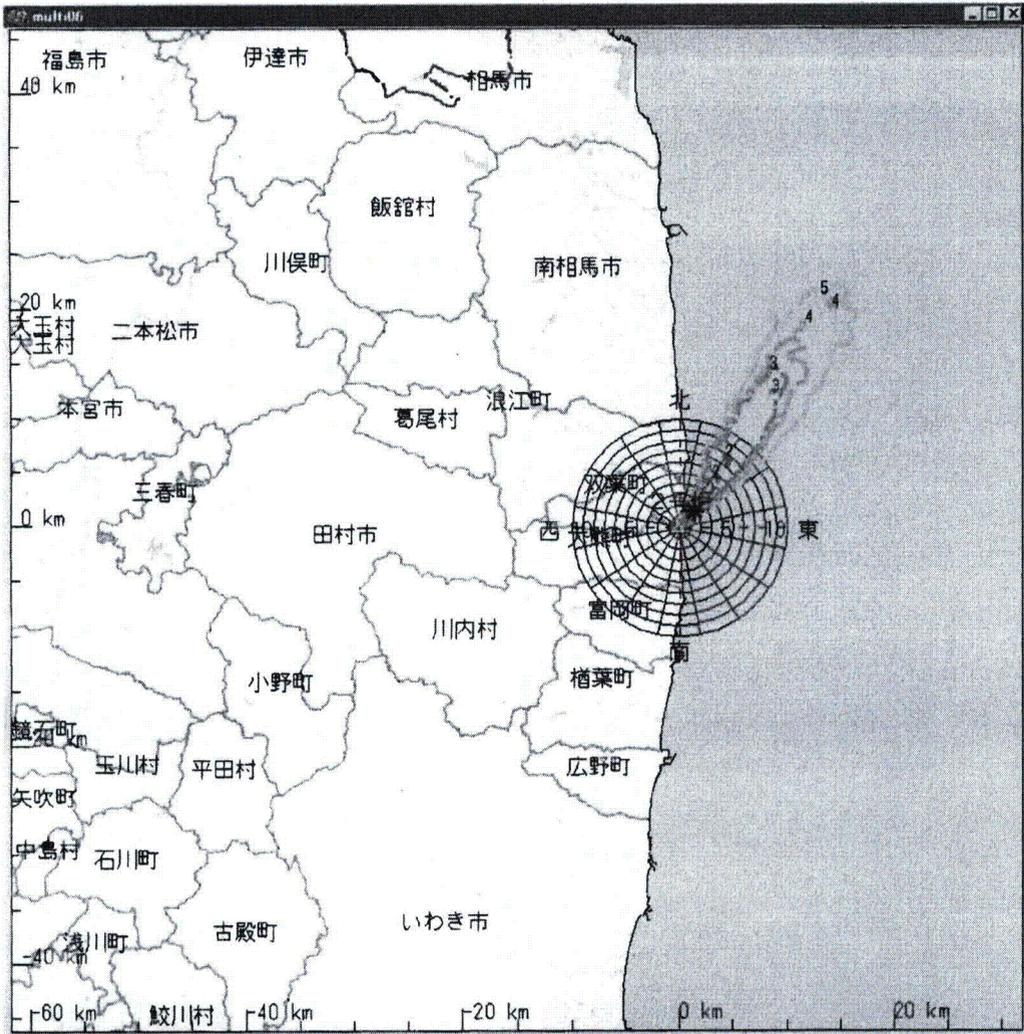
福島第1 2号炉 広域区  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 核種名 = 希ガス

【凡例】  
 空気吸収線量率等値線 (μGy/h)  
 1=  $1.00 \times 10^{-15}$   
 2=  $5.00 \times 10^{-16}$   
 3=  $1.00 \times 10^{-16}$   
 4=  $5.00 \times 10^{-17}$   
 5=  $1.00 \times 10^{-17}$

最大線量率 =  $2.548 \times 10^{-15}$  μGy/h  
 放出地点から (0.5, 0.3) km (\* EP)

計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル  
 【計算条件】  
 計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/MTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/19 06:00  
 放出モード = 単位量放出

06時定期福島1-2号炉



空気吸収線量率

空気吸収線量率  
 日時 = 2011/03/19 06:00 -  
 2011/03/19 07:00  
 気象データ = G P V + 観測値  
 (2011/03/19 06:00) まで

福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 核種名 = 希ガス

- 【凡例】  
 空気吸収線量率等値線 (μ Gy/h)
- 1=  $1.00 \times 10^{-15}$  \_\_\_\_\_
  - 2=  $5.00 \times 10^{-16}$  - - - - -
  - 3=  $1.00 \times 10^{-16}$  - - - - -
  - 4=  $5.00 \times 10^{-17}$  - - - - -
  - 5=  $1.00 \times 10^{-17}$  - - - - -

最大線量率 =  $1.169 \times 10^{-15}$  μ Gy/h  
 放出地点から ( 1.5, 1.3 ) km (\* E印)

計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル  
 【計算条件】  
 計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/MTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/19 06:00  
 放出モード = 単位量放出

06時定期福島1-2号炉



空気吸収線量率

空気吸収線量率

日時 = 2011/03/19 07:00 -  
 2011/03/19 08:00  
 気象データ = G P V + 観測値  
 (2011/03/19 06:00) まで

福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 核種名 = 希ガス

【凡例】

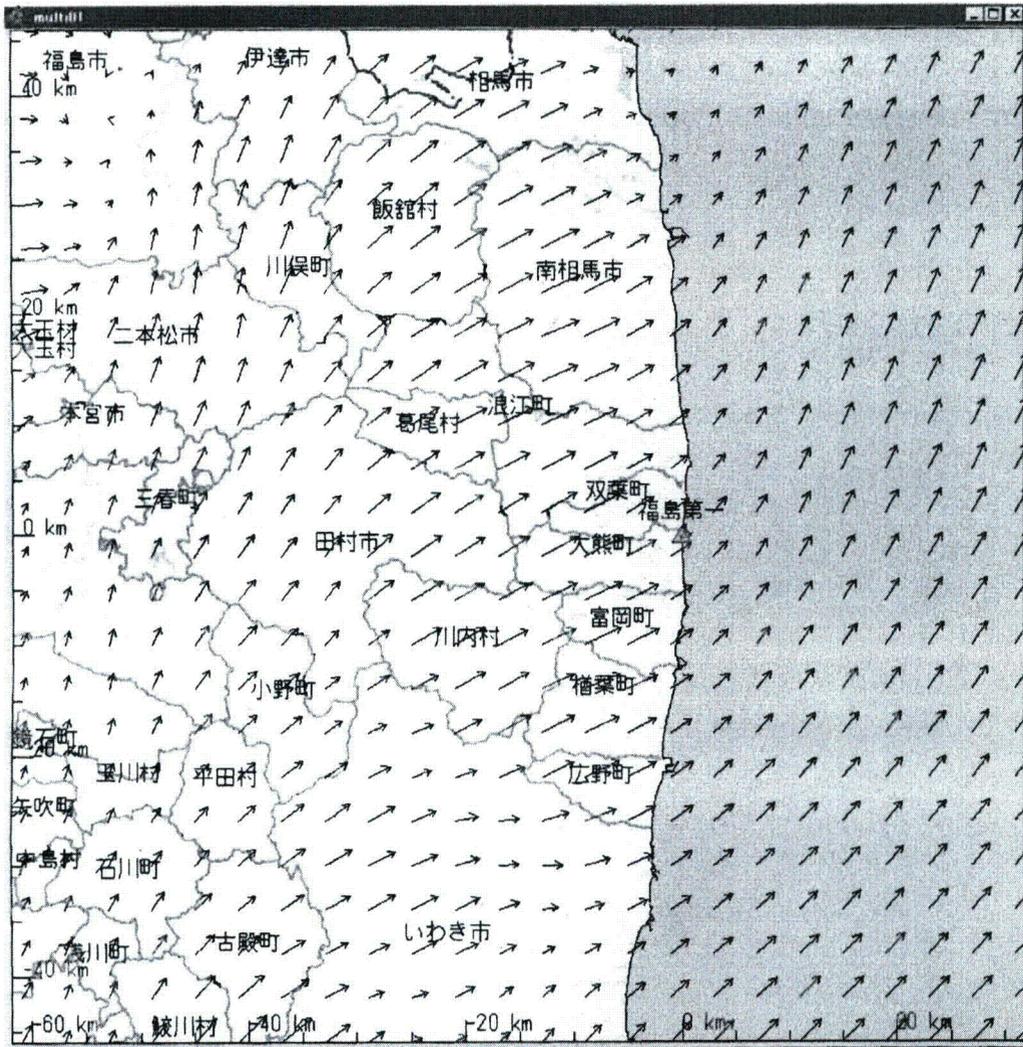
空気吸収線量率等値線 ( $\mu\text{Gy/h}$ )

- 1 =  $1.00 \times 10^{-15}$  \_\_\_\_\_
- 2 =  $5.00 \times 10^{-16}$  - - - - -
- 3 =  $1.00 \times 10^{-16}$  - - - - -
- 4 =  $5.00 \times 10^{-17}$  - - - - -
- 5 =  $1.00 \times 10^{-17}$  - - - - -

最大線量率 =  $2.367 \times 10^{-15} \mu\text{Gy/h}$   
 放出地点から ( 0.5, 0.3 ) km (\* E/F)

計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル  
 【計算条件】  
 計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/MTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/19 06:00  
 放出モード = 単位量放出

06時定期福島1 - 2号炉



風速場(地上高)

風速場 (地上高)

日時 = 2011/03/19 06:00

気象データ = G P V + 観測値

(2011/03/19 06:00) まで

福島第1 広域図

サイト中心 : 141°02'10" - 37°25'12"

領域 : 92km X 92km

表示高度 = 120.00 m

サイト中心付近の風 : 南西 9 m/s

大気安定度 : D型

計算モデル名 = PHYSIC

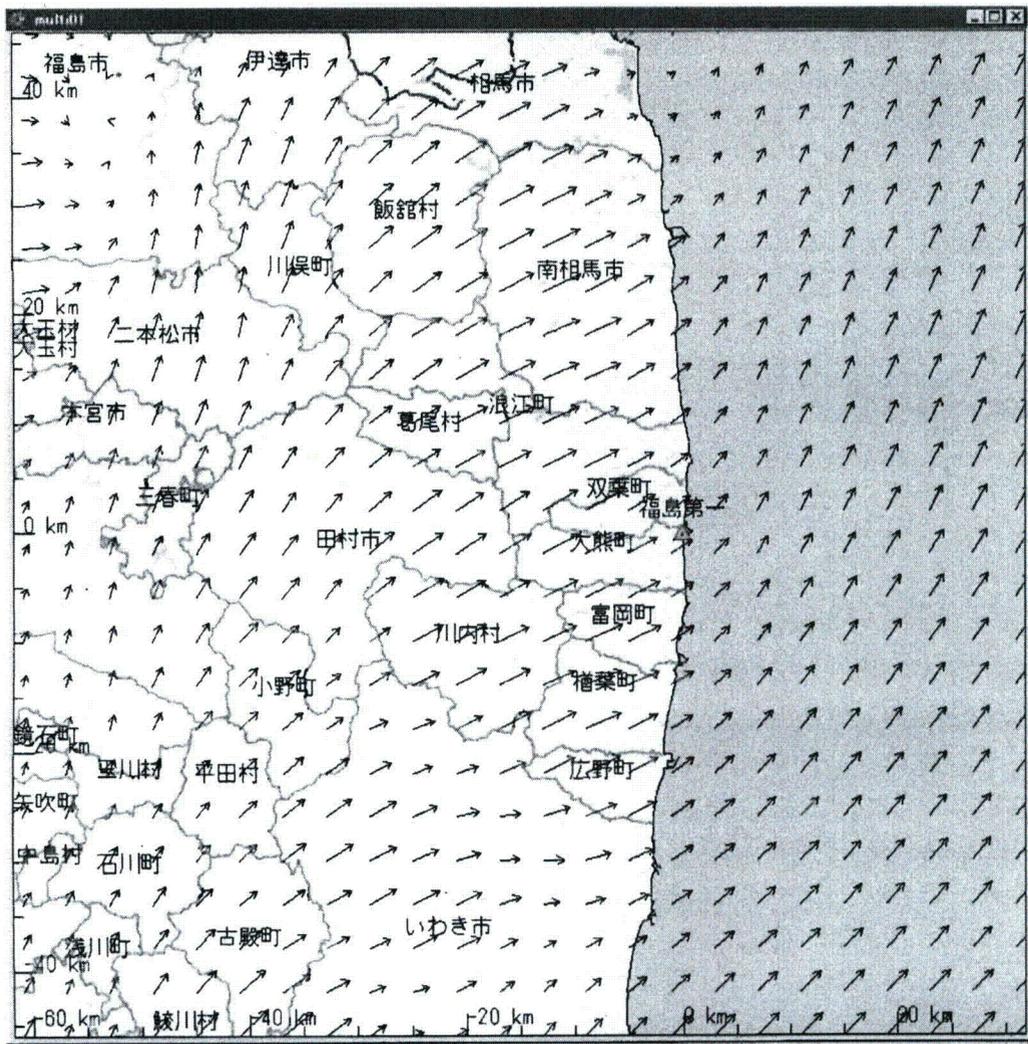
計算メッシュ幅 水平方向 = 2.00 km

【凡例】

標準風速 (標準領域の場合の長さ)

→ = 10 m/s

06時定期福島1-2号炉



風速場(地上高)

風速場(地上高)  
 日時 = 2011/03/19 06:00  
 気象データ = G P V + 観測値  
 (2011/03/19 06:00) まで

福島第1 広域図  
 サイト中心 : 141°02'10" - 37°25'12"  
 領域 : 92km X 92km  
 表示高度 = 120.00 m  
 サイト中心付近の風 : 南西 9 m/s  
 大気安定度: D型

計算モデル名 = PHYSIC  
 計算メッシュ幅 水平方向 = 2.00 km

【凡例】  
 標準風速 (標準領域の場合の長さ)  
 → = 10 m/s

06時定期福島1-2号炉

**From:** NITOPS  
**To:** "hoo.hoc@nrc.gov"; "PMT02.Hoc@nrc.gov"; "rmt01.hoc@nrc.gov"; CMHT; "narc@linl.gov"  
**Subject:** FW: 0500 SPEEDI Data, unzipped  
**Date:** Friday, March 18, 2011 6:24:02 PM  
**Attachments:** FUKUSHIMA1\_air\_concentration07-08hui.gif  
FUKUSHIMA1\_air\_dose05-06hui.gif  
FUKUSHIMA1\_air\_dose06-07hui.gif  
FUKUSHIMA1\_air\_dose07-08hui.gif  
FUKUSHIMA1\_wind05hui.gif  
FUKUSHIMA1\_air\_concentration06-07hui.gif  
FUKUSHIMA1\_air\_concentration05-06hui.gif

---

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

From: JapanEmbassy, TaskForce [mailto:JapanEmbassyTaskForce@state.gov]

Sent: Friday, March 18, 2011 6:16 PM

To: spd01@nustec.or.jp; (b)(6)

(b)(6)

(b)(6)

NITOPS;

JapanEmbassy, TaskForce; (b)(6) Alex Robinson; Anthony  
Ulises; CAT 5; Cherry, Ron; CMHT; Craig Haas; Curry Wright; DART Liaison; HOO; James Trapp; John  
Okon; (b)(6) Mears, Jeremy M; Morales, Russell A; Paul Guss; PMT 12;  
PMT01; (b)(6) Theodore Shaw; Uchida, Koichi

Subject: 0500 SPEEDI Data, unzipped

0500 SPEEDI Data.

SBU

This email is UNCLASSIFIED

Jerome Ryan  
Political Officer  
U.S. Embassy Tokyo  
1-10-5, Akasaka 1-Chome, Minato-Ku, Tokyo 107  
tel:(81)(03)3224-5343  
fax:(81)(03)3224-5322  
<http://japan.usembassy.gov/>

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

From: nustec [mailto:spd01@nustec.or.jp]

Sent: Saturday, March 19, 2011 5:53 AM

To: (b)(6)

(b)(6)

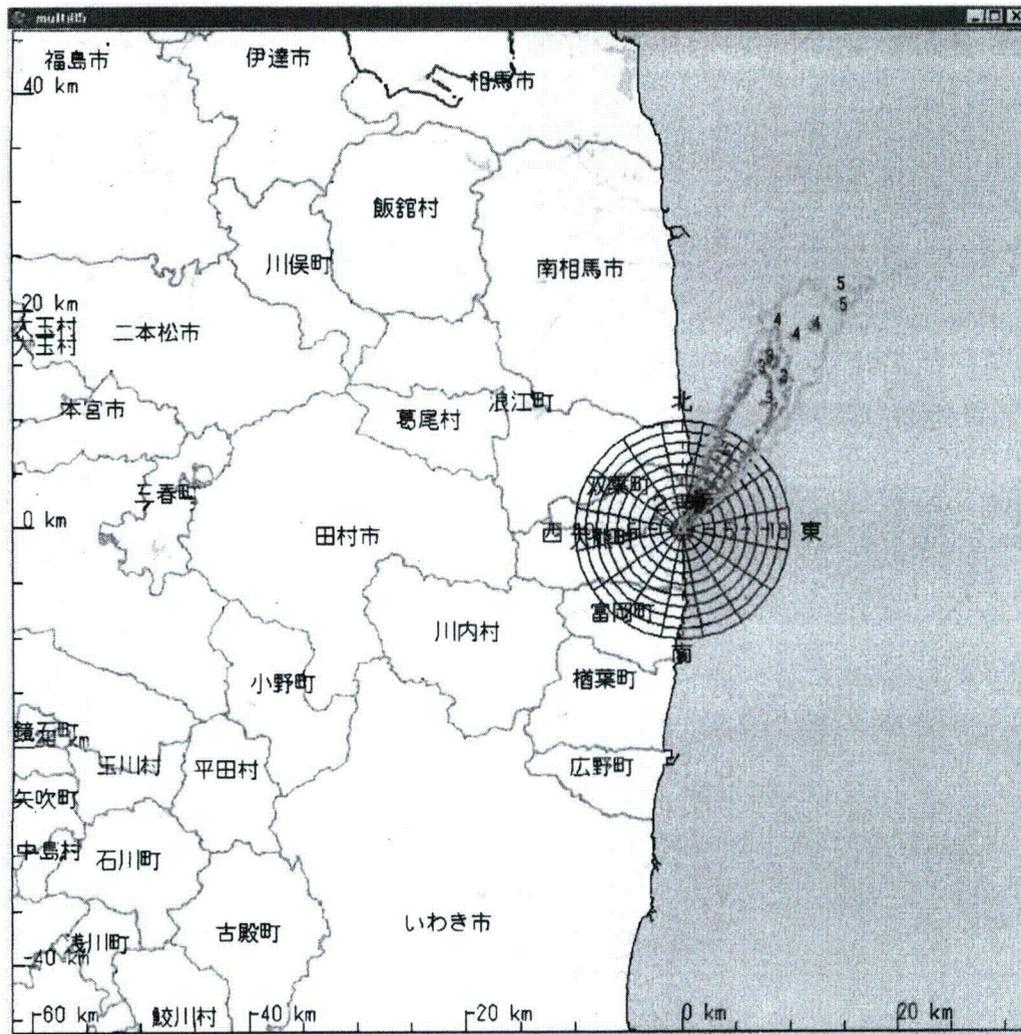
NITOPS@nnsa.doe.gov; JapanEmbassy, TaskForce; (b)(6)  
Subject: 3/19 05時SPEEDI単位量放出図形イメージの送付

関係者各位

お世話になっております。  
原子力安全技術センター SPEEDI担当です。

24/114

3/19 05時のSPEEDI単位量放出図形のイメージデータを送付致します。  
ご確認のほど、よろしくお願い致します。



空気吸収線量率

空気吸収線量率

日時 = 2011/03/19 05:00 -  
2011/03/19 06:00

気象データ = G P V + 観測値  
(2011/03/19 05:00) まで

福島第1 2号炉 広域図  
放出地点 : 141°02'08" - 37°25'18"  
領域 : 92km X 92km  
核種名 = 希ガス

【凡例】

空気吸収線量率等値線 (μGy/h)

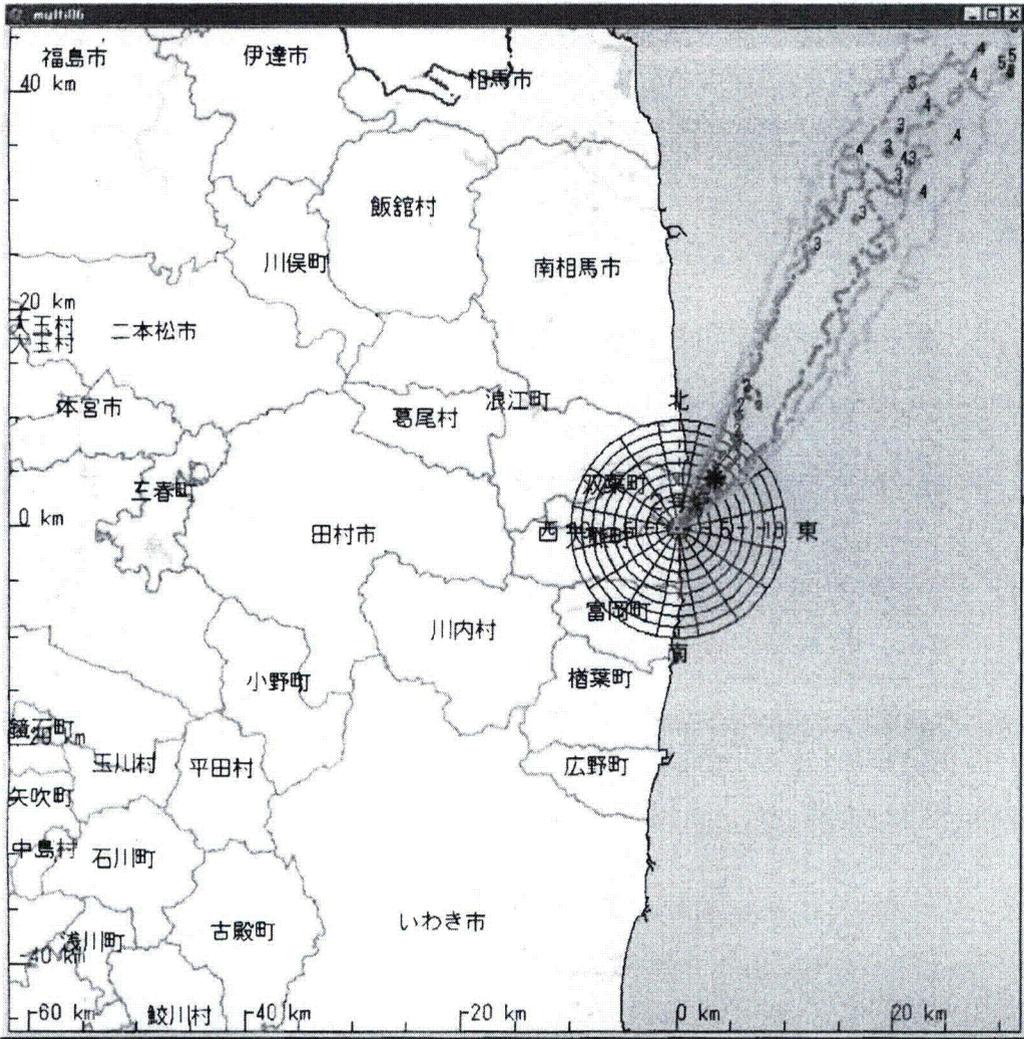
- 1 =  $1.00 \times 10^{-15}$  \_\_\_\_\_
- 2 =  $5.00 \times 10^{-16}$  - - - - -
- 3 =  $1.00 \times 10^{-16}$  - - - - -
- 4 =  $5.00 \times 10^{-17}$  - - - - -
- 5 =  $1.00 \times 10^{-17}$  - - - - -

最大線量率 =  $1.203 \times 10^{-15}$  μGy/h  
放出地点から (1.5, 2.3) km (\*印)

計算モデル名 = PRWDA21  
使用モデル名 = 通常モデル  
(計算条件)

計算メッシュ幅 水平方向 = 1.00 km  
放出高 = 120.0m  
燃焼度 = 20000 MWD/MTU  
原子炉停止時刻 = 2011/03/11 16:00  
放出開始時刻 = 2011/03/19 05:00  
放出モード = 単位量放出

05時定期福島1-2号炉



空気吸収線量率 |

**空気吸収線量率**  
 日時 = 2011/03/19 06:00 - 2011/03/19 07:00  
 気象データ = G P V + 観測値 (2011/03/19 05:00) まで

福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 核種名 = 希ガス

〔凡例〕  
 空気吸収線量率等値線 (μGy/h)  
 1 =  $1.00 \times 10^{-15}$  \_\_\_\_\_  
 2 =  $5.00 \times 10^{-16}$  - - - - -  
 3 =  $1.00 \times 10^{-16}$  \_\_\_\_\_  
 4 =  $5.00 \times 10^{-17}$  - - - - -  
 5 =  $1.00 \times 10^{-17}$  \_\_\_\_\_

最大線量率 =  $1.273 \times 10^{-15}$  μGy/h  
 放出地点から ( 3.5, 4.3 ) km (\*印)

計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル  
 〔計算条件〕  
 計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/MTU  
 原子炉停止時刻 = 2011/03/11 18:00  
 放出開始時刻 = 2011/03/19 05:00  
 放出モード = 単位量放出

○ 5時定期福島1-2号炉



空気吸収線量率

空気吸収線量率

日時 = 2011/03/19 07:00 -  
 2011/03/19 08:00  
 気象データ = G P V + 観測値  
 (2011/03/19 05:00) まで

福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 核種名 = 希ガス

【凡例】

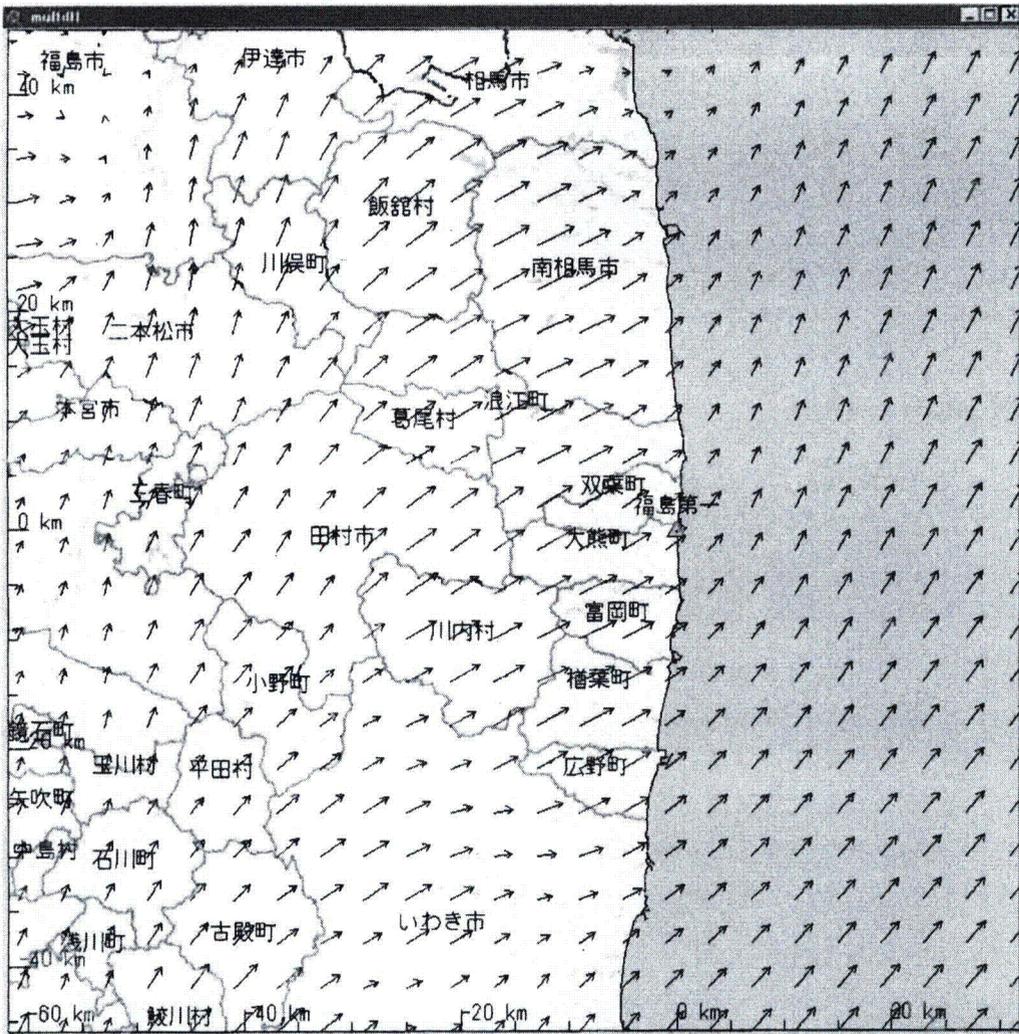
空気吸収線量率等値線 ( $\mu\text{Gy/h}$ )

- 1 =  $1.00 \times 10^{-15}$  \_\_\_\_\_
- 2 =  $5.00 \times 10^{-16}$  - - - - -
- 3 =  $1.00 \times 10^{-16}$  - - - - -
- 4 =  $5.00 \times 10^{-17}$  - - - - -
- 5 =  $1.00 \times 10^{-17}$  - - - - -

最大線量率 =  $2.571 \times 10^{-15} \mu\text{Gy/h}$   
 放出地点から ( 0.5, 0.3 ) km (\*印)

計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル  
 【計算条件】  
 計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/MTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/19 05:00  
 放出モード = 単位量放出

05時定期福島1-2号炉



風速場(地上高)

風速場(地上高)

日時 = 2011/03/19 05:00  
 気象データ = G P V + 観測値  
 (2011/03/19 05:00) まで

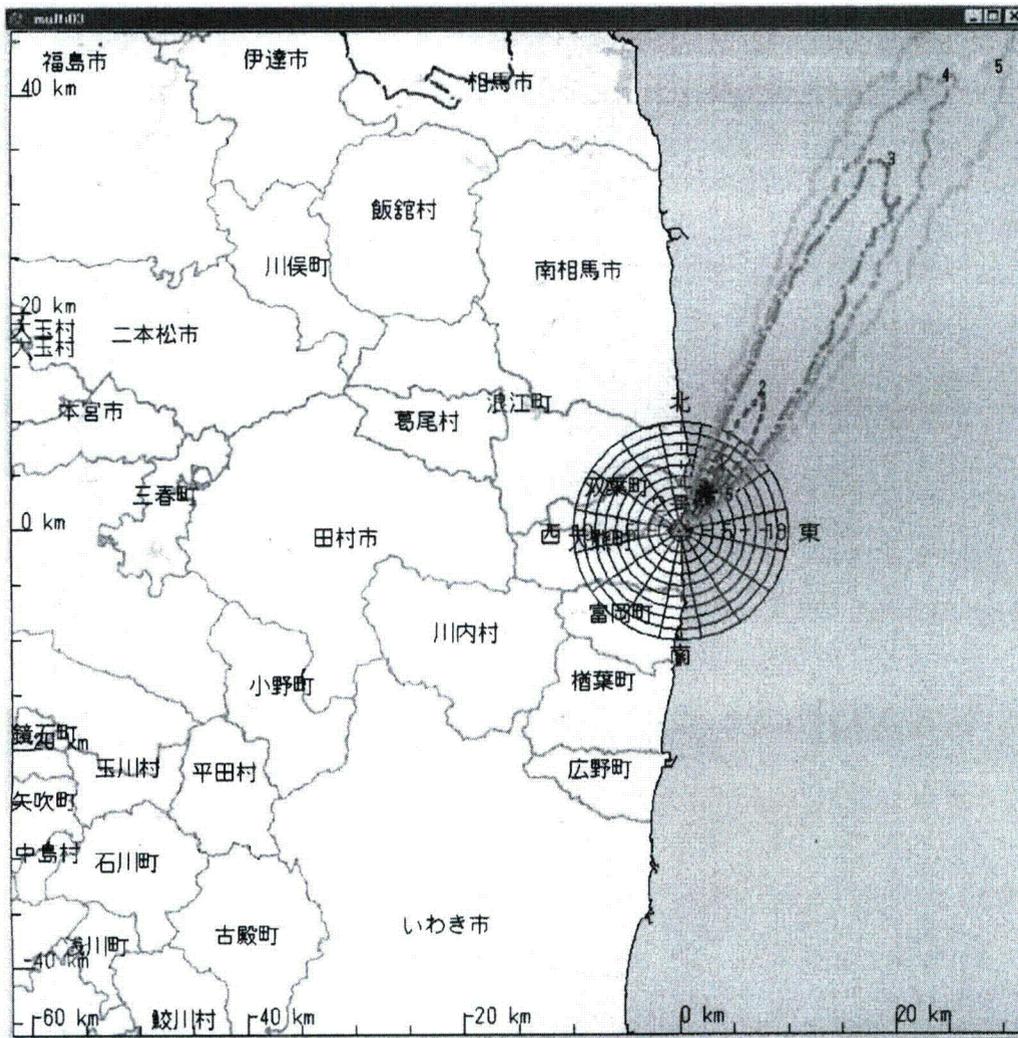
福島第1 広域図

サイト中心 : 141°02'10" - 37°25'12"  
 領域 : 92km X 92km  
 表示高度 = 120.00 m  
 サイト中心付近の風 : 南西 8.8 m/s  
 大気安定度 : D型

計算モデル名 = PHYSIC  
 計算メッシュ幅 水平方向 = 2.00 km

【凡例】  
 標準風速 (標準領域の場合の長さ)  
 → = 10 m/s

05時定期福島1-2号図



大気中濃度(ヨウ素)(地上高)

大気中濃度(ヨウ素)(地上高)

日時 = 2011/03/19 06:00 -

2011/03/19 07:00

気象データ = G P V + 観測値

(2011/03/19 05:00) まで

福島第1 2号炉 広域図

放出地点 : 141°02'08" - 37°25'18"

領域 : 92km X 92km

表示高度 = 1.00 m

【凡例】

大気中濃度等値線 (Bq/m<sup>3</sup>)

1 =  $1.00 \times 10^{-10}$

2 =  $5.00 \times 10^{-11}$

3 =  $1.00 \times 10^{-11}$

4 =  $5.00 \times 10^{-12}$

5 =  $1.00 \times 10^{-12}$

最大濃度 =  $1.157 \times 10^{-10}$  Bq/m<sup>3</sup>

放出地点から ( 2.5, 3.3 ) km (\* EIP)

計算モデル名 = PRWDA21

使用モデル名 = 通常モデル

【計算条件】

計算メッシュ幅 水平方向 = 1.00 km

放出高 = 120.0m

燃焼度 = 20000 MWD/MTU

原子炉停止時刻 = 2011/03/11 16:00

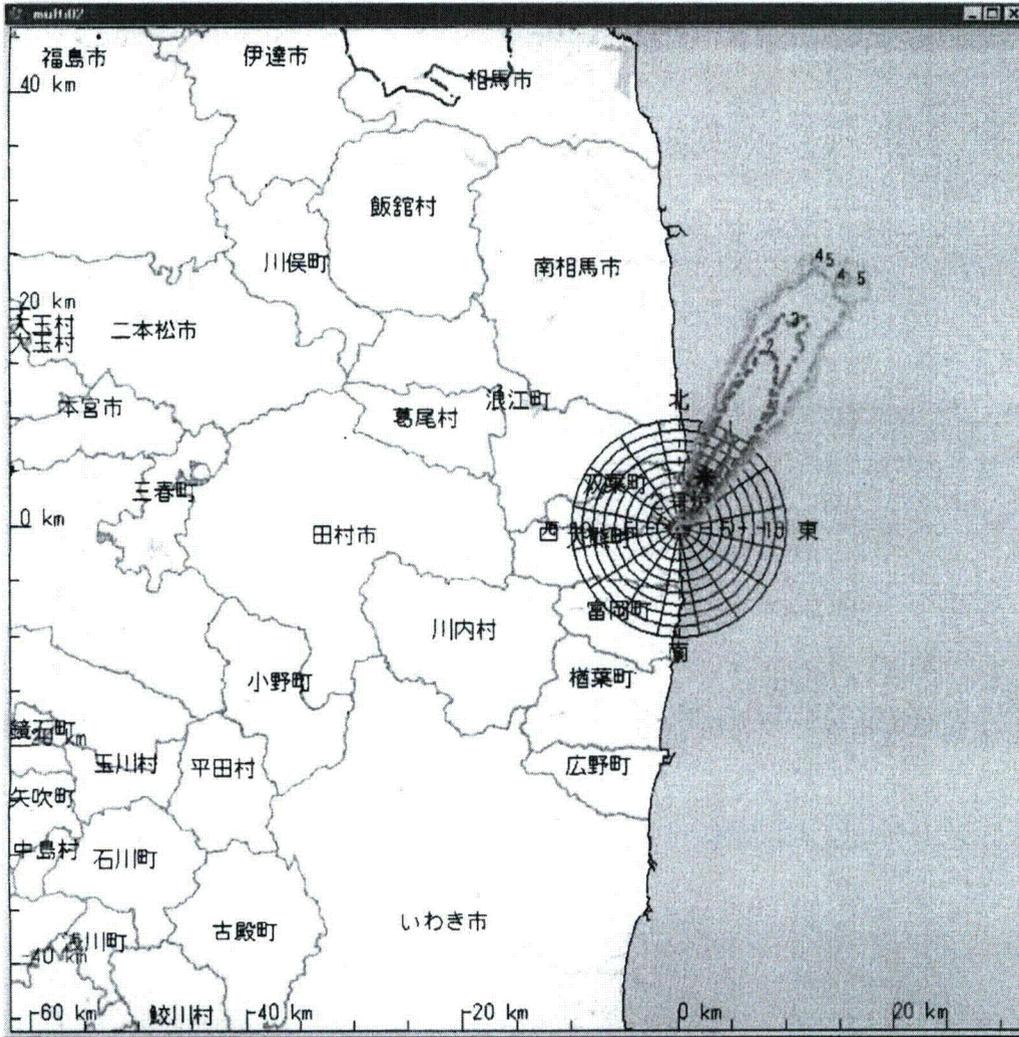
放出開始時刻 = 2011/03/19 05:00

放出モード = 単位置放出

放出核種・放出率(積算): Bq/h (Bq)

ヨウ素 :  $1.00 \times 10^0$  ( $1.00 \times 10^0$ )

05時定期福島1-2号炉



大気中濃度(ヨウ素)(地上高)

大気中濃度(ヨウ素) (地上高)  
 日時 = 2011/03/19 05:00 - 2011/03/19 06:00  
 気象データ = G P V + 観測値 (2011/03/19 05:00) まで

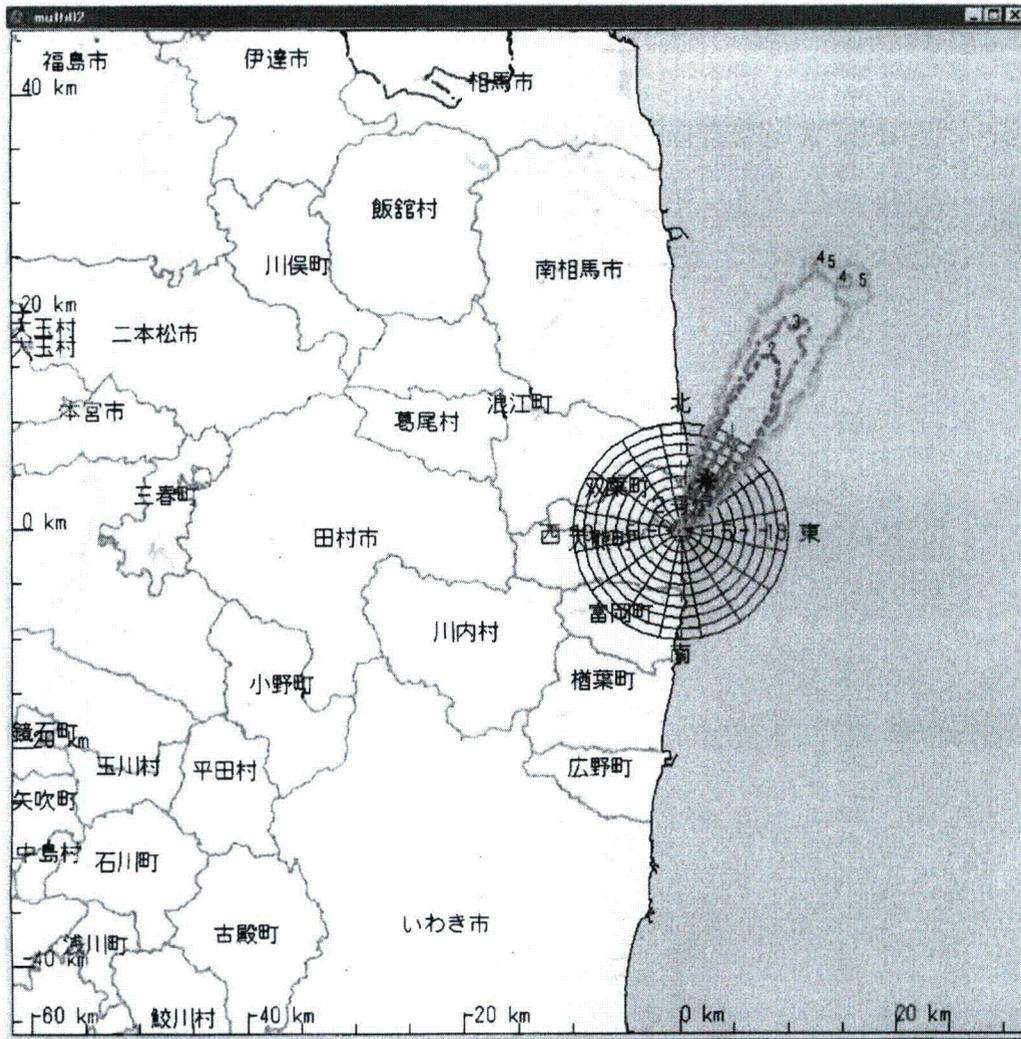
福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 表示高度 = 1.00 m

【凡例】  
 大気中濃度等値線 (Ba/m3)  
 1 =  $5.00 \times 10^{-11}$   
 2 =  $1.00 \times 10^{-11}$   
 3 =  $5.00 \times 10^{-12}$   
 4 =  $1.00 \times 10^{-12}$   
 5 =  $5.00 \times 10^{-13}$

最大濃度 =  $9.603 \times 10^{-11}$  Ba/m3  
 放出地点から ( 2.5, 4.3 ) km ( \* E印 )

計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル  
 【計算条件】  
 計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/MTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/19 05:00  
 放出モード = 単位量放出  
 放出核種・放出率(積算) : Ba/h (3a)  
 ヨウ素 :  $1.00 \times 10^0$  ( $1.00 \times 10^0$ )

05時定期福島1-2号炉



大気中濃度(ヨウ素)(地上高)

大気中濃度(ヨウ素)(地上高)  
 日時 = 2011/03/19 05:00 - 2011/03/19 06:00  
 気象データ = GPV + 観測値 (2011/03/19 05:00) まで

福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 表示高度 = 1.00 m

【凡例】  
 大気中濃度等値線 (Bq/m³)  
 1 =  $5.00 \times 10^{-11}$  \_\_\_\_\_  
 2 =  $1.00 \times 10^{-11}$  - - - - -  
 3 =  $5.00 \times 10^{-12}$  - - - - -  
 4 =  $1.00 \times 10^{-12}$  - - - - -  
 5 =  $5.00 \times 10^{-13}$  - - - - -

最大濃度 =  $9.603 \times 10^{-11}$  Bq/m³  
 放出地点から ( 2.5, 4.3 ) km (\*印)

計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル  
 【計算条件】  
 計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWD/MTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/19 05:00  
 放出モード = 単位置放出  
 放出核種・放出率(積算) : Ba/h (Ba)  
 ヨウ素 :  $1.00 \times 10^0$  ( $1.00 \times 10^0$ )

05時定期福島1-2号炉

**From:** NITOPS  
**To:** "hoo.hoc@nrc.gov"; "PMT02.Hoc@nrc.gov"; "pmt01.hoc@nrc.gov"; CMHT; "narac@lnl.gov"  
**Subject:** FW: 0600 SPEEDI Data  
**Date:** Friday, March 18, 2011 6:25:09 PM  
**Attachments:** FUKUSHIMA1 air concentration06-07h01.gif  
FUKUSHIMA1 air concentration08-09h01.gif  
FUKUSHIMA1 air concentration07-08h01.gif  
FUKUSHIMA1 air dose08-09h01.gif  
FUKUSHIMA1 air dose06-07h01.gif  
FUKUSHIMA1 air dose07-08h01.gif  
FUKUSHIMA1 wind06h01.gif

---

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

**From:** JapanEmbassy, TaskForce [mailto:JapanEmbassyTaskForce@state.gov]  
**Sent:** Friday, March 18, 2011 6:21 PM  
**To:** spd01@nustec.or.jp; (b)(6)

(b)(6)

(b)(6)

NITOPS;  
JapanEmbassy, TaskForce; (b)(6) Alex Robinson; Anthony  
Ulses; CAT 5; Cherry, Ron; CMHT, Craig Haas, Curry Wright, DAKI Liaison, HOO; James Trapp; John  
Okon; (b)(6) Mears, Jeremy M; Morales, Russell A; Paul Guss; PMT 12;  
PMT01; (b)(6) Theodore Shaw; Uchida, Koichi  
**Subject:** 0600 SPEEDI Data

0600 SPEEDI Data, unzipped.

SBU

This email is UNCLASSIFIED

Jerome Ryan  
Political Officer  
U.S. Embassy Tokyo  
1-10-5, Akasaka 1-Chome, Minato-Ku, Tokyo 107  
tel:(81)(03)3224-5343  
fax:(81)(03)3224-5322  
<http://japan.usembassy.gov/>

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

**From:** nustec [mailto:spd01@nustec.or.jp]  
**Sent:** Saturday, March 19, 2011 6:35 AM  
**To:** (b)(6)

(b)(6)

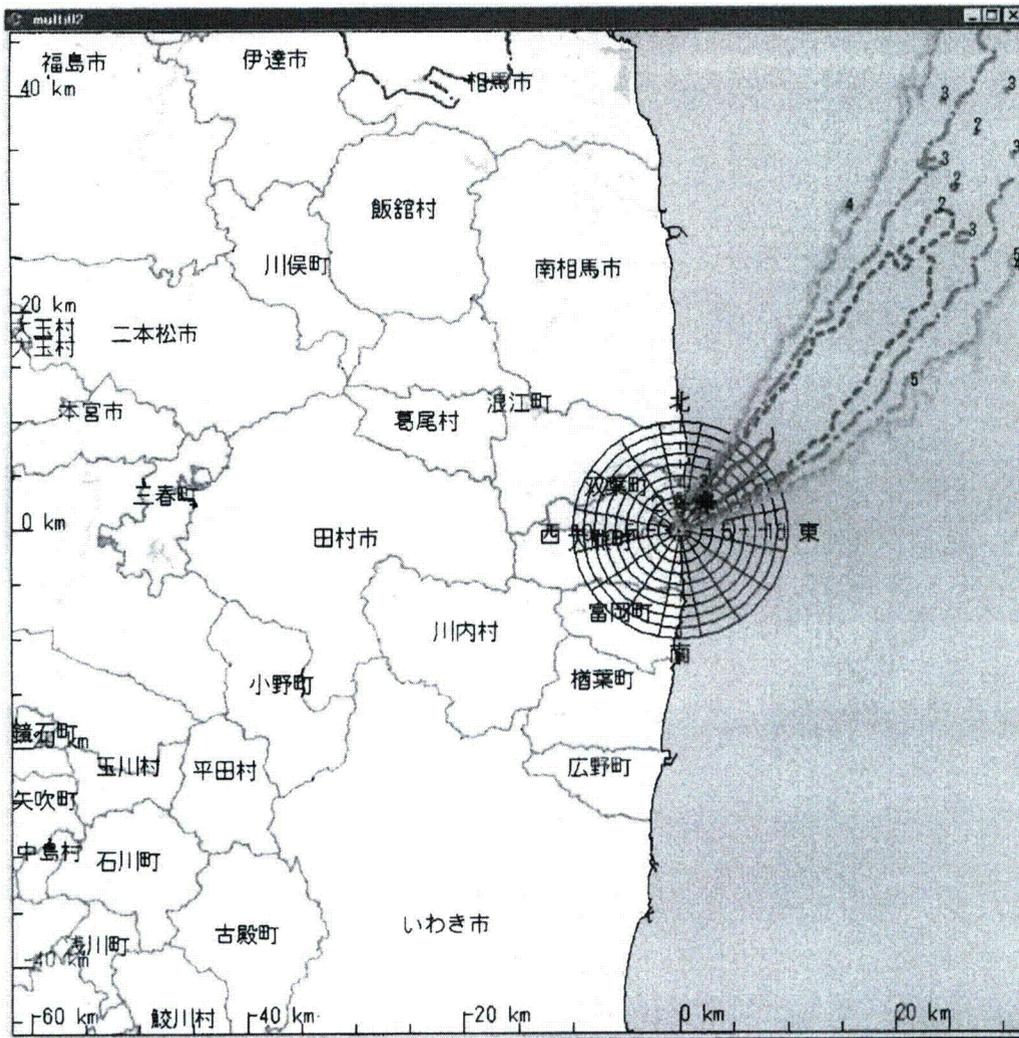
NITOPS@nnsa.doe.gov; JapanEmbassy, TaskForce; (b)(6)  
**Subject:** 3/19 06時SPEEDI単位量放出図形イメージの

関係者各位

お世話になっております。  
原子力安全技術センター SPEEDI担当です。

44/115

3/19 06時のSPEEDI単位量放出図形のイメージデータを送付致します。  
ご確認のほど、よろしくお願い致します。



大気中濃度(ヨウ素)(地上高)

大気中濃度(ヨウ素) (地上高)

日時 = 2011/03/19 08:00 -

2011/03/19 09:00

気象データ = G P V + 観測値

(2011/03/19 06:00) まで

福島第1 2号炉 広域図

放出地点 : 141°02'08" - 37°25'18"

領域 : 92km X 92km

表示高度 = 1.00 m

【凡例】

大気中濃度等値線 (Bq/m<sup>3</sup>)

1 =  $5.00 \times 10^{-11}$

2 =  $1.00 \times 10^{-11}$

3 =  $5.00 \times 10^{-12}$

4 =  $1.00 \times 10^{-12}$

5 =  $5.00 \times 10^{-13}$

最大濃度 =  $7.806 \times 10^{-11}$  Bq/m<sup>3</sup>

放出地点から ( 2.5, 2.3 ) km (\* E印)

計算モデル名 = PRWDA21

使用モデル名 = 通常モデル

【計算条件】

計算メッシュ幅 水平方向 = 1.00 km

放出高 = 120.0m

燃焼度 = 20000 MWD/MTU

原子炉停止時刻 = 2011/03/11 16:00

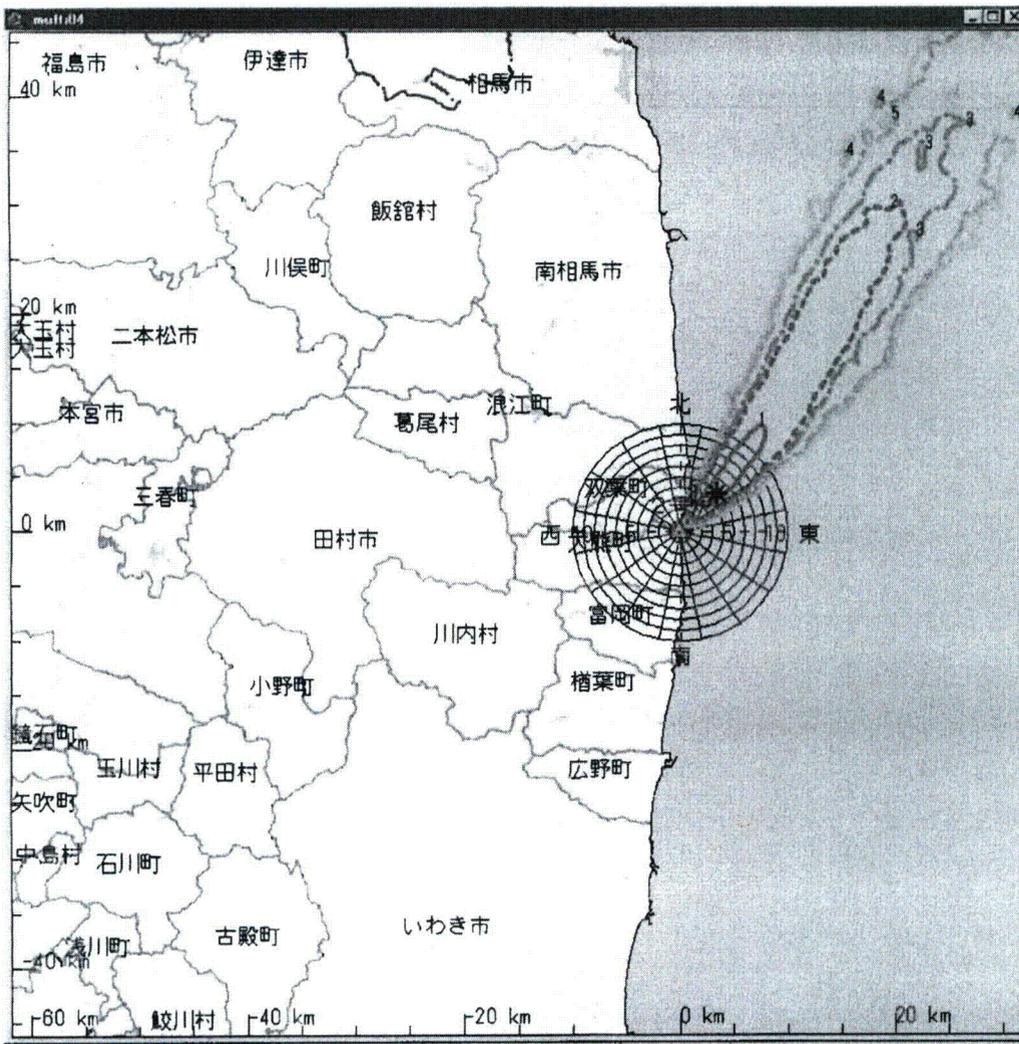
放出開始時刻 = 2011/03/19 06:00

放出モード = 単位置放出

放出核種・放出率(積算): Ba/h (Ba)

ヨウ素 :  $1.00 \times 10^0$  ( $1.00 \times 10^0$ )

06時定期福島1-2号炉



大気中濃度(ヨウ素)(地上高)

大気中濃度(ヨウ素) (地上高)

日時 = 2011/03/19 07:00 -

2011/03/19 08:00

気象データ = G P V + 観測値

(2011/03/19 06:00) まで

福島第1 2号炉 広域図

放出地点 : 141°02'08" - 37°25'18"

領域 : 92km X 92km

表示高度 = 1.00 m

【凡例】

大気中濃度等値線 (Ba/m<sup>3</sup>)

1 =  $5.00 \times 10^{-11}$

2 =  $1.00 \times 10^{-11}$

3 =  $5.00 \times 10^{-12}$

4 =  $1.00 \times 10^{-12}$

5 =  $5.00 \times 10^{-13}$

最大濃度 =  $9.175 \times 10^{-11}$  Ba/m<sup>3</sup>

放出地点から ( 3.5, 3.3 ) km (\* E印)

計算モデル名 = PRWDA21

使用モデル名 = 通常モデル

【計算条件】

計算メッシュ幅 水平方向 = 1.00 km

放出高 = 120.0m

燃焼度 = 20000 MWD/MTU

原子炉停止時刻 = 2011/03/11 16:00

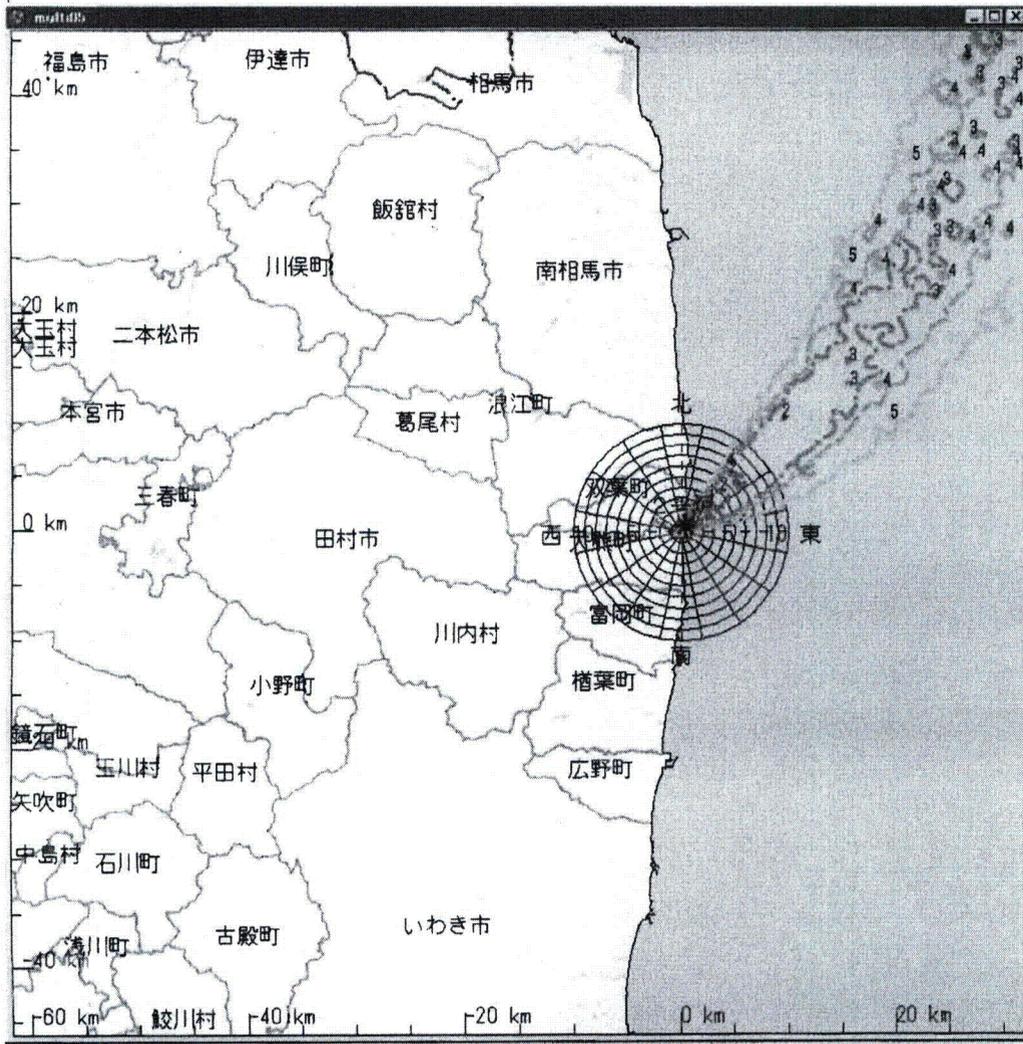
放出開始時刻 = 2011/03/19 06:00

放出モード = 単位量放出

放出核種・放出率(積算): Ba/h (Ba)

ヨウ素 :  $1.00 \times 10^0$  ( $1.00 \times 10^0$ )

06時定期福島1-2号炉



空気吸収線量率

日時 = 2011/03/19 08:00 -  
 2011/03/19 09:00  
 気象データ = G P V + 観測値  
 (2011/03/19 06:00) まで

福島第1 2号炉 広域図  
 放出地点 : 141°02'08" - 37°25'18"  
 領域 : 92km X 92km  
 核種名 = 希ガス

- 【凡例】  
 空気吸収線量率等値線 (μGy/h)
- 1=  $1.00 \times 10^{-15}$  \_\_\_\_\_
  - 2=  $5.00 \times 10^{-16}$  - - - - -
  - 3=  $1.00 \times 10^{-16}$  - - - - -
  - 4=  $5.00 \times 10^{-17}$  - - - - -
  - 5=  $1.00 \times 10^{-17}$  - - - - -

最大線量率 =  $2.548 \times 10^{-15}$  μGy/h  
 放出地点から ( 0.5, 0.3 ) km (\*印)

計算モデル名 = PRWDA21  
 使用モデル名 = 通常モデル  
 【計算条件】  
 計算メッシュ幅 水平方向 = 1.00 km  
 放出高 = 120.0m  
 燃焼度 = 20000 MWd/MTU  
 原子炉停止時刻 = 2011/03/11 16:00  
 放出開始時刻 = 2011/03/19 06:00  
 放出モード = 単位量放出



空気吸収線量率

空気吸収線量率

日時 = 2011/03/19 06:00 -

2011/03/19 07:00

気象データ = G P V + 観測値

(2011/03/19 06:00) まで

福島第1 2号炉 広域図

放出地点 : 141°02'08" - 37°25'18"

領域 : 92km X 92km

核種名 = 希ガス

【凡例】

空気吸収線量率等値線 ( $\mu\text{Gy/h}$ )

1 =  $1.00 \times 10^{-15}$

2 =  $5.00 \times 10^{-16}$

3 =  $1.00 \times 10^{-16}$

4 =  $5.00 \times 10^{-17}$

5 =  $1.00 \times 10^{-17}$

最大線量率 =  $1.169 \times 10^{-15} \mu\text{Gy/h}$

放出地点から ( 1.5, 1.3 ) km (\* 印)

計算モデル名 = PRWDA21

使用モデル名 = 通常モデル

【計算条件】

計算メッシュ幅 水平方向 = 1.00 km

放出高 = 120.0m

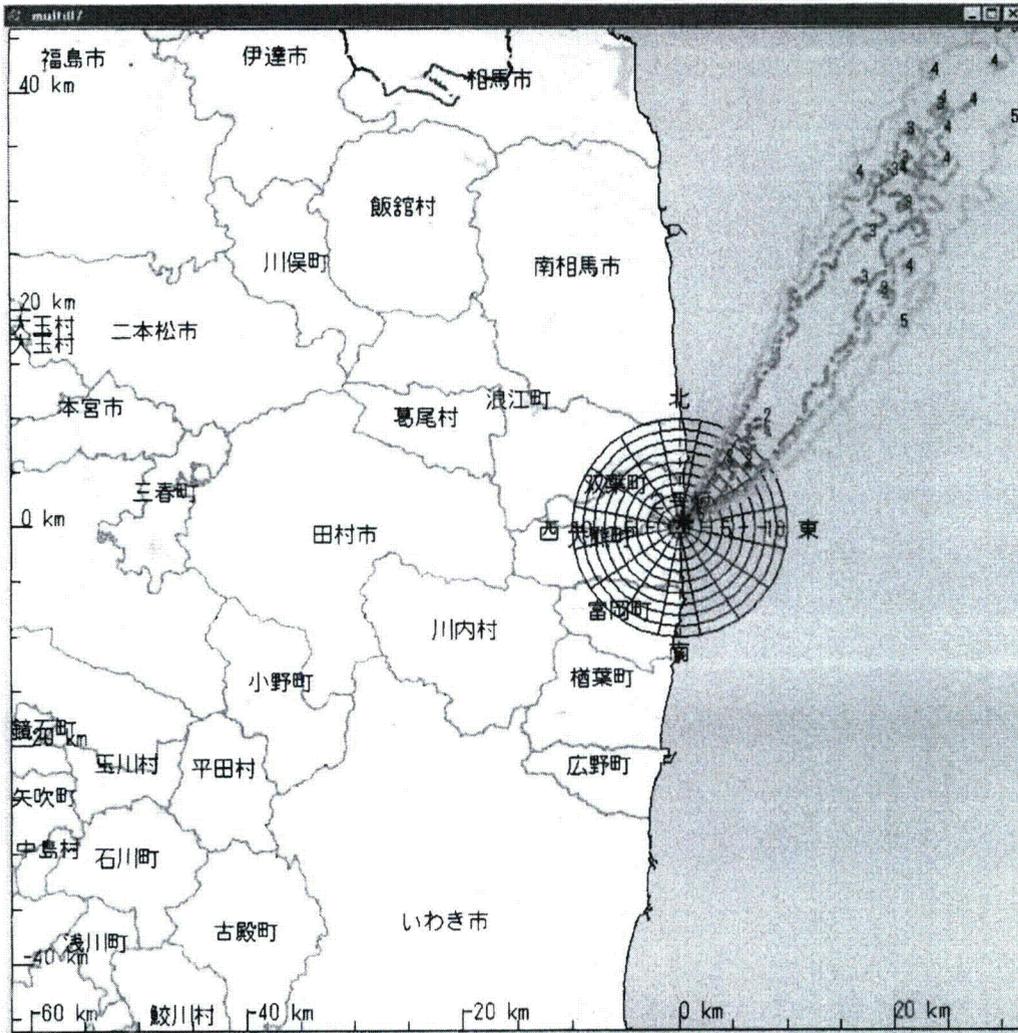
燃焼度 = 20000 MWD/MTU

原子炉停止時刻 = 2011/03/11 16:00

放出開始時刻 = 2011/03/19 06:00

放出モード = 単位量放出

06時定期福島1-2号炉



空気吸収線量率

空気吸収線量率

日時 = 2011/03/19 07:00 -  
2011/03/19 08:00  
気象データ = G.P.V + 観測値  
(2011/03/19 06:00) まで

福島第1 2号炉 広域図  
放出地点 : 141°02'08" - 37°25'18"  
領域 : 92km X 92km  
核種名 = 希ガス

【凡例】

空気吸収線量率等値線 ( $\mu\text{Gy/h}$ )

- 1=  $1.00 \times 10^{-15}$  \_\_\_\_\_
- 2=  $5.00 \times 10^{-16}$  - - - - -
- 3=  $1.00 \times 10^{-16}$  - - - - -
- 4=  $5.00 \times 10^{-17}$  - - - - -
- 5=  $1.00 \times 10^{-17}$  - - - - -

最大線量率 =  $2.367 \times 10^{-15} \mu\text{Gy/h}$   
放出地点から (0.5, 0.3) km (\*印)

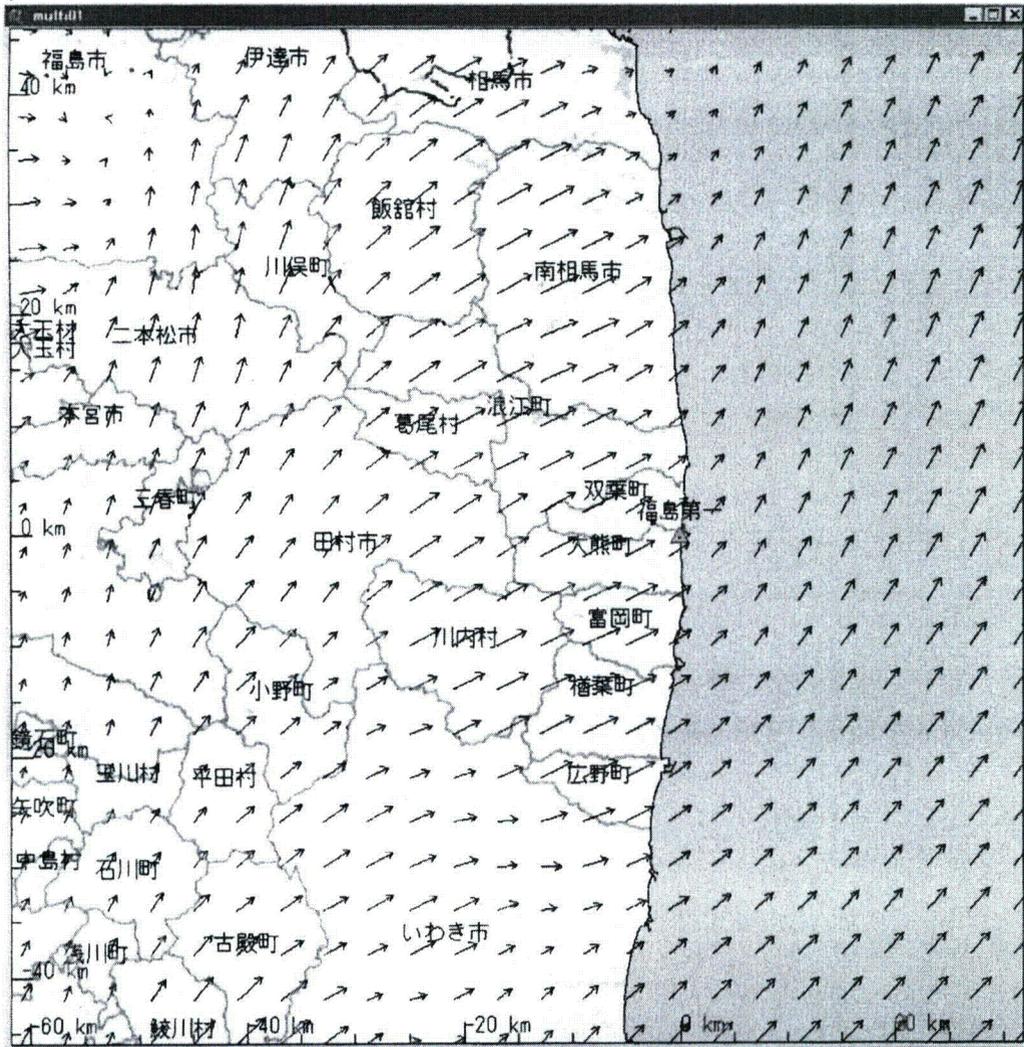
計算モデル名 = PRWDA21

使用モデル名 = 通常モデル

【計算条件】

計算メッシュ幅 水平方向 = 1.00 km  
放出高 = 120.0m  
燃焼度 = 20000 MWD/MTU  
原子炉停止時刻 = 2011/03/11 16:00  
放出開始時刻 = 2011/03/19 06:00  
放出モード = 単位置放出

06時定期福島1-2号炉



風速場(地上高)

風速場 (地上高)

日時 = 2011/03/19 06:00

気象データ = GPV + 観測値

(2011/03/19 06:00) まで

福島第1 広域図

サイト中心 : 141°02'10" - 37°25'12"

領域 : 92km X 92km

表示高度 = 120.00 m

サイト中心付近の風 : 南西 9 m/s

大気安定度 : D型

計算モデル名 = PHYSIC

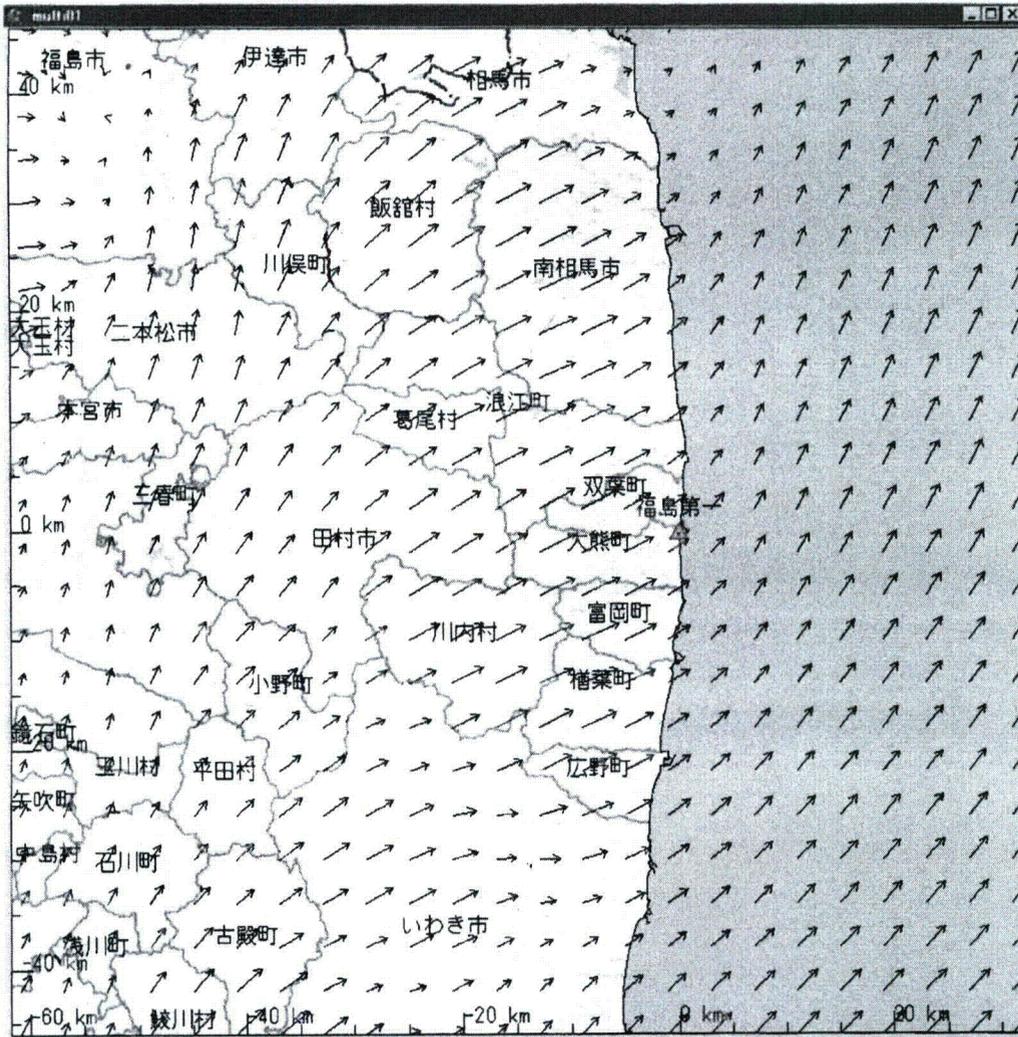
計算メッシュ幅 水平方向 = 2.00 km

【凡例】

標準風速 (標準領域の場合の長さ)

→ = 10 m/s

06時定期福島1-2号炉



風速場(地上高)

風速場 (地上高)  
 日時 = 2011/03/19 06:00  
 気象データ = G P V + 観測値  
 (2011/03/19 06:00) まで

福島第1 広域図  
 サイト中心 : 141°02'10" - 37°25'12"  
 領域 : 92km X 92km  
 表示高度 = 120.00 m  
 サイト中心付近の風 : 南西 9 m/s  
 大気安定度: D型

計算モデル名 = PHYSIC  
 計算メッシュ幅 水平方向 = 2.00 km

【凡例】  
 標準風速 (標準領域の場合の長さ)  
 → = 10 m/s

06時定期福島1-2号炉

**From:** Sugiyama, Gayle  
**To:** NITOPS; HOO Hoc; PMT02 Hoc; PMT01 Hoc; CMHT@nnsa.doe.gov; nitops@nnsa.doe.gov; alan.remick@nnsa.doe.gov; (b)(6)  
**Cc:** "narc@llnl.gov"  
**Subject:** Notification of forecasting change in wind conditions to on-shore (approximstely 3/19 22Z)  
**Date:** Friday, March 18, 2011 8:16:18 PM  
**Attachments:** WRF\_Fukushima\_NPP\_Forecast\_2011-03-18\_18Z\_5km.xlsx

---

As requested, this is a notification that the forecast models show that the winds will shift to onshore at approximately 22-23Z on March 19 and remain on-shore through at least March 20 18Z.

--- Gayle

Gayle Sugiyama, Ph.D.  
NARAC/IMAAC Program Leader  
L-103 Lawrence Livermore National Laboratory  
7000 East Avenue  
Livermore CA 94550  
925-422-7266  
sugiyama@llnl.gov

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

From: Simpson, Matthew D. [mailto:simpson35@llnl.gov]  
Sent: Friday, March 18, 2011 5:07 PM  
To: hoo.hoc@nrc.gov; PMT02 Hoc; pmt01.hoc@nrc.gov; CMHT@nnsa.doe.gov; nitops@nnsa.doe.gov; alan.remick@nnsa.doe.gov; (b)(6)  
Cc: narc@llnl.gov  
Subject: Update of forecast wind conditions for Fukushima Daiichi 1

Please find attached a spreadsheet containing the latest forecast wind conditions at the Fukushima Power Plant.

The forecast time series is derived from the latest NARAC WRF simulation with 5 km horizontal grid spacing.

Matthew Simpson  
NARAC Atmospheric Scientist

11/17/11

Forecast Model: WRF

Horizontal Grid Spacing: 5 km

Vertical Levels: 44

Forecast Location: Fukushima NPP, Japan

Data Produced by Matthew Simpson (NARAC, 925 / 422-7627)

YEAR	MO	DY	HR	WSP	WDR	CLASS	RAIN
----	--	--	UTC	m/s	---	----	in/hr
2011	3	19	1	2.2	259	C	0
2011	3	19	2	5.9	281	C	0
2011	3	19	3	6.9	276	C	0
2011	3	19	4	4.2	257	C	0
2011	3	19	5	2.6	233	C	0
2011	3	19	6	3.1	253	C	0
2011	3	19	7	3.2	237	E	0
2011	3	19	8	4.9	241	E	0
2011	3	19	9	4.5	237	E	0
2011	3	19	10	5.5	251	E	0
2011	3	19	11	9.9	280	D	0
2011	3	19	12	12.8	293	D	0
2011	3	19	13	10	293	D	0
2011	3	19	14	8.4	279	D	0
2011	3	19	15	11.5	276	D	0
2011	3	19	16	12	283	D	0
2011	3	19	17	5.5	286	D	0
2011	3	19	18	2.6	302	F	0
2011	3	19	19	2.5	305	F	0
2011	3	19	20	5.8	309	D	0
2011	3	19	21	6.5	321	D	0
2011	3	19	22	2.6	0	E	0
2011	3	19	23	0.6	265	B	0
2011	3	20	0	1.8	182	C	0
2011	3	20	1	1.4	155	B	0
2011	3	20	2	4.1	141	C	0
2011	3	20	3	4.5	137	C	0
2011	3	20	4	5.7	137	C	0
2011	3	20	5	5.5	146	C	0
2011	3	20	6	5.5	152	C	0
2011	3	20	7	5	156	D	0
2011	3	20	8	3.3	163	E	0
2011	3	20	9	3.2	170	E	0
2011	3	20	10	3.2	161	D	0
2011	3	20	11	3.4	156	D	0
2011	3	20	12	2.7	144	D	0.02
2011	3	20	13	1.7	119	C	0.06
2011	3	20	14	0.8	151	C	0.09

2011	3	20	15	0.8	155	C	0.13
2011	3	20	16	1.3	0	C	0.14
2011	3	20	17	1.5	19	C	0.08
2011	3	20	18	2.5	2	C	0.04

**From:** [Sugiyama\\_Gayle](mailto:Sugiyama_Gayle)  
**To:** [Sugiyama\\_Gayle](mailto:Sugiyama_Gayle); [NITOPS](mailto:NITOPS); [HOO\\_Hoc](mailto:HOO_Hoc); [PMT02\\_Hoc](mailto:PMT02_Hoc); [PMT01\\_Hoc](mailto:PMT01_Hoc); [CMHT@nnsa.doe.gov](mailto:CMHT@nnsa.doe.gov); [nitops@nnsa.doe.gov](mailto:nitops@nnsa.doe.gov); [alan.remick@nnsa.doe.gov](mailto:alan.remick@nnsa.doe.gov); (b)(6)  
**Cc:** "narc@llnl.gov"  
**Subject:** RE: Notification of forecasting change in wind conditions to on-shore (approximstely 3/19 22Z) - possible precipitation  
**Date:** Friday, March 18, 2011 8:20:22 PM

---

As requested, this is a notification that the forecast models show that the winds will shift to onshore at approximately 22-23Z on March 19 and remain on-shore through at least March 20 18Z.

Forecast models also predict that precipitation may occur at the same period. This may wash out parts of the plume reducing downwind impacts but increasing deposition in areas where precipitation scavenging occurs.

--- Gayle

Gayle Sugiyama, Ph.D.  
NARAC/IMAAC Program Leader  
L-103 Lawrence Livermore National Laboratory 7000 East Avenue Livermore CA 94550  
925-422-7266  
[sugiyama@llnl.gov](mailto:sugiyama@llnl.gov)

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

**From:** Simpson, Matthew D. [<mailto:simpson35@llnl.gov>]  
**Sent:** Friday, March 18, 2011 5:07 PM  
**To:** [hoo.hoc@nrc.gov](mailto:hoo.hoc@nrc.gov); [PMT02\\_Hoc](mailto:PMT02_Hoc); [pmt01.hoc@nrc.gov](mailto:pmt01.hoc@nrc.gov); [CMHT@nnsa.doe.gov](mailto:CMHT@nnsa.doe.gov); [nitops@nnsa.doe.gov](mailto:nitops@nnsa.doe.gov); [alan.remick@nnsa.doe.gov](mailto:alan.remick@nnsa.doe.gov); (b)(6)  
**Cc:** [narc@llnl.gov](mailto:narc@llnl.gov)  
**Subject:** Update of forecast wind conditions for Fukushima Daiichi 1

Please find attached a spreadsheet containing the latest forecast wind conditions at the Fukushima Power Plant.

The forecast time series is derived from the latest NARAC WRF simulation with 5 km horizontal grid spacing.

Matthew Simpson  
NARAC Atmospheric Scientist

44/127

**From:** Simpson, Matthew D.  
**To:** HQ Hoc; PMT02 Hoc; PMT01 Hoc; CMHT@nnsa.doe.gov; nitops@nnsa.doe.gov; alan.remick@nnsa.doe.gov;  
(b)(6)  
**Cc:** narac@inl.gov  
**Subject:** Update of forecast wind conditions for Fukushima Daiichi 1  
**Date:** Friday, March 18, 2011 2:37:26 AM  
**Attachments:** WRF Fukushima NPP Forecast 2011-03-18 00Z 5km.xlsx

---

Please find attached a spreadsheet containing the latest forecast wind conditions at the Fukushima Power Plant.

The forecast time series is derived from the latest NARAC WRF simulation with 5 km horizontal grid spacing.

Matthew Simpson  
NARAC Atmospheric Scientist

4/1/18

Forecast Model: WRF

Horizontal Grid Spacing: 5 km

Vertical Levels: 44

Forecast Location: Fukushima NPP, Japan

Data Produced by Matthew Simpson (NARAC, 925 / 422-7627)

YEAR	MO	DY	HR	WSP	WDR	CLASS	RAIN
----	--	--	UTC	m/s	---	----	in/hr
2011	3	18	6	7	290	C	0
2011	3	18	7	6.3	288	D	0
2011	3	18	8	4.8	283	E	0
2011	3	18	9	3.3	294	F	0
2011	3	18	10	2.8	296	F	0
2011	3	18	11	1.8	273	F	0
2011	3	18	12	3.1	264	F	0
2011	3	18	13	2.9	238	F	0
2011	3	18	14	3.2	236	F	0
2011	3	18	15	4.1	240	E	0
2011	3	18	16	4.8	224	E	0
2011	3	18	17	4.2	202	E	0
2011	3	18	18	3.5	196	E	0
2011	3	18	19	5.1	235	D	0
2011	3	18	20	7.3	239	D	0
2011	3	18	21	8.6	244	D	0
2011	3	18	22	8.1	244	D	0
2011	3	18	23	4.9	208	D	0
2011	3	19	0	3.3	197	D	0
2011	3	19	1	2.3	252	C	0
2011	3	19	2	3.8	280	C	0
2011	3	19	3	3.6	285	C	0
2011	3	19	4	5.1	256	C	0
2011	3	19	5	6.7	260	C	0
2011	3	19	6	6.5	258	C	0
2011	3	19	7	5.4	253	D	0
2011	3	19	8	5.4	248	E	0
2011	3	19	9	6	246	D	0
2011	3	19	10	7.5	257	D	0
2011	3	19	11	9.4	267	D	0
2011	3	19	12	10.8	270	D	0
2011	3	19	13	9.3	265	D	0
2011	3	19	14	7.8	260	D	0
2011	3	19	15	7.3	264	D	0
2011	3	19	16	8.3	270	D	0
2011	3	19	17	8.9	280	D	0
2011	3	19	18	5	284	D	0
2011	3	19	19	2.7	282	F	0

2011	3	19	20	1.8	305	F	0
2011	3	19	21	0.9	323	F	0
2011	3	19	22	0.6	222	F	0
2011	3	19	23	1.4	256	C	0
2011	3	20	0	2.9	307	C	0

**From:** Vogt, Phil  
**To:** CMHT@nnsa.doe.gov; nitops@nnsa.doe.gov; HQO\_Hoc; PMT02\_Hoc; PMT01\_Hoc; (b)(6)  
**Cc:** (b)(6)  
**Subject:** Latest forecast winds for Fukushima Daiichi 1  
**Date:** Friday, March 18, 2011 1:21:31 PM  
**Attachments:** Fukushima\_Forecast\_18March18Z.xlsx

---

Here is the latest forecast from our WRF model runs. File is also attached.

Date	Hour (UTC)	Speed (m/s)	Dir	Stability	RAIN
18-Mar	18	3.4	222	F	0
	19	3.3	228	E	0
	20	5.5	234	D	0
	21	6	244	D	0
	22	2.7	231	F	0
	23	1.4	157	F	0
19-Mar	0	1.3	187	C	0
	1	3.7	272	C	0
	2	4.5	288	C	0
	3	6	250	C	0
	4	6.7	258	C	0
	5	7	255	C	0
	6	6.7	261	C	0
	7	5.3	258	D	0
	8	4.7	250	E	0
	9	5.2	249	E	0
	10	7.5	264	D	0
	11	10.3	271	D	0
	12	10.5	269	D	0
	13	7.8	257	D	0
	14	7.1	253	D	0
	15	7.4	245	D	0
	16	8.6	255	D	0
	17	10.7	274	D	0
18	7.6	287	D	0	

NARAC Operations  
925-422-7627  
narac@llnl.gov

444/119

Date	Hour (UTC)	Speed (m/s)	Dir	Stability	RAIN
18-Mar	18	3.4	222	F	0
	19	3.3	228	E	0
	20	5.5	234	D	0
	21	6	244	D	0
	22	2.7	231	F	0
	23	1.4	157	F	0
19-Mar	0	1.3	187	C	0
	1	3.7	272	C	0
	2	4.5	288	C	0
	3	6	250	C	0
	4	6.7	258	C	0
	5	7	255	C	0
	6	6.7	261	C	0
	7	5.3	258	D	0
	8	4.7	250	E	0
	9	5.2	249	E	0
	10	7.5	264	D	0
	11	10.3	271	D	0
	12	10.5	269	D	0
	13	7.8	257	D	0
	14	7.1	253	D	0
	15	7.4	245	D	0
	16	8.6	255	D	0
	17	10.7	274	D	0
18	7.6	287	D	0	

**From:** Vogt, Phil  
**To:** CMHT@nnsa.doe.gov; nitops@nnsa.doe.gov; HQO Hoc; PMT02 Hoc; PMT01 Hoc; (b)(6)  
(b)(6) lan.remick@nnsa.doe.gov  
**Cc:** nara@ltnl.gov  
**Subject:** Latest WRF forecast winds for Fukushima Daiichi 1  
**Date:** Friday, March 18, 2011 4:31:28 PM  
**Attachments:** Fukushima\_Forecast\_18March21Z.xlsx

---

Here is the latest forecast winds for the plant, it is based on the 1200 UTC WRF run initialization.  
(also attached as a spreadsheet)

Date	Hour (UTC)	Speed (m/s)	Dir	Stability	RAIN
18-Mar	21	4.2	251	E	0
	22	2.3	177	F	0
	23	2.3	173	E	0
19-Mar	0	2.1	289	C	0
	1	5.1	283	C	0
	2	4.8	266	C	0
	3	7.1	266	C	0
	4	6.8	260	C	0
	5	6.8	261	C	0
	6	6	260	C	0
	7	4.9	242	D	0
	8	4.4	222	E	0
	9	5.7	239	D	0
	10	10.4	272	D	0
	11	12.7	282	D	0
	12	10.9	282	D	0
	13	7.1	270	D	0
	14	6.2	259	D	0
	15	8.2	271	D	0
	16	7.8	284	D	0
	17	5.3	290	D	0
	18	4	307	E	0
	19	2.5	329	F	0
	20	1.2	341	F	0
	21	3.1	341	E	0
	22	2.8	350	E	0
	23	1.7	14	C	0
20-Mar	0	0.8	3	B	0
	1	0.5	318	A	0
	2	0.8	34	A	0
	3	2.9	127	C	0
	4	5.6	136	C	0
	5	5.2	138	C	0

144/120

NARAC Operations  
925-422-7627  
narac@llnl.gov

**From:** Simpson, Matthew D.  
**To:** HOO Hoc; PMT02 Hoc; PMT01 Hoc; CMHT@nnsa.doe.gov; nltops@nnsa.doe.gov; alan.remick@nnsa.doe.gov;  
(b)(6)  
**Cc:** narac@nnsa.gov  
**Subject:** Update of forecast wind conditions for Fukushima Daiichi 1  
**Date:** Friday, March 18, 2011 8:08:45 PM  
**Attachments:** WRF Fukushima NPP Forecast 2011-03-18 18Z 5km.xlsx

---

Please find attached a spreadsheet containing the latest forecast wind conditions at the Fukushima Power Plant.

The forecast time series is derived from the latest NARAC WRF simulation with 5 km horizontal grid spacing.

Matthew Simpson  
NARAC Atmospheric Scientist

###/121

Forecast Model: WRF

Horizontal Grid Spacing: 5 km

Vertical Levels: 44

Forecast Location: Fukushima NPP, Japan

Data Produced by Matthew Simpson (NARAC, 925 / 422-7627)

YEAR	MO	DY	HR	WSP	WDR	CLASS	RAIN
----	--	--	UTC	m/s	---	----	in/hr
2011	3	19	1	2.2	259	C	0
2011	3	19	2	5.9	281	C	0
2011	3	19	3	6.9	276	C	0
2011	3	19	4	4.2	257	C	0
2011	3	19	5	2.6	233	C	0
2011	3	19	6	3.1	253	C	0
2011	3	19	7	3.2	237	E	0
2011	3	19	8	4.9	241	E	0
2011	3	19	9	4.5	237	E	0
2011	3	19	10	5.5	251	E	0
2011	3	19	11	9.9	280	D	0
2011	3	19	12	12.8	293	D	0
2011	3	19	13	10	293	D	0
2011	3	19	14	8.4	279	D	0
2011	3	19	15	11.5	276	D	0
2011	3	19	16	12	283	D	0
2011	3	19	17	5.5	286	D	0
2011	3	19	18	2.6	302	F	0
2011	3	19	19	2.5	305	F	0
2011	3	19	20	5.8	309	D	0
2011	3	19	21	6.5	321	D	0
2011	3	19	22	2.6	0	E	0
2011	3	19	23	0.6	265	B	0
2011	3	20	0	1.8	182	C	0
2011	3	20	1	1.4	155	B	0
2011	3	20	2	4.1	141	C	0
2011	3	20	3	4.5	137	C	0
2011	3	20	4	5.7	137	C	0
2011	3	20	5	5.5	146	C	0
2011	3	20	6	5.5	152	C	0
2011	3	20	7	5	156	D	0
2011	3	20	8	3.3	163	E	0
2011	3	20	9	3.2	170	E	0
2011	3	20	10	3.2	161	D	0
2011	3	20	11	3.4	156	D	0
2011	3	20	12	2.7	144	D	0.02
2011	3	20	13	1.7	119	C	0.06
2011	3	20	14	0.8	151	C	0.09

2011	3	20	15	0.8	155	C	0.13
2011	3	20	16	1.3	0	C	0.14
2011	3	20	17	1.5	19	C	0.08
2011	3	20	18	2.5	2	C	0.04

Date	Hour (UTC)	Speed (m/s)	Dir	Stability	Rain
18-Mar	21	4.2	251	E	0
	22	2.3	177	F	0
	23	2.3	173	E	0
19-Mar	0	2.1	289	C	0
	1	5.1	283	C	0
	2	4.8	266	C	0
	3	7.1	266	C	0
	4	6.8	260	C	0
	5	6.8	261	C	0
	6	6	260	C	0
	7	4.9	242	D	0
	8	4.4	222	E	0
	9	5.7	239	D	0
	10	10.4	272	D	0
	11	12.7	282	D	0
	12	10.9	282	D	0
	13	7.1	270	D	0
	14	6.2	259	D	0
	15	8.2	271	D	0
	16	7.8	284	D	0
	17	5.3	290	D	0
	18	4	307	E	0
	19	2.5	329	F	0
	20	1.2	341	F	0
	21	3.1	341	E	0
	22	2.8	350	E	0
23	1.7	14	C	0	
20-Mar	0	0.8	3	B	0
	1	0.5	318	A	0
	2	0.8	34	A	0
	3	2.9	127	C	0
	4	5.6	136	C	0
	5	5.2	138	C	0

**From:** [Smith, Brooke](#)  
**To:** [LIA03 Hoc](#); [LIA02 Hoc](#); [HOO Hoc](#)  
**Subject:** Fw: Updated Factsheet  
**Date:** Friday, March 18, 2011 11:50:12 AM  
**Attachments:** [110318\\_1400rev\\_factsheet.doc](#)  
[110318monitoring\\_data.pdf](#)

---

Sent from an NRC Blackberry.  
Brooke G. Smith

(b)(6)

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

**From:** Cherry, Ronald C <[CherryRC@state.gov](mailto:CherryRC@state.gov)>  
**To:** NITOPS <[NITOPS@nnsa.doe.gov](mailto:NITOPS@nnsa.doe.gov)>; JapanEmbassy, TaskForce <[JapanEmbassyTaskForce@state.gov](mailto:JapanEmbassyTaskForce@state.gov)>; Alan Remick <[DartDOELiaison1@OFDA.gov](mailto:DartDOELiaison1@OFDA.gov)>; Aleshia Duncan <[Aleshia.Duncan@nuclear.energy.gov](mailto:Aleshia.Duncan@nuclear.energy.gov)>; Cook, William; Smith, Brooke; Casto, Chuck; Damian Peko <[Damian.Peko@nuclear.energy.gov](mailto:Damian.Peko@nuclear.energy.gov)>; Duncan, Aleshia D <[DuncanAD@state.gov](mailto:DuncanAD@state.gov)>; Howard, E. Bruce <[HowardEB@state.gov](mailto:HowardEB@state.gov)>; Foster, Jack; Trapp, James; James Trapp (BB)

(b)(6)

Joe Hughart <[joseph.hughart@foh.hhs.gov](mailto:joseph.hughart@foh.hhs.gov)>; Joe Hughart (DART) <[jnhughart@ofda.gov](mailto:jnhughart@ofda.gov)>; Monninger, John; Johnstone, Gregg M <[johnstonegm@state.gov](mailto:johnstonegm@state.gov)>; Foggie, Kirk; Mears, Jeremy M <[MearsJM@state.gov](mailto:MearsJM@state.gov)>; Morales, Russell A <[MoralesRA@state.gov](mailto:MoralesRA@state.gov)>; Devercelly, Richard; Kolb, Timothy; Nakanishi, Tony; Ulses, Anthony  
**Sent:** Fri Mar 18 11:41:22 2011  
**Subject:** FW: Updated Factsheet

Updated information from METI/ANRE.

This email is UNCLASSIFIED

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

**From:** 那須 良 [<mailto:masu-ryo@meti.go.jp>]  
**Sent:** Friday, March 18, 2011 8:34 PM  
**To:** Cherry, Ronald C  
**Cc:** 南亮; [yamato-koji@meti.go.jp](mailto:yamato-koji@meti.go.jp); [miura-satoshi3@meti.go.jp](mailto:miura-satoshi3@meti.go.jp); [sugita-rie@meti.go.jp](mailto:sugita-rie@meti.go.jp)  
**Subject:** Updated Factsheet

Dear Mr. Cherry,

This is Ryo Nasu, a chief deputy director of international Affairs division.  
The fact sheet we sent you before is updated today.  
Please share these materials with your colleagues in DC.

Thank you.

Best Regards,  
Ryo

-----  
Ryo NASU  
Deputy-Director  
International Affairs Division  
Agency for Natural Resources and Energy  
Ministry of Economy, Trade and Industry, JAPAN

44/122

tel: +81-3-3501-0598  
fax: +81-3-3595-3056  
nasu-ryo@meti.go.jp

---

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

From: minami-ryo@meti.go.jp [mailto:[minami-ryo@meti.go.jp](mailto:minami-ryo@meti.go.jp)]  
Sent: Wednesday, March 16, 2011 6:22 PM  
To: CherryRC@state.gov  
Cc: yamato-koji@meti.go.jp; nasu-ryo@meti.go.jp  
Subject: Updated Factsheet

Dear Mr.Cherry,

This is updated fact sheet.  
Could you please send this to DC?

Thank you.  
(添付ファイル: 110315\_2330rev\_factseet.pdf)

---

南亮 (Ryo MINAMI)  
経済産業省 資源エネルギー庁  
国際課長  
Director, International Affairs Division Agency for Natural Resources and Energy, METI

tel +81-3-3501-1511  
cell (b)(6)

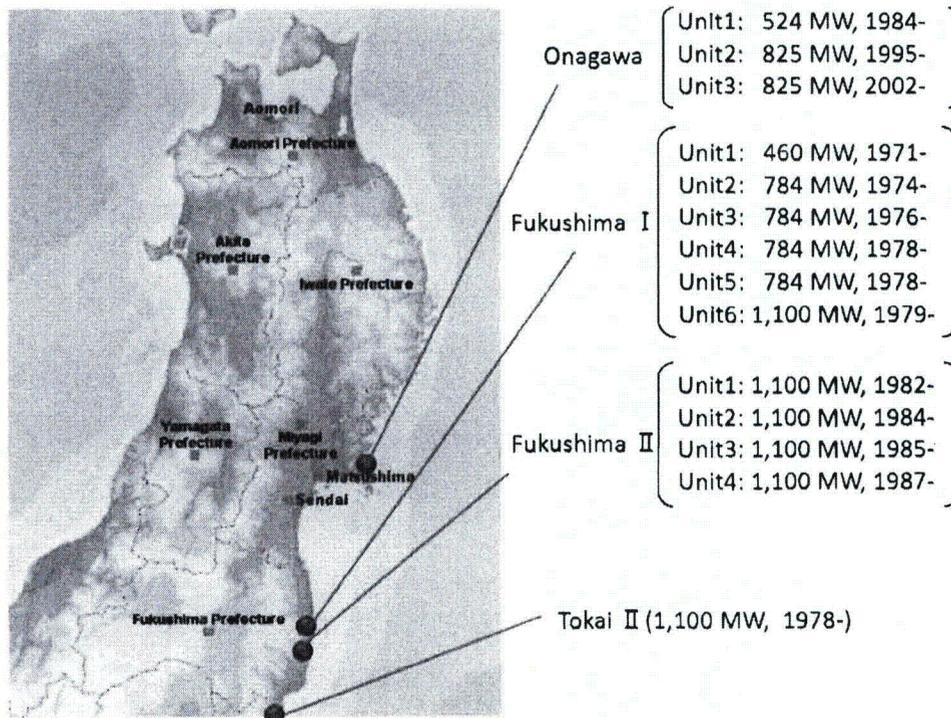
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## Tohoku Pacific Earthquake and the seismic damage to the NPSs

11. 03. 18 As of 14:00

Ministry of Economy, Trade and Industry

### Earthquake occurrence and automatic shut-down of nuclear reactors



The Tohoku Pacific Earthquake of magnitude 9.0 struck the northeastern part of Japan at 2:46 pm on March 11th, 2011.

While 3 reactors (Fukushima Dai-ichi (I) Unit 4,5,6) were under periodic inspection, 11 reactors (Onagawa Unit 1,2,3; Fukushima Dai-ichi (I) 1,2,3; Fukushima-Dai-ni (II) Unit 1,2,3,4; and Tokai Dai-ni (II)) were automatically shut-down.

After the automatic shut-down, the Unit 1-3 at Onagawa Nuclear Power Station, the Unit 3 at Fukushima II Nuclear Power Station, and the Unit at Tokai II Nuclear Power Station have been cold shut down safely. As for the unit 1,2,4 at Fukushima II Nuclear Power Station the operator of the station reported NISA nuclear emergency situation, but afterward the three units have been cold shut down.

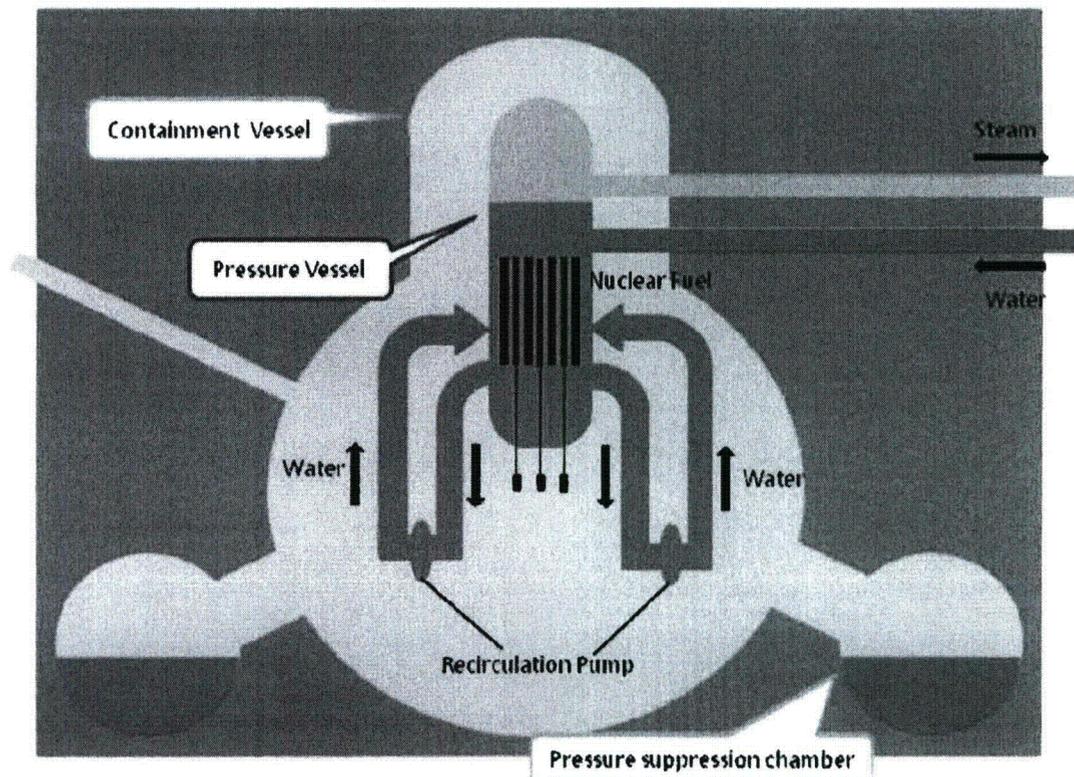
Outline of the Fukushima I Nuclear Power Station



(Fukushima Dai-ichi nuclear power station)



Concrete Building Housing



(Structure of BWR)

**Report concerning incidents at Unit 1, 2, 3 and 4 at the Fukushima I NPS**

***Unit 1 Seawater is being injected into the reactor pressure vessel as of 6:30 March 18th.***

- On March 11th, after the automatic shut-down of the reactor, the temperature of the reactor core went up, because the seawater pump which is necessary to operate cooling systems lost its water supply function due to the devastating Tsunami.
- On March 12th, water levels inside the pressure vessel dropped and the reaction of cladding metal of fuel and water generated hydrogen. The hydrogen leaked outside of the containment vessel and caused the explosion at the upper-part of a concrete building housing at 15:36 on March 12,
- Currently, seawater is being injected into the reactor pressure vessel. There is no risk of a hydrogen explosion in the containment vessel because there is no oxygen in it. There is no high probability of leaking large amount of radioactive material currently.

***Unit 2 Seawater is being injected into the reactor pressure vessel as of 17:30 March 17th.***

- After the automatic shut-down of the reactor, the water injection function was sustained, but the reactor water level tended to decrease.
- At 6:10 on March 15th, TEPCO reported that there was an explosion sound at Unit 2. Given the fact that the pressure in the suppression chamber of Unit 2 decreased. It is presumed that the possibility of certain damage on the suppression chamber.
- Currently, seawater is being injected into the reactor pressure vessel. White smoke is running from reactor building through blowout panel.

***Unit 3 Several counter measures are being used to cool down Unit 3 as of 17:30 March 17th.***

- After the automatic shut-down of the reactor, on March 13<sup>th</sup> fresh water and subsequently seawater were injected into the reactor pressure vessel through the fire extinguishing system line.
- The explosion took place around the reactor building of Unit 3 at 11:01 on March 14th.
- At 8:30 on March 16th, white smoke like steam was generated from Unit 3. Because of the possibility that the containment vessel of Unit 3 was damaged, the operators evacuated from the central control room of Unit 3 and 4 at 10:45 on March 16th. Thereafter, the operators returned to the room and restarted the operation for water injection into the reactor pressure vessel at 11:30 on March 16th.
- Helicopters and water cannon trucks of Self Defense Forces discharged water to Unit 3 from sky and ground on March 17<sup>th</sup>. Riot police also shot water from ground. Currently, seawater is being injected into the reactor pressure vessel.

***Unit 1,2 &3***

- As Cesium and Iodine were detected, it was believed that a part of nuclear fuel was damaged and a small amount of radioactive material was leaked into core cooling water.

***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.

***Unit 5&6 Back up power of Unit 6 is in working condition and power supply to Unit 5&6 is maintaining as of March 17<sup>th</sup>***

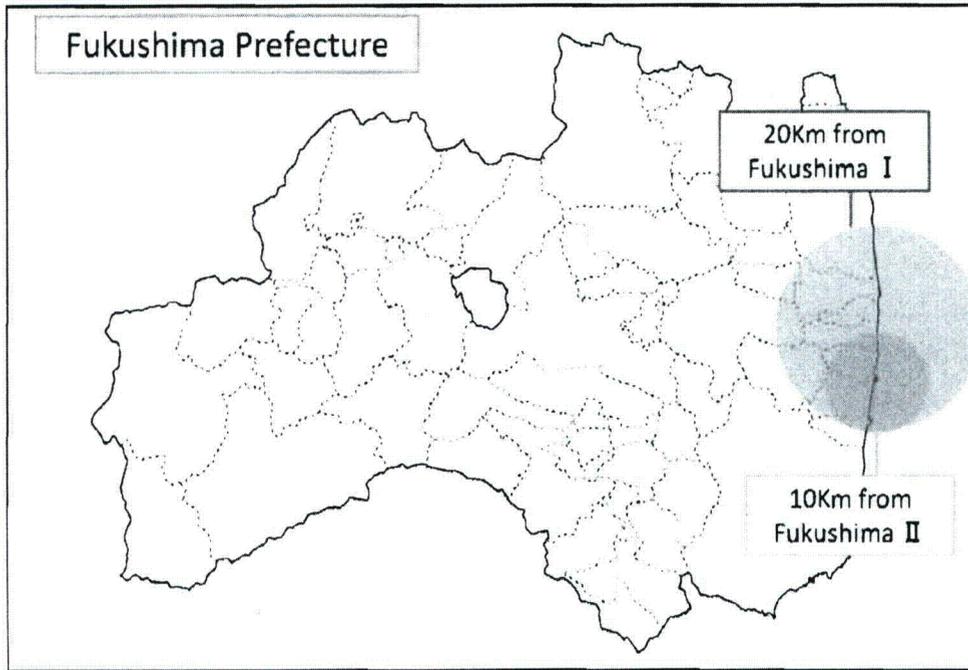
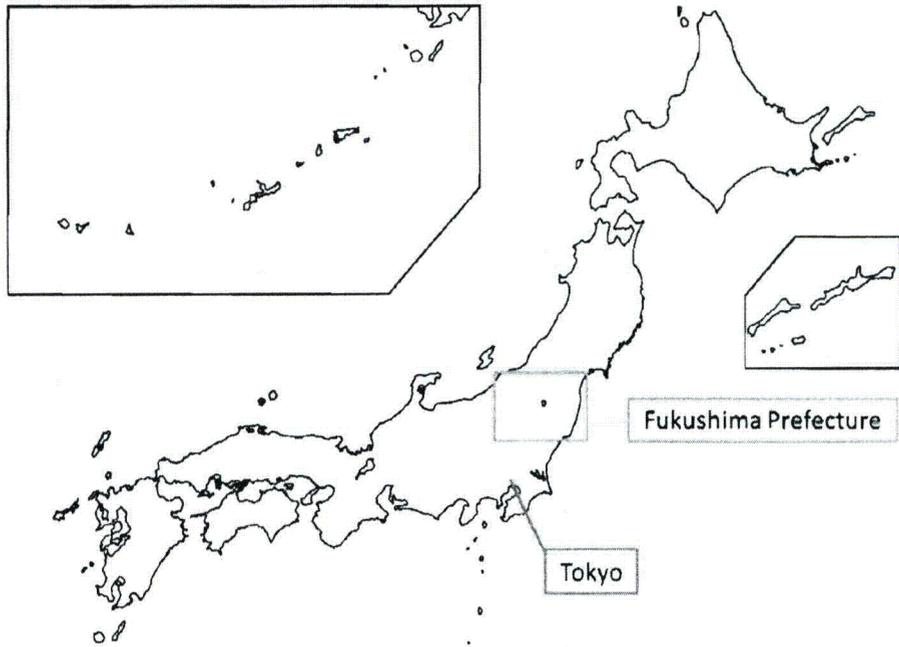
- Fresh water is being injected into reactor pressure vessels and spent fuel pools by Make-Up Water Condensate system.

#### **Current Situation**

- Evacuation as far as 20 kilometers from Fukushima I NPS and 10 kilometers from Fukushima II was almost completed (see the diagram below). The residents in the areas from 20 kilometers to 30 kilometers radius from Fukushima I NPS are directed to stay in-house.
- On March 16th, the Local Emergency Response Headquarter issued “the direction to administer the stable Iodine during evacuation from the evacuation area (20 km radius)” to the Prefecture Governors and the heads of cities, towns and villages.

\*The data of Monitoring Post out of 20 Km Zone of Fukushima Dai-ichi NPP is available at following URL.

[http://www.mext.go.jp/a\\_menu/saigaijohou/syousai/1303726.htm](http://www.mext.go.jp/a_menu/saigaijohou/syousai/1303726.htm)



Fukushima Dai-ichi(1F) West Gate (near MP-6) (at approximately 1.1km from Unit 2 and in west direction)  
 Measurement at west gate because of the risk of high dose at MP-6

March 17,2011															
monitoring car	0:30	0:50	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30
Reading (μ Sv/h)	351.4	350.1	348.2	343.9	344.8	344.8	341.7	340.8	338.4	338.3	338.1	334.7	333.8	314.8	313.5
neutron	N.D														
wind direction	NE	SSW	E	W	NW	N	W	W	NW	W	W	W	W	W	W
wind speed(m/s)	1.1	0.4	0.9	0.5	1.5	1.5	1.8	1.8	1.0	1.3	2.3	2.1	3.8	3.7	3.8

Fukushima Dai-ichi(1F) near gymnasium (east side of MP-6) (at approximately 0.5km from Unit 2 and in west-northwest direction)  
 Moved to another place for injection water in Reactor Building

March 17,2011							
monitoring car	7:50	8:00	8:30	8:40	8:50	9:00	9:10
Reading (μ Sv/h)	381.3	378.0	373.0	372.5	372.7	373.7	371.8
neutron	N.D						
wind direction	W	SW	WSW	SW	SW	SW	SW
wind speed(m/s)	3.7	3.7	3.2	3.8	3.4	3.7	3.0

Fukushima Dai-ichi(1F) north side of main building (approximately 0.4km from Unit 2 and in northwest direction)

March 17,2011								
monitoring car	8:30	8:40	9:50	10:00	10:10	10:20	10:30	10:40
Reading (μ Sv/h)	3788.8	3782.0	3783.0	3759.0	3756.0	3764.0	3750.0	3753.0
neutron	N.D							
wind direction	W	WSW	W	NW	NW	W	W	WSW
wind speed(m/s)	8.1	8.0	6.8	6.2	6.8	6.2	7.0	4.5

Fukushima Dai-ichi(1F) Main Gate (near MP-6) (at approximately 1.0km from Unit 2 and in west-southwest direction)

March 17,2011		
monitoring car	11:00	11:10
Reading (μ Sv/h)	847.3	848.2
neutron	N.D	N.D
wind direction	NW	NW
wind speed(m/s)	4.8	2.3

Fukushima Dai-ichi(1F) West Gate (near MP-6) (at approximately 1.1km from Unit 2 and in west direction)

March 17,2011								
monitoring car	11:15	11:20	11:30	12:00	12:30	13:00	13:10	13:20
Reading (μ Sv/h)	313.1	312.5	312.3	311.0	310.7	309.7	308.3	308.1
neutron	N.D							
wind direction	NW	W	WNW	W	W	W	W	W
wind speed(m/s)	4.7	4.4	2.9	3.6	3.8	3.8	3.5	3.1

Fukushima Dai-ichi(1F) north of main building (at approximately 0.5km from Unit 2 and in northwest direction)

March 17,2011			
monitoring car	13:30	13:40	14:00
Reading (μ Sv/h)	4176.0	4165.0	3810.0
neutron	N.D	N.D	N.D
wind direction	NW	W	W
wind speed(m/s)	4.8	4.7	6.2

Fukushima Dai-ichi(1F) West Gate (near MP-6) (at approximately 1.1km from Unit 2 and in west direction)

March 17,2011				
	14:10	14:30	15:00	15:30
	311.1	310.3	308.1	308.7
	N.D	N.D	N.D	N.D
	NW	W	W	W
	6.8	3.5	3.2	3.1

Fukushima Dai-ichi (1F) north of main building (at approximately 0.8km from Unit 2 and in northwest direction)

March 17, 2011	
monitoring car	15:50 15:55 16:00 16:05 16:10 16:15 17:00 17:05 17:10 17:15 17:20 17:25 17:30 17:35 17:40 17:45 17:50 17:55 18:00 18:05 18:10 18:15 18:20
Reading (μ Sv/h)	3700.0 3698.0 3698.0 3695.0 3695.0 3691.0 3678.0 3678.0 3678.0 3675.0 3672.0 3670.0 3667.0 3665.0 3638.0 3653.0 3650.0 3648.0 3648.0 3645.0 3641.0 3641.0 3645.0
neutron	N.D
wind direction	W W W W W W W NW NW NW NW W NW NW NW W W W WNW W NW W W
wind speed(m/s)	3.2 4.7 4.3 4.1 4.3 4.1 3.1 3.3 2.8 2.7 3.3 3.2 3.4 3.7 3.8 3.3 2.7 2.4 2.1 2.3 2.4 2.4 2.8

March 17, 2011	
monitoring car	18:23 18:30 18:35 18:40 18:50 19:00 19:10 19:20 19:30 20:00 20:10
Reading (μ Sv/h)	3643.0 3643.0 3637.0 3630.0 3630.0 3630.0 3628.0 3623.0 3593.0 3601.0 3598.0
neutron	N.D
wind direction	W WNW NW NW WNW WSW WNW W NW NE WNW
wind speed(m/s)	2.8 2.7 2.7 2.8 2.4 2.7 2.7 2.3 4.8 1.5 1.4

West Gate (near MP-6) (at approximately 1.1km from Unit 2 and in west direction)

March 17, 2011	
monitoring car	20:40 21:00 21:10 21:20 21:30 21:40 21:50 22:00 22:10 22:20 22:30 22:40 22:50 23:00 23:10 23:20 23:30 23:40 23:50
Reading (μ Sv/h)	292.2 291.9 291.7 291.3 291.2 291.1 290.0 290.4 290.4 289.8 289.7 289.8 289.5 289.0 289.0 288.8 288.7 287.8 288.9
neutron	N.D
wind direction	WNW NW NW W NW NW NW NW NW NW NW NW NW NE NW WNW NW NW NW
wind speed(m/s)	1.2 0.9 1.0 1.7 1.8 1.8 1.5 1.4 1.5 1.3 1.0 1.3 1.2 0.9 0.9 0.7 1.2 1.3 1.0

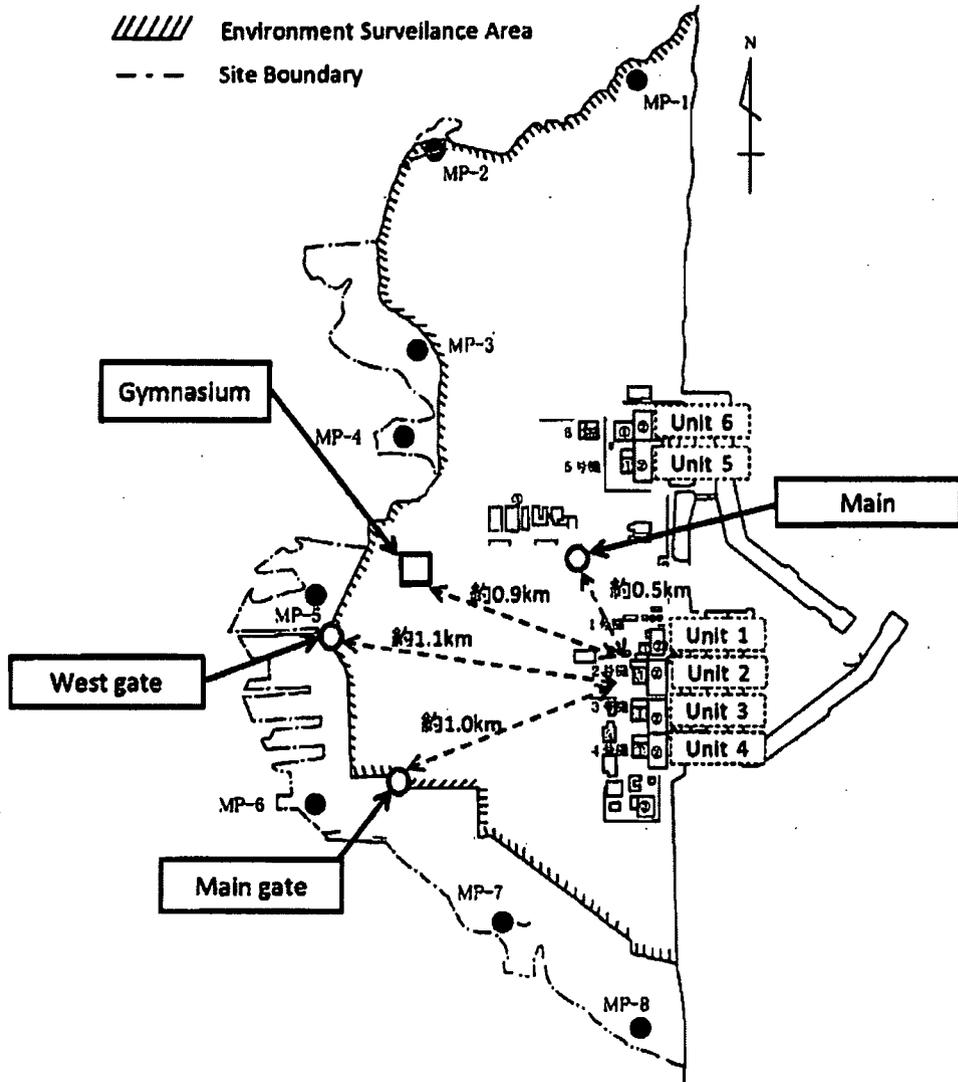
March 18, 2011	
monitoring car	0:00 0:10 0:20 0:30 0:40 0:50 1:00 1:10 1:20 1:30 1:40 1:50 2:00 2:10 2:20 2:30 2:40 2:50 3:00 3:10 3:20 3:30 3:40
Reading (μ Sv/h)	287.0 287.3 288.8 288.4 288.3 288.0 285.8 285.5 285.2 284.8 284.8 284.4 284.0 283.7 283.7 283.5 283.0 282.9 282.8 282.2 282.1 281.8 281.5
neutron	N.D
Reading (μ Sv/h)	W W W W W WNW NW NW NW NW N NW NW NW NW NE NW W WNW WNW W NW
wind speed(m/s)	1.4 1.0 1.0 0.9 0.9 1.0 1.6 1.5 1.7 1.4 0.9 0.6 1.0 0.5 0.2 0.2 0.2 0.2 0.2 0.3 0.4 0.7 0.8

March 18, 2011	
monitoring car	3:50 4:00 4:10 4:20 4:30 4:40 4:50 5:00 5:10 5:20 5:30 5:40 5:50 6:00 6:10 6:20 6:30 6:40 6:50 7:00 7:10 7:20 7:30
Reading (μ Sv/h)	281.1 281.1 280.9 280.7 280.2 280.0 279.8 278.4 278.3 278.0 278.9 278.9 277.1 274.0 274.0 273.8 274.1 272.7 273.4 272.4 271.7 271.6 271.4
neutron	N.D
wind direction	E W W N NW N NE NNE NNW N NW NW N NE N N W NW W W N N W
wind speed(m/s)	0.4 0.5 0.5 0.4 0.2 0.8 0.5 0.5 0.5 0.6 0.7 1.0 1.0 1.3 1.6 1.4 1.2 1.5 1.8 2.3 2.1 1.9 2.0

March 18, 2011	
monitoring car	7:40 7:50 8:00 8:10 8:20 8:30
Reading (μ Sv/h)	271.7 271.2 270.5 270.3 269.9 269.9
neutron	N.D N.D N.D N.D N.D N.D
wind direction	NW NW NW NW NW
wind speed(m/s)	2.8 3.0 2.7 2.8 3.4 3.7

Fukushima Dai-ichi

2011/3/17



**From:** Smith, Brooke  
**To:** LIA03 Hoc; LIA02 Hoc; HQQ Hoc  
**Subject:** Fw: Radiation data by MEXT  
**Date:** Friday, March 18, 2011 11:50:47 PM  
**Attachments:** 20110319\_01.pdf

---

Please pass to prmt. Thx.

Sent from an NRC Blackberry.  
Brooke G. Smith

(b)(6)

----- Original message -----

**From:** Cherry, Ronald C <CherryRC@state.gov>  
**To:** JapanEmbassy, TaskForce <JapanEmbassyTaskForce@state.gov>; NITOPS <NITOPS@nnsa.doe.gov>  
**Cc:** Alan Remick <DartDOELiaison1@OFDA.gov>; Aleshia Duncan <Aleshia.Duncan@nuclear.energy.gov>; Cook, William; Smith, Brooke; Casto, Chuck; Damian Peko <Damian.Peko@nuclear.energy.gov>; Duncan, Aleshia D <DuncanAD@state.gov>; Howard, E. Bruce <HowardEB@state.gov>; Foster, Jack; Trapp, James; James Trapp (BB) <(b)(6)>; Joe Hughart <joseph.hughart@foh.hhs.gov>; Joe Hughart (DART) <jnhughart@ofda.gov>; Monninger, John; Johnstone, Gregg M <johnstonegm@state.gov>; Foggie, Kirk; Mears, Jeremy M <MearsJM@state.gov>; Morales, Russell A <MoralesRA@state.gov>; Devercelly, Richard; Kolb, Timothy; Nakanishi, Tony; Ulses, Anthony  
**Sent:** Fri Mar 18 23:43:30 2011  
**Subject:** FW: Radiation data by MEXT

Please see attached data for readings taken by sources including NUSTEC, JAEA, and TEPCO.

This email is UNCLASSIFIED

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**From:** [Kenagy, W David](#)  
**To:** [Kenagy, W David](#); [McClelland, Vince](#); [Rodriguez, Veronica](#); [Heinrich, Ann](#); [HOO Hoc](#); [HQO2 Hoc](#); [Huffman, William](#); [DeCair, Sara@epamail.epa.gov](#); [timothy.greten@dhs.gov](#); [Maria.Martinissen@hhs.gov](#); [\(b\)\(6\)](#); [joehgeoc@oem.doe.gov](#); [hhs.soc@hhs.gov](#); [James.Kish@dhs.gov](#); [HOO Hoc](#); [Smith, Brose](#); [Zubarev, Julie](#); [Snaffer, Mark R](#); [NITOPS@nnsa.doe.gov](#); [Skvpek, Thomas M](#)  
**Subject:** RE: IAEA distributed documents  
**Date:** Friday, March 18, 2011 6:39:08 AM  
**Attachments:** [NISA METI press release 29 \(Japanese\)11.pdf](#)  
[Summary of reactor unit status at 0500 18-March UTC11.pdf](#)  
[NISA METI press release 29 \(Japanese\) - Attachm 211.pdf](#)  
[NISA METI press release 29 \(Japanese\) - Attachm 111.pdf](#)

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**IAEA**

International Atomic Energy Agency

## INCIDENT AND EMERGENCY CENTRE

EMERCON

EMERCON

EMERCON

**FAX: +43 1 26007 29309**

**email: [iec3@iaea.org](mailto:iec3@iaea.org)**

**Date: 2011-3-18  
05:00 UTC**

**Pages incl. cover sheet: 8**

**TO: All Contact points**

**cc: Permanent Missions**

**Subject: Status of the Fukushima Daiichi nuclear power plant.**

Please find attached the latest information on the current status and summary table of reactor and spent fuel pool status.

An electronic version is available on ENAC ([www-emergency.iaea.org](http://www-emergency.iaea.org)).

The IAEA will issue further information as soon as it becomes available.

A handwritten signature in black ink, appearing to read 'Rodolfo Cruz Suarez', written over a horizontal line.

Rodolfo Cruz Suarez

Emergency Response Manager  
18-March-2011 05:00 UTC  
IAEA Incident and Emergency Centre



**Subject: Status of the Fukushima Daiichi nuclear power plant**

The Incident and Emergency Centre (IEC) is continuing to monitor the status of the nuclear power plants in Japan following the earthquake.

Based on information received by 05:00 UTC on March 18, 2011 the following update for the reactor units at the Fukushima Daiichi Nuclear Power Plant is provided:

**Radiation Monitoring Data**

The IAEA has requested the Japanese authorities to provide information on the radionuclides identified in environmental samples.

**Off-Site Environmental Radiation Measurements**

The Japanese authorities have made available the results of continuous gamma dose rate monitoring at six sites. The data cover a three-day period from 15:00 on 13<sup>th</sup> March to 21:00 on 16<sup>th</sup> March and are summarized in the table below.

Iwate, which shows no increase above normal levels, is located due north of the Daiichi nuclear power plant and the other five sampling locations are located to the south-west. All of these showed short-term increases in the normal gamma dose rate by factors between about 10 and 50, returning quickly to normal values. At Tochigi levels remained consistently ten times above normal values.

During 14<sup>th</sup> and 15<sup>th</sup> March the winds were from the north (blowing from Daiichi to the south towards Tokyo and the other cities mentioned) with an average wind speed of about 22 km per hour. The times of the peak values observed in Tokyo and at the Daiichi site do not correlate exactly, but that is not unexpected. However, of greater importance is to note that the highest values recorded in Tokyo were about 20,000 times lower than the highest values at Daiichi.

Location	Distance (km) from Daiichi NPP	Normal level ( $\mu\text{Sv/h}$ )*	Observed peaks ( $\mu\text{Sv/h}$ )*
Chiba	230 SW	0.04	0.6 (09:00 UTC 15 <sup>th</sup> March) 0.3 (01:00 UTC 16 <sup>th</sup> March)
Saitama	200 SW	0.03	1.2 (01:00 UTC 15 <sup>th</sup> March) 1.0 (09:00 UTC 15 <sup>th</sup> March) 0.2 (21:00 UTC 15 <sup>th</sup> March)
Tokyo	230 SW	0.04	0.1 (20:00 UTC 14 <sup>th</sup> March) 0.5 (01:00 UTC 15 <sup>th</sup> March) 0.37 (10:00 UTC 15 <sup>th</sup> March) 0.15 (21:00 UTC 15 <sup>th</sup> March)

Ibaraki	130 SW	0.03	1.5 (23:00 UTC 14 <sup>th</sup> March) 1.0 (22:00 UTC 15 <sup>th</sup> March)
Tochigi	140 SW	0.02	1.3 (02:00 UTC 15 <sup>th</sup> March) 0.2 (03:00 UTC 16 <sup>th</sup> March onwards)
Iwate	250 N	0.04	No increase above normal level

\*All values are approximate as they are extrapolated from graphic presentations

Additional hourly summary monitoring data for the period 08:00 on March 15<sup>th</sup> to 22:00 on March 16<sup>th</sup> have been provided for an additional 40 Japanese cities. In the cities of Miyagi (95 km N), Gumma (205 km SW) and Kanagawa (280 km SW) elevated gamma dose rates, up to ten times the normal levels, were reported at some time during the measurement period. At all other locations the levels remained normal.

### On-Site Environmental Radiation Measurements

#### Fukushima Daiichi NPP:

The on-site environmental monitoring data from sampling locations MP5 and MP6 are presented in the attached graph. The data start at 13:15 UTC on Monday 14<sup>th</sup> March and run through to 22:30 UTC on Thursday 17<sup>th</sup> March. A significant increase in the gamma dose rate is associated with each of the major events taking place on the site. The ambient normal background level at the site is typically 0.05  $\mu\text{Sv/h}$  per hour. The highest peak value observed is 12,000  $\mu\text{Sv/h}$  at 00:00 UTC on 15<sup>th</sup> March and would appear to be associated with events at units 2 and 4. It is also important to note that, while levels have fallen quickly from each peak value, they still remain of the order of 300  $\mu\text{Sv}$ .

The highest recorded value at the site was 400,000  $\mu\text{Sv/h}$  (400 mSv/h). This was recorded at a different on-site location and so is not included in this graph.

#### Fukushima Daiini NPP:

Comparable data for the Daiini site are also presented in graphical form. Apart from one peak value of just over 100  $\mu\text{Sv/h}$  at 00:40 UTC on 16<sup>th</sup> March, the ambient levels are predominantly between 10 and 30  $\mu\text{Sv/h}$ , compared with levels of the order of 0.05  $\mu\text{Sv/h}$  before the earthquake and tsunami.

There is no record of any incidents or releases from the Daiini site. For that reason, the peak value observed at ~ 04:00 UTC 16 March and the present elevated ambient levels are attributed to events taking place at the Daiichi site.

Units 1, 2, 3, 4, 5 and 6 Plant Status

The following data was verified on the status of Units 1-6 as of 18:50 UTC, March 17.

Fukushima Daiichi							Parameter / Indications	Unit
Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6		MPa	Reactor Pressure Vessel Pressure
0.265 (A) 0.243 (B)	0.085 (A) 0.069 (B)	0.096 (A) 0.115 (B)	-	0.843	0.632			
2.62 (A) 2.4 (B)	0.84 (A) 0.68 (B)	0.95 (A) 1.13 (B)	-	8.34	6.2		atm	Reactor Pressure Vessel Pressure
-1700 (A) (B) below the scale	-1400 (A) (B) not available	-2000 (A) -2300 (B)	-	2018	1909		mm (above the top of active fuel)	Reactor Pressure Vessel Level
Instrumentation not available	130	155	-	-	-		KPa	Containment Vessel (Drywell) Pressure
	n not available	1.28	1.53	-	-		atm	
No Data	No Data	No Data	No Data	No Data	No Data		°C	Suppression Pool Temperature
No Data	Below the scale	Below the scale	-	-	-		KPa	Suppression Pool Pressure
Sea water injection is continued using fire extinguish line into RPV	Sea water injection is continued using fire extinguish line into RPV	Sea water injection is continued using fire extinguish line into RPV	-	Injection to RPV and the Spent Fuel Pool using make up water	Injection to RPV and the Spent Fuel Pool using make up water		Unknown • Adding • Not adding	Adding water to Reactor Pressure Vessel

\* All pressures are gauge pressure (pressure above normal atmospheric pressure)  
 (A) and (B) refer to two measurement channels

For all units, NISA informed the IAEA that the way of restoring the off-site power from the grid operated by TOHOKU EPC is being considered.

For Unit 1, Seawater is being injected as of 08:30 UTC March 16th.

For Unit 2, Seawater is being injected as of 08:30 March 17th. A white smoke was observed through the blown-out panels of unit 2.

For Unit 3, water sprayings by helicopter on the unit 3 from 00:48 to about 01:00 UTC on March 16 (4 times total) were performed. Police trucks equipped with water with 5 cannons have sprayed water on Unit 3 spent fuel from 10:05 UTC of 17 March (as of 21:30 UTC). Seawater is being injected to reactor pressure vessel as of 08:30 UTC March 17 via fire protection system.

For Unit 4, No information is available regarding the spent fuel pool water level or temperature. Around 08:30 UTC 17 March the seawater injection was stopped into the spent fuel pool.

For Unit 5, at 15:00 UTC on March 16, the water level decreased to 1872 mm above the top of the fuel (at 18:00 UTC on March 17 the level was 2018 mm).

For Unit 6, at 15:00 UTC on March 16 the water level had decreased to 1773 mm above the top of the fuel (at 18:00 UTC on March 17 the level was 1909). Emergency Diesel Generator (1 unit) of Unit 6 is operable and supplying electricity to Units 5 and 6. Water injection to the Spent Fuel Pool through make up water system is progressing. It is scheduled to inject water to reactor pressure vessel (RPV) after the recovery of external power source.

For the Common Use Spent Fuel Pool, it was reported that the pool was "almost fully" covered by water.

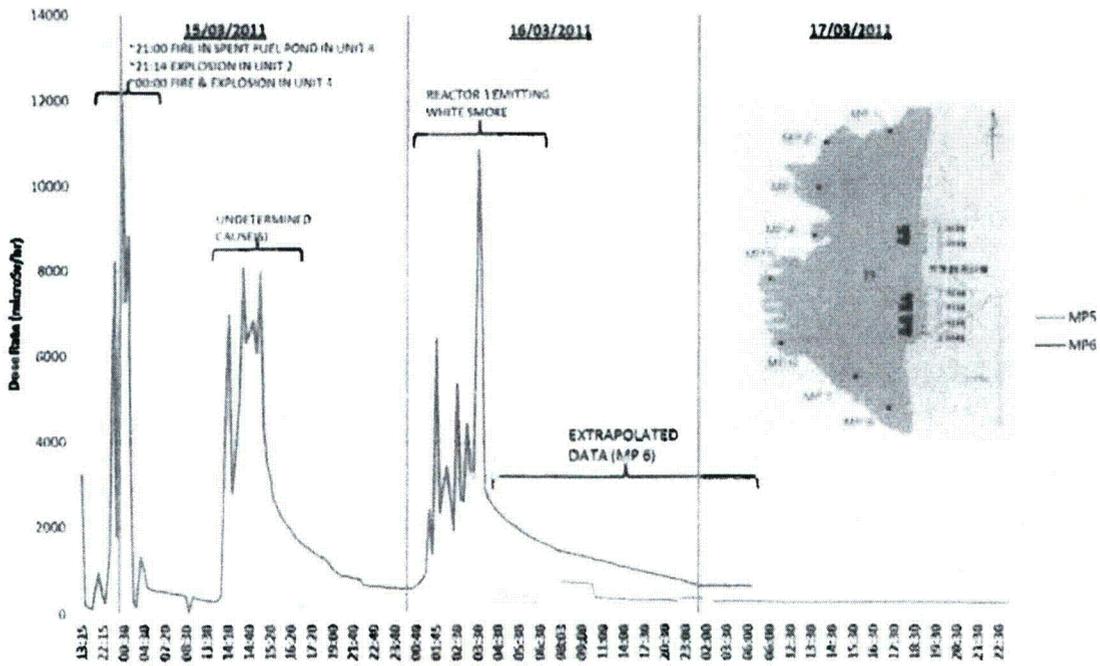
#### Spent Fuel Ponds

Latest temperatures of the water in the spent fuel ponds in Units 4, 5 and 6 have been measured with the results below:

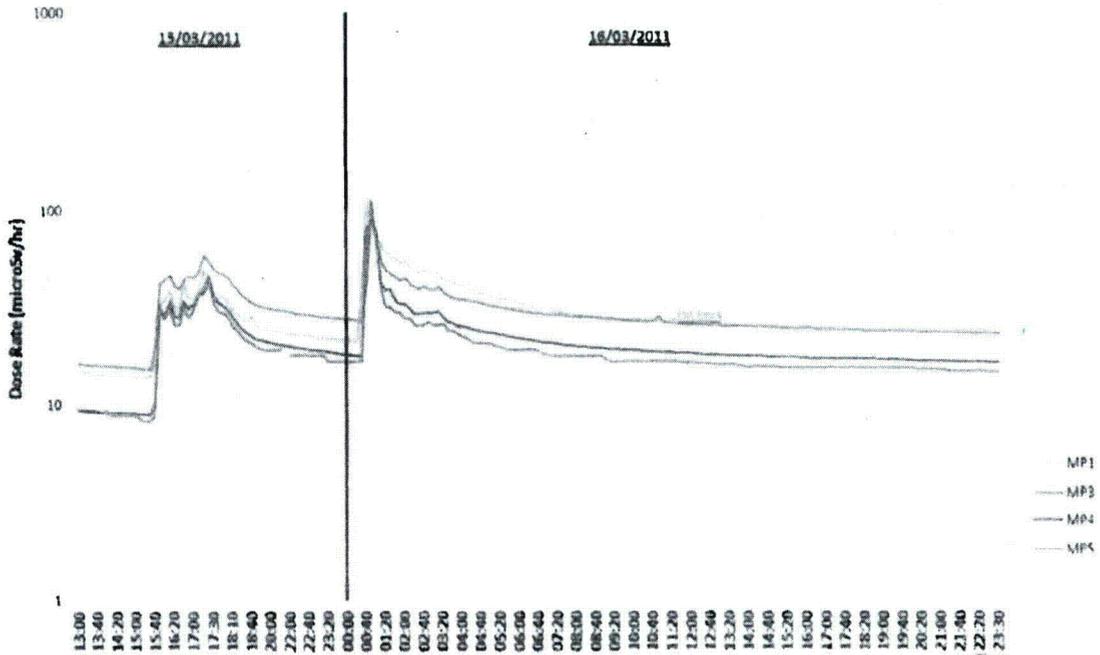
Unit 4	Unit 5	Unit 6
84°C at 19:08 UTC 13-Mar	64.2°C at 03:00 UTC 17-Mar	62.5°C at 03:00 UTC 17-Mar
	65.5°C at 18:00 UTC 17-Mar	62.0°C at 18:00 UTC 17-Mar

  
Emergency Response Manager  
Rodolfo Cruz Suarez  
18-March-2011 05:00 UTC

Fukushima Dai-ichi Dose Rate Measurements (microSv/hr) MP 5 and MP 6  
from 14th March 2011 13:15 to 17th March 2011 06:00 UTC



Fukushima Dai-ichi Dose Rate Measurements (microSv/hr)  
MP 1, MP 3, MP 4 & MP 5 from 15 March 13:00 to 16 March 23:30 UTC



Unit	1	2	3	4
Power (MWe/th)	460/1380	784/2381	784/2381	784/2381
Type of Reactor	BWR-3	BWR-4	BWR-4	BWR-4
Status at time of EQ occurred	In service – auto shutdown	In service – auto shutdown	In service – auto shutdown	Outage
Core and fuel	Damaged	Damaged	Damaged	No fuel rods
Containment integrity	No damage reported	Damage suspected	No information	NA / outage configuration
Off site power	Not available	Not available	Not available	Not available
Diesel generators	Not available	Not available	Not available	Not available
Building	Severe damage	Slight damage	Severe damage	Severe damage
Water level of RPV	Around half of Fuel assembly	Around half of Fuel assembly	Around half of Fuel assembly	NA / outage configuration
Pressure of RPV	Stable	Unreliable data	Decreasing	
CV Pressure Drywell	Unknown	Stable	Stable	
Water injection to RPV	Seawater	Seawater	Seawater	
Water injection to CV	Not available	Not available	Not available	
Spent Fuel Pool	No information	No information	No information	No information



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Unit	5	6
Power	784/2381	1100/3293
Type of Reactor	BWR-4	BWR-5
Status at the EQ occurred	Outage	Outage
Core and Fuel	No damage expected	No Damage expected
Containment int.	No damage expected	No damage expected
Off site power	Not available	Not available
Diesel generators	1 Emergency Diesel From unit 6	Emergency Diesel
Building	No damage reported	No damage reported
Water level of RPV	Above fuel	Above fuel
Pressure of RPV	No information	No information
Containment Pressure	No information	No information
Water injection to RPV	Not necessary	Not necessary
Water injection to CV	Not necessary	Not necessary
Spent Fuel Pool Temperature	Slightly increasing	Slightly increasing

Reporting time:

Date : March 18

Time : 05:00 UTC



Severe condition



Concern



No immediate concern

福島第一原子力発電所 プラント関連パラメータ

3月18日 3:00 現在

号機	1u	2u	3u	4u	5u	6u
注水状況	消火系ラインを用いた海水注 中。 流量計無 圧力 0.55MPa(1.40)	消火系ラインを用いた海水注 中。 流量 550L/min(仮設計値) 圧力 0.65MPa(2.47)	消火系ラインを用いた海水注 中。 流量 250L/min(仮設計値) 圧力 0.50MPa(3/17 2.14)	停止中	停止中	停止中
原子炉水位	燃料域A: -1700mm 燃料域B: ダウンスケール (2.50 現在)	燃料域A: -1400mm (2.50 現在)	燃料域A: -2000mm 燃料域B: -2300mm (2.45 現在)	-	停止域 2018mm (3.00 現在)	停止域 1909mm (3.00 現在)
原子炉圧力	0.164MPag (A) 0.142MPag (B) (2.50 現在)	-0.016MPag (A) -0.032MPag (B) (2.50 現在)	-0.005MPag (A) 0.014MPag (B) (2.45 現在)	-	0.742MPag (3.00 現在)	0.531MPag (3.00 現在)
原子炉水温度	-			-	163.1℃ (3.00 現在)	157.1℃ (3.00 現在)
D/W・S/C圧力 S/C水温度	D/W 検出器不働 S/C 検出器不働	D/W 0.130MPaabs S/C ダウンスケール (2.50 現在)	D/W 0.155MPaabs S/C ダウンスケール (2.45 現在)	-		
CAMS	D/W 3.80×10 <sup>-9</sup> Sv/h S/C 4.77×10 <sup>-9</sup> Sv/h (2.50 現在)	D/W 7.98×10 <sup>-9</sup> Sv/h S/C 2.40×10 <sup>-9</sup> Sv/h (2.50 現在)	D/W - S/C - (CAMS未復旧)	-		
D/W設計使用圧力	384kPag	384kPag	384kPag	-		
D/W最高使用圧力	427kPag	427kPag	427kPag	-		
使用済燃料プール 水温度	-	-	-	84℃ (3/14 4:08)	65.5℃ (3.00 現在)	62.0℃ (3.00 現在)
電源	1Aトリップ 1Bトリップ	2Aトリップ 2Bトリップ	3Aトリップ 3Bトリップ	4A,B使用不可	5A,Bトリップ	6B動作中 6A不可 HPCS不可
その他情報						

福島第一(1F) 西門付近(MP-5付近)(2号機より西約1.1キロ) ※MP-6の放射線によるリスクが高いことから西門付近で測定

3月17日															
モニタリングカー	0:30	0:50	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30
測定値( $\mu$ Sv/h)	351.4	350.1	348.2	345.9	344.8	344.6	341.7	340.8	339.4	338.3	336.1	334.7	333.8	314.5	313.5
中性子	ND														
風向	北東	南南西	東	西	北西	北	西	西	北西	西	西	西	西	西	西
風速(m/s)	1.1	0.4	0.9	0.5	1.5	1.5	1.8	1.8	1.0	1.3	2.3	3.1	3.6	3.7	3.8

福島第一(1F) 体育館付近(MP-5東側)(2号機より西北西約0.9キロ) ※高圧注水活動の作業者のための放射線管理を行うため移動

3月17日							
モニタリングカー	7:50	8:00	8:30	8:40	8:50	9:00	9:10
測定値( $\mu$ Sv/h)	381.3	379.0	373.0	372.5	372.7	373.7	371.9
中性子	ND						
風向	西	南西	西南西	南西	南西	南西	南西
風速(m/s)	3.7	3.7	3.2	3.8	3.4	3.7	3.0

福島第一(1F) 事務本館北(2号機より北西約0.5キロ) ※注水活動による効果を測定するためにより近傍へ移動

3月17日									
モニタリングカー	9:30	9:40	9:50	10:00	10:10	10:20	10:30	10:40	10:50
測定値( $\mu$ Sv/h)	3786.0	3782.0	3763.0	3759.0	3755.0	3754.0	3750.0	3753.0	3743.0
中性子	ND								
風向	西	西南西	西	北西	北西	西	西	西南西	南西
風速(m/s)	5.1	5.0	6.8	5.2	5.6	5.2	7.0	4.5	2.2

福島第一(1F) 正門付近前(MP-6付近)(2号機より西南西約1.0キロ) ※入場者のための放射線管理を行うため移動

3月17日		
モニタリングカー	11:00	11:10
測定値( $\mu$ Sv/h)	647.3	646.2
中性子	ND	ND
風向	北西	北北西
風速(m/s)	4.8	2.3

福島第一(1F) 西門(MP-5付近)(2号機より西約1.1キロ) ※定点で測定するため移動

3月17日								
モニタリングカー	11:15	11:20	11:30	12:00	12:30	13:00	13:10	13:20
測定値( $\mu$ Sv/h)	313.1	312.5	312.3	311.0	310.7	309.7	309.3	309.1
中性子	ND							
風向	北西	西	西北西	西	西	西	西	西
風速(m/s)	4.7	4.4	2.9	3.5	3.5	3.8	3.5	3.1

福島第一(1F) 事務本館北(2号機より北西約0.5キロ) ※注水活動による効果を測定するためにより近傍へ移動

3月17日			
モニタリングカー	13:30	13:40	14:00
測定値( $\mu$ Sv/h)	4175.0	4165.0	3810.0
中性子	ND	ND	ND
風向	北西	西	西
風速(m/s)	4.5	4.7	5.2

福島第一(1F) 西門 (MP-5付近)(2号機より西約1.1キロ) ※定点で測定するため移動

3月17日				
モニタリングカー	14:10	14:30	15:00	15:30
測定値( $\mu\text{Sv/h}$ )	311.1	310.3	309.1	309.7
中性子	ND	ND	ND	ND
風向	北西	西	西	西
風速(m/s)	5.8	3.5	3.2	3.1

福島第一(1F) 事務本館北(2号機より北西約0.5キロ) ※注水活動による効果を測定するためにより近傍へ移動

3月17日																							
モニタリングカー	15:50	15:55	16:00	16:05	16:10	16:15	17:00	17:05	17:10	17:15	17:20	17:25	17:30	17:35	17:40	17:45	17:50	17:55	18:00	18:05	18:10	18:15	18:20
測定値( $\mu\text{Sv/h}$ )	3700.0	3699.0	3698.0	3695.0	3695.0	3691.0	3676.0	3676.0	3675.0	3675.0	3672.0	3670.0	3667.0	3665.0	3639.0	3653.0	3650.0	3649.0	3649.0	3645.0	3641.0	3641.0	3645.0
中性子	ND																						
風向	西	西	西	西	西	西	西	北西	北西	北西	北西	西	北西	北西	西北西	西	西	西	西北西	西	北西	西	西
風速(m/s)	6.2	4.7	4.3	4.1	4.3	4.1	3.1	3.3	2.8	2.7	3.3	3.2	3.4	3.7	3.6	3.3	2.7	2.4	2.1	2.2	2.4	2.4	2.6

3月17日											
モニタリングカー	18:25	18:30	18:35	18:40	18:50	19:00	19:10	19:20	19:50	20:00	20:10
測定値( $\mu\text{Sv/h}$ )	3643.0	3643.0	3637.0	3638.0	3638.0	3630.0	3626.0	3623.0	3599.0	3601.0	3586.0
中性子	ND										
風向	西	西北西	北西	北西	西北西	西南西	西北西	西	北西	北東	西北西
風速(m/s)	2.8	2.7	2.7	2.9	2.4	2.7	2.7	2.3	4.8	1.5	1.4

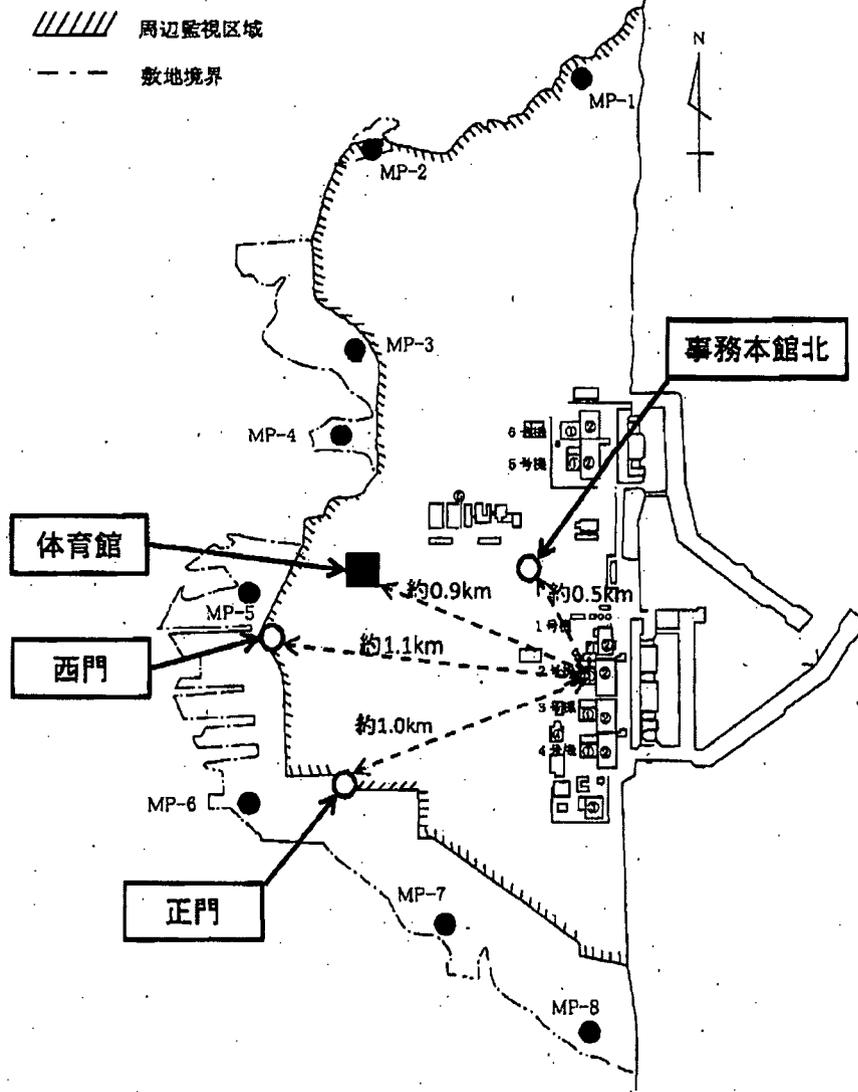
福島第一(1F) 西門 (MP-5付近)(2号機より西約1.1キロ) ※放水が終了し、定点で測定するため移動

3月17日																			
モニタリングカー	20:40	21:00	21:10	21:20	21:30	21:40	21:50	22:00	22:10	22:20	22:30	22:40	22:50	23:00	23:10	23:20	23:30	23:40	23:50
測定値( $\mu\text{Sv/h}$ )	292.2	291.9	291.7	291.3	291.2	291.1	290.9	290.4	290.4	289.9	289.7	289.6	289.5	289.0	289.0	288.8	288.7	287.8	288.9
中性子	ND																		
風向	西北西	北西	北西	西	北西	北西	北西	北西	北西	北西	西北西	北西	北西	北西	北東	北西	北北西	北西	北西
風速(m/s)	1.2	0.9	1.6	1.7	1.8	1.6	1.5	1.4	1.5	1.3	1.0	1.3	1.2	0.9	0.9	0.7	1.2	1.3	1.0

3月18日																							
モニタリングカー	0:00	0:10	0:20	0:30	0:40	0:50	1:00	1:10	1:20	1:30	1:40	1:50	2:00	2:10	2:20	2:30	2:40	2:50	3:00	3:10	3:20	3:30	3:40
測定値( $\mu\text{Sv/h}$ )	287.0	287.3	286.6	286.4	286.3	286.0	285.6	285.5	285.2	284.9	284.6	284.4	284.0	283.7	283.7	283.5	283.0	282.9	282.6	282.2	282.1	281.6	281.5
中性子	ND																						
風向	西	西	西	西	北西	西北西	北西	北西	北西	北西	北	北西	北西	北西	北東	北東	北東	北北東	北西	西	西北西	西北西	西
風速(m/s)	1.4	1.0	1.0	0.8	0.9	1.0	1.6	1.6	1.7	1.4	0.9	0.6	1.0	0.5	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.7	0.6

3月18日																							
モニタリングカー	3:50	4:00	4:10	4:20	4:30	4:40	4:50	5:00	5:10	5:20	5:30	5:40	5:50	6:00	6:10	6:20	6:30	6:40	6:50	7:00	7:10	7:20	7:30
測定値( $\mu\text{Sv/h}$ )	281.1	281.1	280.9	280.7	280.2	280.0	279.8	279.4	279.3	279.0	278.9	278.9	277.1	274.0	274.0	273.8	274.1	272.7	273.4	272.4	271.7	271.6	271.4
中性子	ND																						
風向	東	西	西	北	北西	北	北東	北北東	北北西	北	北西	北西	北	北東	西	北	西	北西	西	西	北	北	西
風速(m/s)	0.4	0.5	0.5	0.4	0.2	0.6	0.5	0.5	0.5	0.6	0.7	1.0	1.0	1.3	1.6	1.4	1.2	1.5	1.6	2.3	2.1	1.9	2.0

3月18日			
モニタリングカー	7:40	7:50	8:00
測定値( $\mu$ Sv/h)	271.1	271.2	270.5
中性子	ND	ND	ND
風向	北西	北	北西
風速(m/s)	2.9	3.0	2.7



福島第二(2F) (事業者のモニタリングポスト)

3月17日																						
モニタリングポスト	0:00	0:10	0:20	0:30	0:40	0:50	1:00	1:30	1:40	1:50	2:00	2:10	2:20	2:30	2:40	2:50	3:00	3:10	3:20	3:30	3:40	3:50
MP1(μSv/h)	25.0	24.9	24.9	24.8	24.7	24.8	24.7	24.6	24.5	24.4	24.3	24.4	24.3	24.2	24.2	24.2	24.1	24.1	24.0	24.0	24.0	23.8
MP2(μSv/h)	点検中																					
MP3(μSv/h)	25.2	25.0	25.0	25.0	25.0	25.0	25.1	24.9	24.7	24.7	24.8	24.6	24.7	24.5	24.6	24.5	24.5	24.4	24.3	24.2	24.3	24.3
MP4(μSv/h)	17.4	17.4	17.4	17.4	17.4	17.3	17.3	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.1	17.1	17.1	17.1	17.0
MP5(μSv/h)	15.6	15.5	15.5	15.6	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.6	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
MP6(μSv/h)	欠測																					
MP7(μSv/h)	欠測																					
風向	西北西	西北西	北西	西	西北西	西	西北西	西北西	西北西	西北西	西北西	西	西	西北西	西	西	西	西	西	西	西	西
風速(m/s)	6.9	6.1	4.2	4.3	5.5	5.2	5.8	6.8	7.3	6.8	6.0	7.2	5.9	5.0	6.0	8.7	10.0	9.6	10.9	9.6	12.6	12.4

3月17日																						
モニタリングポスト	4:00	4:10	4:20	4:30	4:40	4:50	5:00	5:10	5:20	5:30	5:40	5:50	6:00	6:10	6:20	6:30	6:40	6:50	7:00	7:10	7:20	7:30
MP1(μSv/h)	23.9	23.8	23.7	23.6	23.6	23.6	23.5	23.6	23.6	23.6	23.5	23.5	23.5	23.5	23.5	23.4	23.4	23.4	23.3	23.3	23.3	23.3
MP2(μSv/h)	点検中																					
MP3(μSv/h)	24.2	24.2	24.2	24.0	23.9	24.0	23.9	23.9	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.6	23.7	23.6	23.6	23.5	23.5
MP4(μSv/h)	17.0	17.0	16.9	16.9	16.8	16.8	16.8	16.7	16.7	16.6	16.7	16.6	16.6	16.6	16.6	16.5	16.5	16.5	16.5	16.5	16.5	16.5
MP5(μSv/h)	15.5	15.5	15.4	15.4	15.4	15.4	15.4	15.2	15.1	15.2	15.1	15.1	15.1	15.0	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9
MP6(μSv/h)	欠測																					
MP7(μSv/h)	欠測																					
風向	西	西	西	西	西	西	西北西	西	西	西	西	西	西	西	西	西	西	西	西北西	西	西	西
風速(m/s)	11.4	12.3	11.7	11.3	12.6	8.7	9.5	9.4	8.6	10.5	11.7	10.8	11.0	10.5	11.2	15.2	12.8	13.1	13.0	15.1	17.2	16.9

3月17日																						
モニタリングポスト	7:40	7:50	8:00	8:10	8:20	8:30	8:40	8:50	9:00	9:10	9:20	9:30	9:40	9:50	10:00	10:10	10:20	10:30	10:40	10:50	11:00	11:10
MP1(μSv/h)	23.3	23.2	23.2	23.2	23.2	23.1	23.0	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.8	22.8	22.8	22.7	22.8	22.7	22.6	22.6
MP2(μSv/h)	点検中	点検中	点検中	点検中	点検中	点検中	点検中	点検中														
MP3(μSv/h)	23.5	23.5	23.5	23.5	23.4	23.4	23.5	23.4	23.3	23.4	23.4	23.2	23.2	23.1	23.2	23.1	23.1	23.1	23.1	23.1	23.1	23.1
MP4(μSv/h)	16.4	16.4	16.4	16.3	16.3	16.3	16.3	16.3	16.3	16.2	16.1	16.1	16.1	16.1	16.0	16.1	16.1	16.0	16.0	16.1	16.0	16.0
MP5(μSv/h)	14.8	14.8	14.8	14.8	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.6	14.6	14.6	14.6	14.6	14.6	14.5	14.5	14.5	14.5
MP6(μSv/h)	欠測	欠測	欠測	欠測	欠測	欠測	欠測	欠測														
MP7(μSv/h)	欠測	欠測	欠測	欠測	欠測	欠測	欠測	欠測														
風向	西	西	西	西	西	西	西	西	西	西	西	西	西	西	西	西	西	西	西	西	西	西
風速(m/s)	18.1	16.5	18.8	19.1	19.0	16.8	16.1	16.7	19.2	17.3	14.5	15.7	14.6	14.3	16.7	17.6	16.4	16.8	17.8	14.2	13.6	11.9

3月17日																						
モニタリングポスト	11:20	11:30	11:40	11:50	12:00	12:10	12:20	12:30	12:40	12:50	13:00	13:10	13:20	13:30	13:40	13:50	14:00	14:10	14:20	14:30	14:40	14:50
MP1(μSv/h)	22.4	22.5	22.5	22.5	22.4	22.4	22.3	22.4	22.4	22.2	22.2	22.2	22.2	22.2	22.1	22.0	22.2	22.1	22.2	22.1	22.1	22.0
MP2(μSv/h)	点検中																					
MP3(μSv/h)	23.0	23.0	22.9	22.9	22.8	22.8	22.9	22.8	22.8	22.7	22.6	22.7	22.6	22.6	22.5	22.6	22.5	22.5	22.5	22.5	22.5	22.4
MP4(μSv/h)	16.0	15.9	15.9	15.9	15.9	15.9	15.9	15.7	15.8	15.8	15.8	15.8	15.7	15.7	15.7	15.7	15.7	15.6	15.6	15.6	15.5	15.6
MP5(μSv/h)	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2
MP6(μSv/h)	欠測																					
MP7(μSv/h)	欠測																					
風向	西	西北西	北西	西	北西	西	西	西	西	西	西北西	西北西	西北西	西	北西	北西	北西	北西	北西	北西	西	北西
風速(m/s)	11.6	7.9	7.9	7.9	6.0	9.2	11.2	9.2	8.2	8.7	9.1	7.5	8.8	7.3	8.5	8.4	8.7	9.2	8.1	8.0	7.4	3.2

3月18日		0:00	0:10	0:20	0:30	0:40	0:50	1:00	1:10	1:20	1:30	1:40	1:50	2:00	2:10	2:20	2:30	2:40	2:50	3:00	3:10	3:20	3:30	
モニタリングポスト																								
MP1( $\mu$ Sv/h)		20.8	20.8	20.7	20.7	20.7	20.7	20.7	20.7	20.6	20.6	20.6	20.6	20.6	20.7	20.5	20.5	20.5	20.5	20.4	20.5	20.4	20.4	
MP2( $\mu$ Sv/h)		点検中																						
MP3( $\mu$ Sv/h)		21.3	21.3	21.3	21.3	21.2	21.1	21.0	21.1	21.1	21.0	21.0	20.9	21.0	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	
MP4( $\mu$ Sv/h)		14.8	14.8	14.8	14.8	14.7	14.7	14.7	14.6	14.6	14.7	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.5	14.6	14.6	
MP5( $\mu$ Sv/h)		13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	
MP6( $\mu$ Sv/h)		欠測																						
MP7( $\mu$ Sv/h)		欠測																						
風向		西北西	西北西	西	西	西	西北西	北西	西北西	北西	北西	北北西	北北西	北	北	北								
風速(m/s)		5.2	8.1	8.0	7.7	6.8	7.0	7.3	6.1	5.6	6.4	6.5	6.7	7.7	7.2	6.0	5.2	5.1	2.3	3.4	3.9	3.9	3.1	

3月18日		3:40	3:50	4:00	4:10	4:20	4:30	4:40	4:50	5:00	5:10	5:20	5:30	5:40	5:50	6:00	6:10	6:20	6:30	6:40	6:50	7:00	7:10	
モニタリングポスト																								
MP1( $\mu$ Sv/h)		20.3	20.3	20.4	20.3	20.3	20.3	20.3	20.2	20.3	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.1	20.1	20.1	20.1	20.0	20.1	
MP2( $\mu$ Sv/h)		点検中																						
MP3( $\mu$ Sv/h)		20.9	20.9	20.8	20.8	20.8	20.8	20.8	20.7	20.7	20.7	20.5	20.5	20.6	20.5	20.5	20.5	20.5	20.5	20.4	20.4	20.4	20.4	
MP4( $\mu$ Sv/h)		14.6	14.6	14.5	14.5	14.5	14.5	14.4	14.5	14.5	14.4	14.5	14.4	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.2	14.2	14.2	
MP5( $\mu$ Sv/h)		13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.3	13.3	13.0	13.0	12.9	12.8	12.6	12.7	12.5	12.5	
MP6( $\mu$ Sv/h)		欠測																						
MP7( $\mu$ Sv/h)		欠測																						
風向		北北西	北西	北西	北西	北北西	北	北	北	北	北	北	北	北	北西	西	北北西	北北西	西北西	北西	北西	北西	北北西	
風速(m/s)		3.0	3.1	2.8	2.6	4.2	5.4	5.0	4.5	2.9	3.0	3.4	2.0	1.8	1.1	1.4	2.8	3.6	2.8	5.9	6.6	5.0	2.8	

3月18日		7:20	7:30	7:40	7:50	8:00
モニタリングポスト						
MP1( $\mu$ Sv/h)		20.1	20.0	20.0	20.0	20.0
MP2( $\mu$ Sv/h)		点検中	点検中	点検中	点検中	点検中
MP3( $\mu$ Sv/h)		20.3	20.4	20.4	20.3	20.3
MP4( $\mu$ Sv/h)		14.2	14.2	14.2	14.2	14.1
MP5( $\mu$ Sv/h)		12.0	12.5	12.5	12.5	12.5
MP6( $\mu$ Sv/h)		欠測	欠測	欠測	欠測	欠測
MP7( $\mu$ Sv/h)		欠測	欠測	欠測	欠測	欠測
風向		北西	北西	北	西北西	北北西
風速(m/s)		1.3	1.4	1.7	2.8	6.5

福島第一(1F) 西門付近(MP-5付近)(2号機より西約1.1キロ) ※MP-6の放射線によるリスクが高いことから西門付近で測定

3月17日	
モニタリングカー	0:30 0:50 1:30 2:00 2:30 3:00 3:30 4:00 4:30 5:00 5:30 6:00 6:30 7:00 7:30
測定値( $\mu\text{Sv/h}$ )	351.4 350.1 348.2 345.9 344.8 344.6 341.7 340.8 339.4 338.3 336.1 334.7 333.8 314.5 313.5
中性子	ND
風向	北東 南南西 東 西 北西 北 西 西 北西 西 西 西 西 西 西
風速(m/s)	1.1 0.4 0.9 0.6 1.5 1.5 1.8 1.8 1.0 1.3 2.3 3.1 3.6 3.7 3.8

福島第一(1F) 体育館付近(MP-5東側)(2号機より西北西約0.9キロ) ※高圧注水活動の作業者のための放射線管理を行うため移動

3月17日	
モニタリングカー	7:50 8:00 8:30 8:40 8:50 9:00 9:10
測定値( $\mu\text{Sv/h}$ )	381.3 379.0 373.0 372.5 372.7 373.7 371.9
中性子	ND ND ND ND ND ND ND
風向	西 南西 西南西 南西 南西 南西 南西
風速(m/s)	3.7 3.7 3.2 3.8 3.4 3.7 3.0

福島第一(1F) 事務本館北(2号機より北西約0.5キロ) ※注水活動による効果を測定するためにより近傍へ移動

3月17日	
モニタリングカー	9:30 9:40 9:50 10:00 10:10 10:20 10:30 10:40 10:50
測定値( $\mu\text{Sv/h}$ )	3786.0 3782.0 3763.0 3759.0 3755.0 3754.0 3750.0 3753.0 3743.0
中性子	ND ND ND ND ND ND ND ND ND
風向	西 西南西 西 北西 北西 西 西 西南西 南西
風速(m/s)	5.1 5.0 6.8 5.2 5.6 5.2 7.0 4.5 2.2

福島第一(1F) 正門付近前(MP-6付近)(2号機より西南西約1.0キロ) ※入構者のための放射線管理を行うため移動

3月17日	
モニタリングカー	11:00 11:10
測定値( $\mu\text{Sv/h}$ )	647.3 646.2
中性子	ND ND
風向	北西 北北西
風速(m/s)	4.8 2.3

福島第一(1F) 西門(MP-5付近)(2号機より西約1.1キロ) ※定点で測定するため移動

3月17日	
モニタリングカー	11:15 11:20 11:30 12:00 12:30 13:00 13:10 13:20
測定値( $\mu\text{Sv/h}$ )	313.1 312.5 312.3 311.0 310.7 309.7 309.3 309.1
中性子	ND ND ND ND ND ND ND ND
風向	北西 西 西北西 西 西 西 西 西
風速(m/s)	4.7 4.4 2.9 3.5 3.5 3.8 3.5 3.1

福島第一(1F) 事務本館北(2号機より北西約0.5キロ) ※注水活動による効果を測定するためにより近傍へ移動

3月17日	
モニタリングカー	13:30 13:40 14:00
測定値( $\mu\text{Sv/h}$ )	4175.0 4165.0 3810.0
中性子	ND ND ND
風向	北西 西 西
風速(m/s)	4.5 4.7 5.2

福島第一(1F) 西門(MP-5付近)(2号機より西約1.1キロ) ※定点で測定するため移動

3月17日				
モニタリングカー	14:10	14:30	15:00	15:30
測定値(μSv/h)	311.1	310.3	309.1	309.7
中性子	N.D	N.D	N.D	N.D
風向	北西	西	西	西
風速(m/s)	5.8	3.5	3.2	3.1

福島第一(1F) 事務本館北(2号機より北西約0.5キロ) ※注水活動による効果を測定するためにより近傍へ移動

3月17日																							
モニタリングカー	15:50	15:55	16:00	16:05	16:10	16:15	17:00	17:05	17:10	17:15	17:20	17:25	17:30	17:35	17:40	17:45	17:50	17:55	18:00	18:05	18:10	18:15	18:20
測定値(μSv/h)	3700.0	3699.0	3698.0	3695.0	3695.0	3691.0	3676.0	3676.0	3675.0	3675.0	3672.0	3670.0	3667.0	3665.0	3639.0	3653.0	3650.0	3649.0	3649.0	3645.0	3641.0	3641.0	3645.0
中性子	N.D																						
風向	西	西	西	西	西	西	西	北西	北西	北西	北西	西	北西	北西	西北西	西	西	西	西北西	西	北西	西	西
風速(m/s)	5.2	4.7	4.3	4.1	4.3	4.1	3.1	3.3	2.8	2.7	3.3	3.2	3.4	3.7	3.6	3.3	2.7	2.4	2.1	2.2	2.4	2.4	2.6

3月17日											
モニタリングカー	18:25	18:30	18:35	18:40	18:50	19:00	19:10	19:20	19:50	20:00	20:10
測定値(μSv/h)	3643.0	3643.0	3637.0	3638.0	3638.0	3630.0	3626.0	3623.0	3599.0	3601.0	3586.0
中性子	N.D										
風向	西	西北西	北西	北西	西北西	西南西	西北西	西	北西	北東	西北西
風速(m/s)	2.8	2.7	2.7	2.9	2.4	2.7	2.7	2.3	4.8	1.5	1.4

福島第一(1F) 西門(MP-5付近)(2号機より西約1.1キロ) ※放水が終了し、定点で測定するため移動

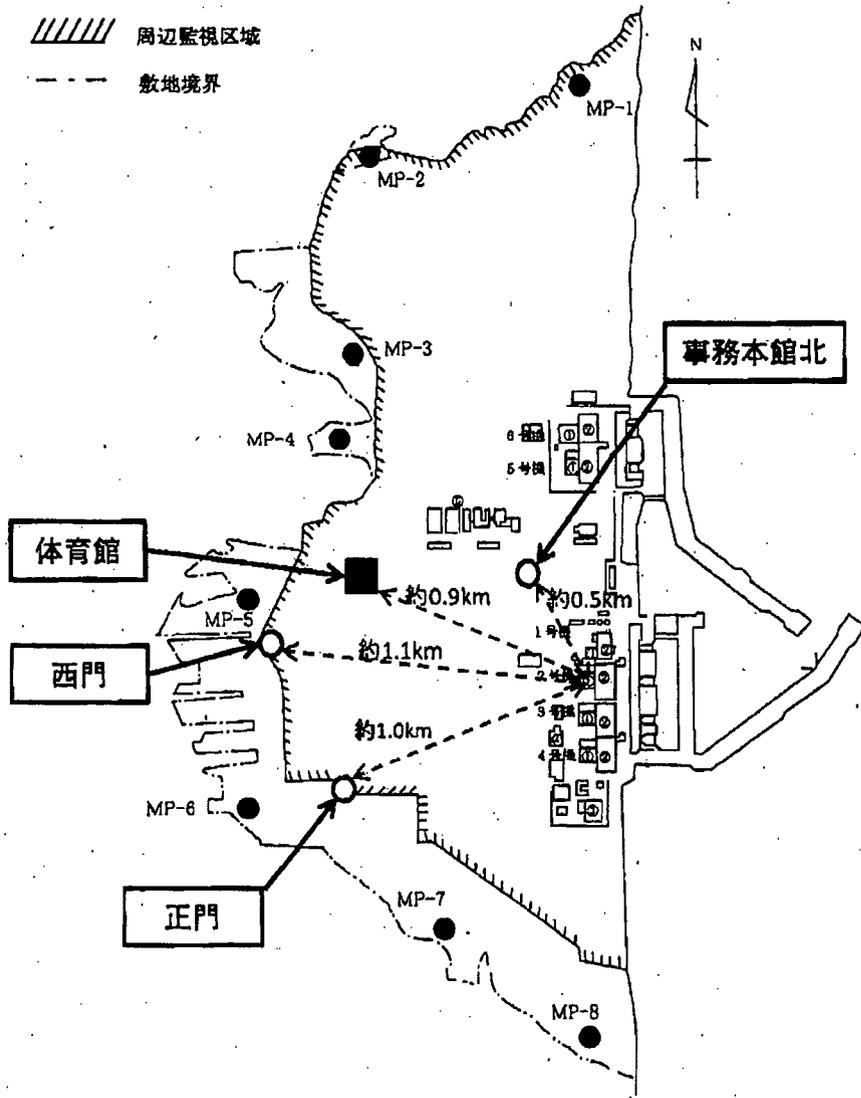
3月17日																			
モニタリングカー	20:40	21:00	21:10	21:20	21:30	21:40	21:50	22:00	22:10	22:20	22:30	22:40	22:50	23:00	23:10	23:20	23:30	23:40	23:50
測定値(μSv/h)	292.2	291.9	291.7	291.3	291.2	291.1	290.9	290.4	290.4	289.9	289.7	289.6	289.5	289.0	288.8	288.7	287.8	288.9	
中性子	N.D																		
風向	西北西	北西	北西	西	北西	北北西	北東	北西	北北西	北西	北西								
風速(m/s)	1.2	0.9	1.6	1.7	1.8	1.5	1.5	1.4	1.5	1.3	1.0	1.3	1.2	0.9	0.9	0.7	1.2	1.3	1.0

3月18日																							
モニタリングカー	0:00	0:10	0:20	0:30	0:40	0:50	1:00	1:10	1:20	1:30	1:40	1:50	2:00	2:10	2:20	2:30	2:40	2:50	3:00	3:10	3:20	3:30	3:40
測定値(μSv/h)	287.0	287.3	286.6	286.4	286.3	286.0	285.6	285.5	285.2	284.9	284.6	284.4	284.0	283.7	283.7	283.5	283.0	282.9	282.6	282.2	282.1	281.6	281.5
中性子	N.D																						
風向	西	西	西	西	北西	西北西	北西	北西	北西	北西	北	北西	北西	北東	北東	北東	北北東	北西	西	西北西	西北西	西	北西
風速(m/s)	1.4	1.0	1.0	0.8	0.9	1.0	1.6	1.6	1.7	1.4	0.9	0.6	1.0	0.5	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.7	0.6

3月18日																							
モニタリングカー	3:50	4:00	4:10	4:20	4:30	4:40	4:50	5:00	5:10	5:20	5:30	5:40	5:50	6:00	6:10	6:20	6:30	6:40	6:50	7:00	7:10	7:20	7:30
測定値(μSv/h)	281.1	281.1	280.9	280.7	280.2	280.0	279.8	279.4	279.3	279.0	278.9	278.9	277.1	274.0	274.0	273.8	274.1	272.7	273.4	272.4	271.7	271.6	271.4
中性子	N.D																						
風向	東	西	西	北	北西	北	北東	北北東	北北西	北	北西	北西	北	西	北	西	北西	西	西	西	北	北	西
風速(m/s)	0.4	0.5	0.5	0.4	0.2	0.6	0.5	0.5	0.5	0.6	0.7	1.0	1.0	1.3	1.6	1.4	1.2	1.5	1.6	2.3	2.1	1.9	2.0

2011/3/18 8:47  
※太枠箇所が更新箇所

3月18日			
モニタリングカー	7:40	7:50	8:00
測定値( $\mu$ Sv/h)	271.1	271.2	270.5
中性子	N.D	N.D	N.D
風向	北西	北	北西
風速(m/s)	2.9	3.0	2.7



福島第二(2F) (事業者のモニタリングポスト)

3月17日																						
モニタリングポスト	0:00	0:10	0:20	0:30	0:40	0:50	1:00	1:30	1:40	1:50	2:00	2:10	2:20	2:30	2:40	2:50	3:00	3:10	3:20	3:30	3:40	3:50
MP1( $\mu$ Sv/h)	25.0	24.9	24.9	24.8	24.7	24.8	24.7	24.6	24.5	24.4	24.3	24.4	24.3	24.2	24.2	24.1	24.1	24.0	24.0	24.0	24.0	23.8
MP2( $\mu$ Sv/h)	点検中																					
MP3( $\mu$ Sv/h)	25.2	25.0	25.0	25.0	25.0	25.0	25.1	24.9	24.7	24.8	24.6	24.7	24.5	24.6	24.5	24.4	24.3	24.2	24.3	24.2	24.3	24.3
MP4( $\mu$ Sv/h)	17.4	17.4	17.4	17.4	17.4	17.3	17.3	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.1	17.1	17.1	17.1	17.1	17.1	17.0
MP5( $\mu$ Sv/h)	15.6	15.5	15.5	15.6	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
MP6( $\mu$ Sv/h)	欠測																					
MP7( $\mu$ Sv/h)	欠測																					
風向	西北西	西北西	北西	西	西北西	西	西北西	西北西	西北西	西北西	西北西	西	西	西北西	西	西	西	西	西	西	西	西
風速(m/s)	6.9	6.1	4.2	4.3	5.5	5.2	5.8	6.8	7.3	6.8	6.0	7.2	5.9	5.0	6.0	8.7	10.0	9.6	10.9	9.6	12.6	12.4

3月17日																						
モニタリングポスト	4:00	4:10	4:20	4:30	4:40	4:50	5:00	5:10	5:20	5:30	5:40	5:50	6:00	6:10	6:20	6:30	6:40	6:50	7:00	7:10	7:20	7:30
MP1( $\mu$ Sv/h)	23.9	23.8	23.7	23.6	23.6	23.6	23.5	23.6	23.6	23.6	23.5	23.5	23.5	23.5	23.5	23.4	23.4	23.4	23.3	23.3	23.3	23.3
MP2( $\mu$ Sv/h)	点検中																					
MP3( $\mu$ Sv/h)	24.2	24.2	24.2	24.0	23.9	24.0	23.9	23.9	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.6	23.7	23.6	23.6	23.5	23.5
MP4( $\mu$ Sv/h)	17.0	17.0	16.9	16.9	16.8	16.8	16.8	16.7	16.7	16.6	16.7	16.6	16.6	16.6	16.6	16.5	16.5	16.5	16.5	16.5	16.5	16.5
MP5( $\mu$ Sv/h)	15.5	15.5	15.4	15.4	15.4	15.4	15.4	15.2	15.1	15.2	15.1	15.1	15.1	15.0	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9
MP6( $\mu$ Sv/h)	欠測																					
MP7( $\mu$ Sv/h)	欠測																					
風向	西	西	西	西	西	西	西北西	西	西	西	西	西	西	西	西	西	西	西	西	西北西	西	西
風速(m/s)	11.4	12.3	11.7	11.3	12.6	8.7	9.5	9.4	8.6	10.5	11.7	10.8	11.0	10.5	11.2	15.2	12.8	13.1	13.0	15.1	17.2	16.9

3月17日																						
モニタリングポスト	7:40	7:50	8:00	8:10	8:20	8:30	8:40	8:50	9:00	9:10	9:20	9:30	9:40	9:50	10:00	10:10	10:20	10:30	10:40	10:50	11:00	11:10
MP1( $\mu$ Sv/h)	23.3	23.2	23.2	23.2	23.2	23.1	23.0	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.8	22.8	22.8	22.7	22.8	22.7	22.6	22.6
MP2( $\mu$ Sv/h)	点検中	点検中	点検中	点検中	点検中	点検中	点検中	点検中														
MP3( $\mu$ Sv/h)	23.5	23.5	23.5	23.5	23.4	23.4	23.5	23.4	23.3	23.4	23.2	23.2	23.1	23.2	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1
MP4( $\mu$ Sv/h)	16.4	16.4	16.4	16.3	16.3	16.3	16.3	16.3	16.2	16.1	16.1	16.1	16.1	16.1	16.0	16.1	16.1	16.0	16.0	16.1	16.0	16.0
MP5( $\mu$ Sv/h)	14.8	14.8	14.8	14.8	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.6	14.6	14.6	14.6	14.6	14.6	14.5	14.5	14.5	14.5
MP6( $\mu$ Sv/h)	欠測	欠測	欠測	欠測	欠測	欠測	欠測	欠測														
MP7( $\mu$ Sv/h)	欠測	欠測	欠測	欠測	欠測	欠測	欠測	欠測														
風向	西	西	西	西	西	西	西	西	西	西	西	西	西	西	西	西	西	西	西	西	西	西
風速(m/s)	18.1	16.5	18.8	19.1	19.0	16.8	16.1	16.7	19.2	17.3	14.5	15.7	14.6	14.3	16.7	17.6	16.4	15.8	17.8	14.2	13.6	11.9

3月17日																						
モニタリングポスト	11:20	11:30	11:40	11:50	12:00	12:10	12:20	12:30	12:40	12:50	13:00	13:10	13:20	13:30	13:40	13:50	14:00	14:10	14:20	14:30	14:40	14:50
MP1( $\mu$ Sv/h)	22.4	22.5	22.5	22.5	22.4	22.4	22.3	22.4	22.4	22.2	22.2	22.2	22.2	22.2	22.1	22.0	22.2	22.1	22.2	22.1	22.1	22.0
MP2( $\mu$ Sv/h)	点検中																					
MP3( $\mu$ Sv/h)	23.0	23.0	22.9	22.9	22.8	22.8	22.9	22.8	22.8	22.7	22.6	22.7	22.6	22.6	22.5	22.6	22.5	22.5	22.5	22.5	22.5	22.4
MP4( $\mu$ Sv/h)	16.0	15.9	15.9	15.9	15.9	15.9	15.9	15.7	15.8	15.8	15.8	15.8	15.7	15.7	15.7	15.7	15.6	15.6	15.6	15.5	15.5	15.6
MP5( $\mu$ Sv/h)	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2
MP6( $\mu$ Sv/h)	欠測																					
MP7( $\mu$ Sv/h)	欠測																					
風向	西	西北西	北西	西	北西	西	西	西	西	西	西北西	西北西	西北西	西	北西	北西	北西	北西	北西	北西	西	北西
風速(m/s)	11.6	7.9	7.9	7.9	6.0	9.2	11.2	9.2	8.2	8.7	9.1	7.5	8.8	7.3	8.5	8.4	8.7	9.2	8.1	8.0	7.4	3.2

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3月18日																						
モニタリングポスト	0:00	0:10	0:20	0:30	0:40	0:50	1:00	1:10	1:20	1:30	1:40	1:50	2:00	2:10	2:20	2:30	2:40	2:50	3:00	3:10	3:20	3:30
MP1( $\mu$ Sv/h)	20.8	20.8	20.7	20.7	20.7	20.7	20.7	20.7	20.6	20.6	20.6	20.6	20.6	20.7	20.5	20.5	20.5	20.5	20.4	20.5	20.4	20.4
MP2( $\mu$ Sv/h)	点検中																					
MP3( $\mu$ Sv/h)	21.3	21.3	21.3	21.3	21.2	21.1	21.0	21.1	21.1	21.1	21.0	21.0	20.9	21.0	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9
MP4( $\mu$ Sv/h)	14.8	14.8	14.8	14.8	14.7	14.7	14.7	14.6	14.6	14.7	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.5	14.6	14.6
MP5( $\mu$ Sv/h)	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4
MP6( $\mu$ Sv/h)	欠測																					
MP7( $\mu$ Sv/h)	欠測																					
風向	西北西	西北西	西	西	西	西北西	北西	西北西	北西	北西	北北西	北北西	北	北	北							
風速(m/s)	5.2	8.1	8.0	7.7	6.8	7.0	7.3	6.1	5.6	6.4	6.5	6.7	7.7	7.2	6.0	5.2	5.1	2.3	3.4	3.9	3.9	3.1

3月18日																						
モニタリングポスト	3:40	3:50	4:00	4:10	4:20	4:30	4:40	4:50	5:00	5:10	5:20	5:30	5:40	5:50	6:00	6:10	6:20	6:30	6:40	6:50	7:00	7:10
MP1( $\mu$ Sv/h)	20.3	20.3	20.4	20.3	20.3	20.3	20.3	20.2	20.3	20.2	20.2	20.2	20.2	20.2	20.2	20.1	20.1	20.1	20.1	20.1	20.0	20.1
MP2( $\mu$ Sv/h)	点検中																					
MP3( $\mu$ Sv/h)	20.9	20.9	20.8	20.8	20.8	20.8	20.8	20.7	20.7	20.7	20.5	20.5	20.6	20.5	20.5	20.5	20.5	20.4	20.4	20.4	20.4	20.4
MP4( $\mu$ Sv/h)	14.6	14.6	14.5	14.5	14.5	14.5	14.5	14.4	14.5	14.5	14.4	14.5	14.4	14.3	14.3	14.3	14.3	14.3	14.3	14.2	14.2	14.2
MP5( $\mu$ Sv/h)	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.3	13.3	13.0	13.0	12.9	12.8	12.6	12.7	12.5	12.5	12.5
MP6( $\mu$ Sv/h)	欠測																					
MP7( $\mu$ Sv/h)	欠測																					
風向	北北西	北西	北西	北西	北北西	北	北	北	北	北	北	北	北	北西	西	北北西	北北西	西北西	北西	北西	北西	北北西
風速(m/s)	3.0	3.1	2.8	2.6	4.2	5.4	5.0	4.5	2.9	3.0	3.4	2.0	1.8	1.1	1.4	2.8	3.6	2.8	5.9	6.6	5.0	2.8

3月18日					
モニタリングポスト	7:20	7:30	7:40	7:50	8:00
MP1( $\mu$ Sv/h)	20.1	20.0	20.0	20.0	20.0
MP2( $\mu$ Sv/h)	点検中	点検中	点検中	点検中	点検中
MP3( $\mu$ Sv/h)	20.3	20.4	20.4	20.3	20.3
MP4( $\mu$ Sv/h)	14.2	14.2	14.2	14.2	14.1
MP5( $\mu$ Sv/h)	12.0	12.5	12.5	12.5	12.5
MP6( $\mu$ Sv/h)	欠測	欠測	欠測	欠測	欠測
MP7( $\mu$ Sv/h)	欠測	欠測	欠測	欠測	欠測
風向	北西	北西	北	西北西	北北西
風速(m/s)	1.3	1.4	1.7	2.8	6.5

**Lee, Richard**

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**From:** Sangimino, Donna-Marie  
**Sent:** Friday, March 18, 2011 10:18 AM  
**To:** Sheron, Brian; Uhle, Jennifer; Gibson, Kathy  
**Cc:** Lee, Richard; Valentin, Andrea; Kardaras, Tom; Dehn, Jeff  
**Subject:** FW: Japanese TV request for Snadia video footage. FW: NHK-TV, Japan - Sandia OECD Lower Head Failure Project - final report  
**Attachments:** image001.gif

All,

This is a request from NEA about video footage of an OECD/NEA program from ~10 years ago. It was NRC funded, Sandia hosted. The video is of a vessel being pressurized and heated until it fails. NEA wants to release the video to a Japanese TV station, and believes it is publically releasable at this point. They're looking to the NRC for a tacit approval at this point.

Jeff talked to Richard, and he believes there isn't a technical reason to decline the request. If you have an opinion on this, please forward as soon as possible. Jeff can provide the video or a link and password to view the video if desired.

We would propose forwarding this request to the Ops Center management with no objection to NEA's request.

Thank you,

Donna-Marie Sangimino

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**From:** Diane.JACKSON@oecd.org [mailto:Diane.JACKSON@oecd.org]  
**Sent:** Friday, March 18, 2011 7:28 AM  
**To:** Dehn, Jeff; Sangimino, Donna-Marie  
**Cc:** Janice.DUNNLEE@oecd.org; Javier.REIG@oecd.org  
**Subject:** Japanese TV request for Snadia video footage. FW: NHK-TV, Japan - Sandia OECD Lower Head Failure Project - final report

Hello Jeff –

A Japanese news station would like to obtain footage and report of the Oct 23 2000 experiment the OECD had requested Sandia to conduct. Please see below the news release from Sandia.

<http://www.sandia.gov/media/NewsRel/NR2000/vessel.htm>

In the e-mail below, the video is identified from the secure NEA website (and information to access it).

Bottom line, the data from the project is now publically available, but there is a question if video footage is included or not.

Before making any decision, the NEA would like to check with the NRC.

Best regards,

 **Diane Jackson**, Nuclear Safety Specialist  
Nuclear Safety Division, OECD Nuclear Energy Agency (NEA)  
Tel.: +33 (0)1 45 24 10 55, [Diane.Jackson@oecd.org](mailto:Diane.Jackson@oecd.org)

HH/125

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**From:** GAS Serge, NEA/RE  
**Sent:** Friday, March 18, 2011 12:03  
**To:** DUNN LEE Janice, NEA; JACKSON Diane, NEA/SURN  
**Cc:** CLAPPER Maureen [United States]; STANFORD Benjamin, NEA/RE  
**Subject:** FW: NHK-TV, Japan - Sandia OECD Lower Head Failure Project - final report

Hello Janice and Diane,

Please see below – I assume you can download the video from this link (Ben will otherwise advise how to proceed).

<http://www.oecd-nea.org/press/accredited/video/OLHF-2.mpg>

Please use the following username and password:

Username: (b)(6)  
Password: (b)(6)

Could you please make sure that NRC has no objection to the release of the footage?

Thanks in advance.

Best regards,

Serge

---

**From:** GAS Serge, NEA/RE  
**Sent:** Friday, March 18, 2011 11:56  
**To:** 'KAMADA TOSHIHIKO'  
**Cc:** DUNN LEE Janice, NEA; YOSHIMURA Uichiro, NEA/SRAN; REIG Javier, NEA/SURN  
**Subject:** NHK-TV, Japan - Sandia OECD Lower Head Failure Project - final report

Dear Toshi,

I am being told that we could be entitled to send it but we don't want to do that without the Japanese government's green light and the US NRC's since they were the main funding organisation at the time. We are starting now to see with the US NRC is it is fine with them. If you could look on your side. Thanks a lot in advance.

Best regards,

Serge

---

**From:** KAMADA TOSHIHIKO [mailto:toshihiko.kamada@mofa.go.jp]  
**Sent:** Friday, March 18, 2011 11:22  
**To:** STANFORD Benjamin, NEA/RE; GAS Serge, NEA/RE  
**Cc:** YOSHIMURA Uichiro, NEA/SRAN  
**Subject:** RE: FW: NHK-TV, Japan - Sandia OECD Lower Head Failure Project - final report

Dear Mr. Benjamin Stanford and Serge,

Thank you very much for your information!

May I ask you a question?

Whose possession is the contents and data of this video and the report?

(member country?, project participants?, NEA? or others?)

Is it possible to think that NEA has right to decide whether this should be open or not?

Best regards,

Toshi

////////////////////////////////////  
Toshihiko KAMADA  
First Secretary (Science and Technology)  
Permanent Delegation of Japan to the OECD  
TEL: +33 (0)1 53 76 61 81  
FAX: +33 (0)1 45 63 05 44  
E-mail: [toshihiko.kamada@mofa.go.jp](mailto:toshihiko.kamada@mofa.go.jp)

////////////////////////////////////

経済協力開発機構日本政府代表部

一等書記官 ( 科学技術担当 )

鎌 田 俊 彦

////////////////////////////////////

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**From:** Benjamin.STANFORD@oecd.org [mailto:Benjamin.STANFORD@oecd.org]  
**Sent:** Friday, March 18, 2011 10:50 AM  
**To:** Serge.GAS@oecd.org; KAMADA TOSHIHIKO  
**Cc:** Uichiro.YOSHIMURA@oecd.org  
**Subject:** RE: FW: NHK-TV, Japan - Sandia OECD Lower Head Failure Project - final report

Dear Mr. Kamada,

You can download the video from this link.

<http://www.oecd-nea.org/press/accredited/video/OLHF-2.mpg>

Please use the following username and password:

Username: (b)(6)  
Password: (b)(6)

Please do not share this username and password. We will provide a separate one to the journalists if the video is to be shared.

Please contact me should you have any technical difficulties.

Best regards,



**Benjamin Stanford**

Webmaster

OECD Nuclear Energy Agency (NEA)

Tel.: +33 (0)1 45 24 10 09

[benjamin.stanford@oecd.org](mailto:benjamin.stanford@oecd.org)

[www.oecd-nea.org](http://www.oecd-nea.org)

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**From:** GAS Serge, NEA/RE  
**Sent:** Friday, March 18, 2011 10:41 AM  
**To:** KAMADA Toshihiko [Company Name]  
**Cc:** YOSHIMURA Uichiro, NEA/SRAN; STANFORD Benjamin, NEA/RE  
**Subject:** FW: FW: NHK-TV, Japan - Sandia OECD Lower Head Failure Project - final report  
**Importance:** High

Dear Toshi,

Please see the exchange of messages below. In fact we have found the footage but the video could have some impact on the public so I think you should have a look before we pass it to the TV channel. Our webmaster Ben Stanford is going to send it to you very soon.

Best regards,

Serge

---

**From:** yuhong hiro koh (b)(6)  
**Sent:** Friday, March 18, 2011 10:15  
**To:** GAS Serge, NEA/RE  
**Cc:** HUERTA Alejandro, NEA/SURN; TURCHI Elodie, PAC/WASH; RUMPF Matthias, PAC/WASH; FISHER Helen, PAC/COM  
**Subject:** Re: FW: NHK-TV, Japan - Sandia OECD Lower Head Failure Project - final report

Mr. Serge Gas,

Thank you very much for this.

Can you please tell me if you have a video footage of the experiment?

If you do, I would like to send someone from NHK Europe to retrieve it today.

I have contacted Sandia, but they unfortunately do not want to help in this matter and are not lifting a finger. Thank you again.

Hiro

On 3/18/2011 1:55 AM, [Serge.GAS@oecd.org](mailto:Serge.GAS@oecd.org) wrote:

Dear Hiro,

This is the final report of the OECD (Sandia) Lower Head Failure project run between 2000 and 2002.

The final report is available (downloadable) on our public website:

<http://www.oecd-nea.org/nsd/docs/2002/csni-r2002-27.pdf>

We cannot send it since it is 570 pages and about 40 Mbytes, without the appendices.

These experiments were to assess resistance of reactor vessel in case of core melt down.

Our expert Alejandro Huerta (copied, +33 1 45 24 10 57) can help you to understand the report if you need it.

Best regards,

**Mr. Serge Gas**

**Head, Central Secretariat, External Relations and Public Affairs**

**OECD Nuclear Energy Agency**

**Tel. : +33 1 45 24 10 10**

**Fax: +33 1 45 24 11 15**

**Le Seine Saint Germain, 12 Boulevard des Iles, 92130 Issy-les-Moulineaux, France**

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

From: yuhong hiro koh (b)(6)  
Sent: Thursday, March 17, 2011 3:35 PM  
To: TURCHI Elodie, PAC/WASH  
Subject: NHK-TV, Japan

Dear Elodie,

Thank you for accommodating me over the phone just now.  
We would like to obtain FOOTAGE and REPORT of the  
2000, Oct 23 experiment the OECD had requested Sandia to  
conduct. Please see below the news release from Sandia.  
<http://www.sandia.gov/media/NewsRel/NR2000/vessel.htm>

I don't have a name of the experiment, but it was to see how  
string the reactor vessels are to pressure and and blasts.  
Again, we have a Friday night deadline for the special edition  
program we are putting together on the situation at Fukushima.  
I would sincerely and greatly appreciate your help.  
Thank you,  
Hiro

Yuhong Hiro Koh  
NHK, Science & Nature  
Tel: US ++1 310-502-4506  
Fax: US ++1 310-539-3021  
e: [s02709-koh@nhk.or.jp](mailto:s02709-koh@nhk.or.jp)

(b)(6)

Homepage: <http://www.nhk.or.jp>  
English: <http://www.nhk.or.jp/nhkworld/index.html>

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Yuhong Hiro Koh  
NHK, Science & Nature  
Tel: US ++1 310-502-4506  
Fax: US ++1 310-539-3021  
e: s02709-koh@nhk.or.jp

(b)(6)

Homepage: <http://www.nhk.or.jp>

English: <http://www.nhk.or.jp/nhkworld/index.html>

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**Greenwood, Carol**

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**From:** Gibson, Kathy  
**Sent:** Friday, March 18, 2011 12:00 PM  
**To:** Bush-Goddard, Stephanie  
**Subject:** Fw: Availability to go to Japan

Should have cc'd you. I am going to talk to Lou Brandon about OJT for some of you folks during this event response if he needs them.

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

**From:** Gibson, Kathy  
**To:** Huffert, Anthony  
**Sent:** Fri Mar 18 11:55:51 2011  
**Subject:** Re: Availability to go to Japan

Thanks for your willingness to serve, Tony. I will submit your name to NSIR and then let you know the decisions as soon as I know.

Pleasant dreams!

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

**From:** Huffert, Anthony  
**To:** Gibson, Kathy  
**Sent:** Fri Mar 18 11:52:24 2011  
**Subject:** RE: Availability to go to Japan

Kathy,

I have (b)(6)

I'm available to go to Japan for 2 weeks.

Since last Friday evening, I've been working a wide range of shifts (day, evening, night) as a PMT Dose Assessment Analyst, performing RACSAL dose assessments. My next shift is tonight (11 PM - 3 AM).

I'm currently scheduled for more shifts next week also.

Thanks for considering me for the Japan assignment and the ongoing support for the PMT.

Tony

---

**From:** Gibson, Kathy  
**Sent:** Friday, March 18, 2011 11:42 AM  
**To:** Huffert, Anthony  
**Subject:** Availability to go to Japan

Tony - we are looking for an HP with good people skills to go with a team to Japan starting about the 24th (next Thursday) for about two weeks. I know you are assigned to the Ops Center but I think you are the best person (and I sent Jason back to Ops Center duty today so I am comfortable taking you out). Are you available to go and do you have a passport?

I need to know before 1pm. Thanks!

LHH/126

**From:** Case, Michael  
**To:** Gibson, Kathy; Evans, Michele  
**Subject:** RE: Staff for Potential Support in Japan  
**Date:** Friday, March 18, 2011 3:42:00 PM

---

(b)(6)

**From:** Gibson, Kathy  
**Sent:** Friday, March 18, 2011 2:06 PM  
**To:** Evans, Michele  
**Cc:** Case, Michael  
**Subject:** Re: Staff for Potential Support in Japan

No he is not, Mike Case is considering alternatives.

---

**From:** Evans, Michele  
**To:** Gibson, Kathy  
**Sent:** Fri Mar 18 14:04:02 2011  
**Subject:** RE: Staff for Potential Support in Japan

A question came up from Wiggins whether Syed Ali was available for structural since he was so involved in the post 911 work

**From:** Gibson, Kathy  
**Sent:** Friday, March 18, 2011 1:39 PM  
**To:** Evans, Michele  
**Cc:** Uhle, Jennifer; Coyne, Kevin; Huffert, Anthony; Rubin, Stuart; Yarsky, Peter; Salley, MarkHenry; Elkins, Scott; Case, Michael; Bush-Goddard, Stephanie; Scott, Michael  
**Subject:** Staff for Potential Support in Japan  
**Importance:** High

Michele,

I am following up on your request to Jennifer for staff to potentially go to Japan beginning around March 24 for about 2 weeks.

I don't have a name for structural as yet, but will provide it when DE gets back to me.

For the other areas of expertise:

Protective Measures – Tony Huffert  
Engineers with good people skills – Stu Rubin, Peter Yarsky  
Infrared Imaging – Mark Salley

Please let me know if you need anything else.

Kathy

HH/127

**From:** [Virgilio, Rosetta](#)  
**To:** [Haney, Catherine](#)  
**Subject:** RE: ACTION: NGA Center in DC Requests NRC Expert Speaker for 3/22 or 3/23 and 4/4  
**Date:** Friday, March 18, 2011 2:35:17 PM

---

OK – how about April 4?

**From:** Haney, Catherine  
**Sent:** Friday, March 18, 2011 2:27 PM  
**To:** Virgilio, Rosetta  
**Subject:** Re: ACTION: NGA Center in DC Requests NRC Expert Speaker for 3/22 or 3/23 and 4/4

I will be on travel next week. Sorry

---

**From:** Virgilio, Rosetta  
**To:** Johnson, Michael; Leeds, Eric; Sheron, Brian; Haney, Catherine  
**Cc:** Dorman, Dan; Santiago, Patricia; Williams, Donna; Wertz, Trent; Piccone, Josephine; Jackson, Deborah; Turtill, Richard; Deegan, George; Miller, Charles; Moore, Scott  
**Sent:** Fri Mar 18 12:38:20 2011  
**Subject:** ACTION: NGA Center in DC Requests NRC Expert Speaker for 3/22 or 3/23 and 4/4

All – Bob Nelson suggested I contact you directly, as you have been designated as NRC Communicators, relative to two requests below from the National Governors Association.

I told Greg Dierkers that NRC staff is pretty well stretched and might not be available to participate in next week's meeting, but I would put the request forward. I also offered that NRC is planning to hold a public Commission meeting Monday, 3/21, which will be Web streamed, and suggested this might satisfy their needs at this time. I told Greg I would send him the details when available. He understood we were pretty busy, indicating FEMA was unable to participate in the NGA meeting.

Please advise whether your schedule can support such a meeting – I would like to close the loop with Greg by COB this/Friday afternoon. Thanks much for your consideration.

Rosetta O. Virgilio  
Senior Liaison Project Manager  
Intergovernmental Liaison Branch  
U.S. Nuclear Regulatory Commission  
11545 Rockville Pike - T-8F42  
Rockville, MD 20852-2738  
301-415-2367  
[Rosetta.Virgilio@nrc.gov](mailto:Rosetta.Virgilio@nrc.gov)

---

**From:** Virgilio, Rosetta  
**To:** 'gdierkers@NGA.ORG' <gdierkers@NGA.ORG>  
**Sent:** Thu Mar 17 17:03:28 2011  
**Subject:** Re: NGA Center NRC expert speaker requests

HHH/128

Thank you, Greg; I will followup and get back to you.

Sent from an NRC Blackberry

Rosetta O. Virgilio

(b)(6)

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**From:** Dierkers, Gregory <gdierkers@NGA.ORG>  
**To:** Virgilio, Rosetta  
**Cc:** Gander, Sue <sgander@NGA.ORG>; MacLellan, Thomas <TMaclellan@NGA.ORG>; Ferro, Carmen <CFerro@NGA.ORG>  
**Sent:** Thu Mar 17 16:36:04 2011  
**Subject:** NGA Center NRC expert speaker requests

Hi Rosetta,

Thanks for your time today. We appreciate you identifying someone from the NRC to support the NGA Center's outreach to states during this busy time.

As we discussed we would like to invite the NRC to join us for **two upcoming events -- a webinar next week and a conference in early April -- to brief governors' advisors on the Japanese situation and the implications for US plants.** The events are:

1) **A webinar with governors' security and energy advisors.** NGA Center staff is planning to host a conference call next week (Tuesday 3/21 or Wednesday 3/22) to provide senior state officials with an update on the Japan situation and to answer questions as to the operations of US plants, including regulations, plant security/safety, and the emergency preparedness efforts at the US nuclear fleet. We would ask that an NRC expert join the webinar remotely; the webinar would last for 1 hour.

2) **An in-person speaker at a governors' energy advisors meeting.** NGA Center's *Governors' Energy Advisors Policy Institute* on April 4th in Arlington, Virginia. The focus of the April 4th Institute is to provide a 'Technology 101' briefing for governors senior energy advisors. We would invite the NRC to attend in-person on April 4th from 1:45pm to 4:15pm. We would ask for a 10-15 minute presentation on the situation in Japan, the state of nuclear technology and regulations in the US, and the implications for states from the Japanese crisis. Attached is a draft agenda.

Thanks for considering both of these requests.

Sincerely,

Greg Dierkers  
Program Director – Energy and Transportation  
NGA Center for Best Practices  
Environment, Energy and Transportation Division  
202-624-7789  
[gdierkers@nga.org](mailto:gdierkers@nga.org)

## Maier, Bill

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**From:** LIA04 Hoc  
**Sent:** Friday, March 18, 2011 5:35 PM  
**To:** Browder, Rachel; McIntyre, David; OST05 Hoc; Meighan, Sean; Nguyen, Quynh; Maier, Bill  
**Subject:** RE: USAID Fact Sheet

Please forward the fact sheet, too.

Richard Turtill  
State Liaison – NRC Liaison Team  
Incident Response Center

**From:** Browder, Rachel  
**Sent:** Friday, March 18, 2011 5:28 PM  
**To:** McIntyre, David; OST05 Hoc; Meighan, Sean; Nguyen, Quynh; LIA04 Hoc; Maier, Bill  
**Subject:** RE: USAID Fact Sheet

Did you all determine whether this FACT Sheet was publicly available or not? I have a request from CA on whether or not we have any "new" news on the Rx's in Japan.

Thanks,  
Rachel

**From:** McIntyre, David  
**Sent:** Friday, March 18, 2011 1:27 PM  
**To:** OST05 Hoc; Meighan, Sean; Nguyen, Quynh  
**Cc:** Barker, Allan; Browder, Rachel; Erickson, Randy; Logaras, Herral; Maier, Bill; McNamara, Nancy; Tifft, Doug; Trojanowski, Robert; Woodruff, Gena; Collins, Elmo; Dean, Bill; Heck, Jared; McCree, Victor; Pederson, Cynthia; Satorius, Mark; Easson, Stuart; Flannery, Cindy; LIA04 Hoc; Lukes, Kim; Maupin, Cardelia; Noonan, Amanda; Rautzen, William; Rivera, Alison; Ryan, Michelle; Turtill, Richard; Virgilio, Rosetta; LIA05 Hoc  
**Subject:** RE: USAID Fact Sheet

This is good. If USAID intended it to be public, I see no reason not to distribute it.

**From:** OST05 Hoc  
**Sent:** Friday, March 18, 2011 2:19 PM  
**To:** OST05 Hoc; Meighan, Sean; Nguyen, Quynh; McIntyre, David  
**Cc:** Barker, Allan; Browder, Rachel; Erickson, Randy; Logaras, Herral; Maier, Bill; McNamara, Nancy; Tifft, Doug; Trojanowski, Robert; Woodruff, Gena; Collins, Elmo; Dean, Bill; Heck, Jared; McCree, Victor; Pederson, Cynthia; Satorius, Mark; Easson, Stuart; Flannery, Cindy; LIA04 Hoc; Lukes, Kim; Maupin, Cardelia; Noonan, Amanda; Rautzen, William; Rivera, Alison; Ryan, Michelle; Turtill, Richard; Virgilio, Rosetta; LIA05 Hoc  
**Subject:** RE: USAID Fact Sheet

Dave,

The attached USAID Fact Sheet came across an e-mail and I sent this out to internal folks. Just sending it for your information and seeing if you would like to review it to determine if the information in the fact sheet could be provided in response to inquiries or just keep this internal?

HH/129

Kim Lukes  
State Liaison – Liaison Team  
Incident Response Center

**From:** OST05 Hoc

**Sent:** Friday, March 18, 2011 1:47 PM

**To:** Meighan, Sean; Nguyen, Quynh

**Cc:** Barker, Allan; Browder, Rachel; Erickson, Randy; Logaras, Harral; Maier, Bill; McNamara, Nancy; Tifft, Doug; Trojanowski, Robert; Woodruff, Gena; Collins, Elmo; Dean, Bill; 'Heck, Jared'; McCree, Victor; Pederson, Cynthia; Satorius, Mark; Easson, Stuart; Flannery, Cindy; LIA04 Hoc; Lukes, Kim; Maupin, Cardelia; Noonan, Amanda; OST05 Hoc; Rautzen, William; Rivera, Alison; Ryan, Michelle; Turtill, Richard; Virgilio, Rosetta

**Subject:**

FYI – Attached is a USAID fact sheet that was just received.

Sean and Quynh – Please consider adding this to the Sharepoint site.

Sent from my NRC Blackberry  
Patricia A Milligan, CHP RPh

(b)(6)

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**From:** Milligan, Patricia  
**To:** Nelson, Robert  
**Sent:** Fri Mar 18 16:16:09 2011  
**Subject:** Fw: Seismic Q&As March 17th 2am update

Sent from my NRC Blackberry  
Patricia A Milligan, CHP RPh

(b)(6)

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**From:** Milligan, Patricia  
**To:** Howe, Allen  
**Cc:** McDermott, Brian  
**Sent:** Fri Mar 18 12:51:23 2011  
**Subject:** RE: Seismic Q&As March 17th 2am update

Allan  
Please consider the attached question for the Q&As

**From:** Howe, Allen  
**Sent:** Thursday, March 17, 2011 3:43 PM  
**To:** Doane, Margaret; Westreich, Barry; Gratton, Christopher; Boska, John; Scott, Michael; Wittick, Susan; Merzke, Daniel; Deegan, George; Williams, Kevin; Milligan, Patricia; Bajwa, Chris; Andersen, James  
**Subject:** FW: Seismic Q&As March 17th 2am update

Current version of Q&A from Ops center.

Allan

**From:** Kammerer, Annie  
**Sent:** Thursday, March 17, 2011 2:36 AM  
**To:** Kammerer, Annie; Hiland, Patrick; Skeen, David; Case, Michael; RST01 Hoc  
**Cc:** Howe, Allen; Nelson, Robert; Stutzke, Martin; Giitter, Joseph; Rihm, Roger; McDermott, Brian; Hasselberg, Rick; Chokshi, Nilesh; Munson, Clifford; Cook, Christopher; Flanders, Scott; Ross-Lee, MaryJane; Brown, Frederick; Giitter, Joseph; Howe, Allen; Ruland, William; Dudes, Laura; Karas, Rebecca; Ake, Jon; Munson, Clifford; Hogan, Rosemary; Uhle, Jennifer; Marshall, Michael; Uselding, Lara; Randall, John; Allen, Don; Burnell, Scott; Hayden, Elizabeth; Pires, Jose; Graves, Herman; Candra, Hernando; Murphy, Andrew; Murphy, Andrew; Pires, Jose; Hogan, Rosemary; Sheron, Brian; Dricks, Victor; Warnick, Greg; Reynoso, John; Lantz, Ryan; Markley, Michael; Orders, William; Santiago, Patricia; Snodderly, Michael; Baggett, Steven; Sosa, Belkys; Davis, Roger; Franovich, Mike; Castleman, Patrick; Sharkey, Jeffrey; Boska, John; Ma, John; Tegeler, Bret; Patel, Pravin; Shams, Mohamed; Morris, Scott; Brenner, Eliot; Harrington, Holly; Seber, Dogan; Ledford, Joey; Johnson, Michael; Virgilio, Martin; Holahan, Vincent; Bergman, Thomas  
**Subject:** Seismic Q&As March 17th 2am update

All,

As promised, a sharepoint site has been set up where our friends in NRR will be posting the latest version of the Seismic Q&A document on an ongoing basis. If someone would prefer to use the sharepoint site, instead of being on this distribution list, please let me know...

## Maier, Bill

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**From:** Collins, Elmo  
**Sent:** Friday, March 18, 2011 5:37 PM  
**To:** Maier, Bill  
**Subject:** Fw: Use this version instead  
**Attachments:** NRC QA (2).doc

Does this help?

---

**From:** Leeds, Eric  
**To:** Lew, David  
**Cc:** Nelson, Robert; McCree, Victor; Dean, Bill; Pederson, Cynthia; Collins, Elmo  
**Sent:** Fri Mar 18 17:52:58 2011  
**Subject:** FW: Use this version instead

Dave –

Attached is a start at responding to the Q on 50 miles. However, we need to add information about the issues at Fukushima that specifically led us to making that decision, including the lack of confirmed information, unavailability of on the ground and overhead monitoring that we would have here in the US, uncertainty in the conditions, etc etc, which lead the agency to take a more conservative position.

We'll continue to work it and get you what we can.

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

**From:** Milligan, Patricia  
**Sent:** Friday, March 18, 2011 5:25 PM  
**To:** Leeds, Eric  
**Subject:** Use this version instead

**From:** Milligan, Patricia  
**Sent:** Friday, March 18, 2011 4:46 PM  
**To:** Leeds, Eric  
**Subject:** Fw: Seismic Q&As March 17th 2am update

Sent from my NRC Blackberry  
Patricia A Milligan, CHP RPh

(b)(6)

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**From:** Milligan, Patricia  
**To:** Thaggard, Mark  
**Sent:** Fri Mar 18 16:44:07 2011  
**Subject:** Fw: Seismic Q&As March 17th 2am update

<http://portal.nrc.gov/edo/nrr/NRR%20TA/FAQ%20Related%20to%20Events%20Occuring%20in%20Japan/Forms/AllItems.aspx>

This latest update has a number of new questions (not many with answers today, but we are working hard). A high priority question we are working on is "how many plants are near a mapped active fault". We're focusing on anything within 50 miles. We're also pulling relevant questions from the congressional inquiries we just received; and will also give these high priority to support any needs by NRR.

Many new figures and some draft fact sheets have added to the "additional information" section. These include the NRO half of a tsunami fact sheet... a description of the tsunami research is still to come from RES.

Some good news: Yesterday's version seems to have been widely forwarded around the agency. So, we are also starting to get some excellent questions from staff looking forward. This is allowing us to feel that we are finally getting out in front of things to a small degree. Also, our team has grown and we now have someone acting as source of seismic expertise for the 11pm to 7 am shift. This means that we now have seismic experts available to the RST and OPA at the Op Center 24 hours, with 2 people during the day. That extra support is allowing us to get this out at least an hour earlier today ☺

We are continuing to compile the questions that come in and update the seismic Q&A document. If you have suggested changes, or want to provide missing answers, please forward them to me for compilation.

This is a living document and will be updated daily in the foreseeable future.

Happy St. Paddy's Day. May the world (especially our friends in Japan) have the luck of the Irish today.

Cheers,  
Annie

Dr. Annie Kammerer, PE  
Senior Seismologist and Earthquake Engineer  
US Nuclear Regulatory Commission  
Office of Nuclear Regulatory Research  
Washington DC 20555

(b)(6) mobile  
BB

**From:** Kammerer, Annie  
**Sent:** Tuesday, March 15, 2011 3:41 AM  
**To:** Hiland, Patrick; Skeen, David  
**Cc:** Howe, Allen; Nelson, Robert; Stutzke, Martin; Giitter, Joseph; Rihm, Roger; McDermott, Brian; Hasselberg, Rick; Kammerer, Annie; Chokshi, Nilesh; Munson, Clifford; Cook, Christopher; Flanders, Scott; Ross-Lee, MaryJane; Brown, Frederick; Giitter, Joseph; Howe, Allen; Case, Michael; Ruland, William; Dudes, Laura; Karas, Rebecca; Ake, Jon; Munson, Clifford; Hogan, Rosemary; Uhle, Jennifer; Marshall, Michael; Uselding, Lara; Randall, John; Allen, Don; Burnell, Scott; Hayden, Elizabeth; Pires, Jose; Graves, Herman; Candra, Hernando; Murphy, Andrew; Murphy, Andrew; Pires, Jose; Hogan, Rosemary; Sheron, Brian; Dricks, Victor; Warnick, Greg; Reynoso, John; Lantz, Ryan; Markley, Michael  
**Subject:** latest version of Q&As

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Dr. Annie Kammerer, PE  
Senior Seismologist and Earthquake Engineer  
US Nuclear Regulatory Commission  
Office of Nuclear Regulatory Research  
Washington DC 20555

(b)(6) mobile  
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Deleted:

**Owen, Lucy**

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**From:** Lew, David  
**Sent:** Friday, March 18, 2011 5:12 PM  
**To:** Leeds, Eric  
**Cc:** Nelson, Robert; McCree, Victor; Dean, Bill; Pederson, Cynthia; Collins, Elmo  
**Subject:** Re: Use this version instead

Thanks Eric. There are some good messages here. We just want to be sure everything is vetted for consistent external comms. Have a good weekend.  
Sent from NRC BlackBerry

---

**From:** Leeds, Eric  
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**Sent:** Fri Mar 18 17:52:58 2011  
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U.S. Nuclear Regulatory Commission  
301-415-1270

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**To:** Thaggard, Mark

144/130

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**Cc:** Howe, Allen; Nelson, Robert; Stutzke, Martin; Giitter, Joseph; Rihm, Roger; McDermott, Brian; Hasselberg, Rick; Chokshi, Niles; Munson, Clifford; Cook, Christopher; Flanders, Scott; Ross-Lee, MaryJane; Brown, Frederick; Giitter, Joseph; Howe, Allen; Ruland, William; Dudes, Laura; Karas, Rebecca; Ake, Jon; Munson, Clifford; Hogan, Rosemary; Uhle, Jennifer; Marshall, Michael; Uselding, Lara; Randall, John; Allen, Don; Burnell, Scott; Hayden, Elizabeth; Pires, Jose; Graves, Herman; Candra, Hernando; Murphy, Andrew; Murphy, Andrew; Pires, Jose; Hogan, Rosemary; Sheron, Brian; Dricks, Victor; Warnick, Greg; Reynoso, John; Lantz, Ryan; Markley, Michael; Orders, William; Santiago, Patricia; Snodderly, Michael; Baggett, Steven; Sosa, Belkys; Davis, Roger; Franovich, Mike; Castleman, Patrick; Sharkey, Jeffrey; Boska, John; Ma, John; Tegeler, Bret; Patel, Pravin; Shams, Mohamed; Morris, Scott; Brenner, Eliot; Harrington, Holly; Seber, Dogan; Ledford, Joey; Johnson, Michael; Virgilio, Martin; Holahan, Vincent; Bergman, Thomas  
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(b)(6) mobile  
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**McKelvey, Harold**

---

**From:** Collins, Elmo  
**Sent:** Friday, March 18, 2011 5:37 PM  
**To:** Maier, Bill  
**Subject:** Fw: Use this version instead  
**Attachments:** NRC QA (2).doc

Does this help?

---

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**Cc:** Nelson, Robert; McCree, Victor; Dean, Bill; Pederson, Cynthia; Collins, Elmo  
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HH/131

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mobile

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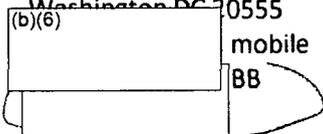
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**McKelvey, Harold**

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**From:** Collins, Elmo  
**Sent:** Friday, March 18, 2011 7:17 AM  
**To:** Howell, Linda  
**Subject:** Fw: japan plume

---

**From:** Taylor, Nick  
**To:** Collins, Elmo; Howell, Art  
**Cc:** Uselding, Lara; Jarriel, Lisamarie; Weaver, Judith; Dricks, Victor; Taylor, Nick  
**Sent:** Fri Mar 18 07:38:46 2011  
**Subject:** FW: japan plume

Elmo,

Our strategy in Region IV of actually talking to people on the hotline versus forwarding them to the OPA voice mail box is paying off – we actually got a thank you note from a citizen this morning (see below).

Nick Taylor  
Senior Allegations Coordinator  
USNRC Region IV  
O: (817) 276-6520  
C: (b)(6)  
F: (817) 276-6525  
E: [nick.taylor@nrc.gov](mailto:nick.taylor@nrc.gov)

**From:** Christine Stilson [<mailto:christine@californiatheaming.com>]  
**Sent:** Thursday, March 17, 2011 9:39 PM  
**To:** Taylor, Nick  
**Subject:** japan plume

Dear Nick,  
I wanted to follow up with you ...  
thank you again for speaking to me you really eased my mind...  
It was great to talk to a real person who was calm and well informed  
You really helped me understand what was going on and I appreciate it .  
Thank you  
Christine Luchetta-Stilson

HH/133

**From:** [Simpson, Matthew D.](#)  
**To:** [HQ Hoc: PMT02 Hoc: PMT01 Hoc: CMHT@nnsa.doe.gov; nltops@nnsa.doe.gov; alan.remick@nnsa.doe.gov;](#)  
[\(b\)\(6\)](#) [na30ecc@nr.doe.gov](#)  
**Cc:** [narac@nrl.gov](#)  
**Subject:** RE: Update of forecast wind conditions for Fukushima Daiichi 1  
**Date:** Saturday, March 19, 2011 2:53:31 AM  
**Attachments:** [WRF Fukushima NPP Forecast 2011-03-19 00Z 5km.xlsx](#)

---

Please find attached a spreadsheet containing the latest forecast wind conditions at the Fukushima Power Plant.

The forecast time series is derived from the latest NARAC WRF simulation with 5 km horizontal grid spacing.

Matthew Simpson  
NARAC Atmospheric Scientist

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Forecast Model: WRF

Horizontal Grid Spacing: 5 km

Vertical Levels: 44

Forecast Location: Fukushima NPP, Japan

Data Produced by Matthew Simpson (NARAC, 925 / 422-7627)

YEAR	MO	DY	HR	WSP	WDR	CLASS	RAIN
----	--	--	UTC	m/s	---	----	in/hr
2011	3	19	6	4.5	266	C	0
2011	3	19	7	5.1	249	D	0
2011	3	19	8	6.2	246	D	0
2011	3	19	9	6.2	237	D	0
2011	3	19	10	5.9	250	D	0
2011	3	19	11	10	280	D	0
2011	3	19	12	11.5	290	D	0
2011	3	19	13	5.4	275	D	0
2011	3	19	14	5.9	259	D	0
2011	3	19	15	9	266	D	0
2011	3	19	16	9.3	274	D	0
2011	3	19	17	6.7	286	D	0
2011	3	19	18	2.9	299	F	0
2011	3	19	19	3.4	307	E	0
2011	3	19	20	4.1	320	E	0
2011	3	19	21	2.1	355	F	0
2011	3	19	22	2.7	266	D	0
2011	3	19	23	1.6	326	C	0
2011	3	20	0	1.3	88	B	0
2011	3	20	1	2.1	109	C	0
2011	3	20	2	4.4	137	C	0
2011	3	20	3	5.6	126	C	0
2011	3	20	4	5.1	146	C	0
2011	3	20	5	5.5	160	C	0
2011	3	20	6	5.2	157	C	0
2011	3	20	7	5.2	161	D	0
2011	3	20	8	3.5	172	D	0
2011	3	20	9	2.4	185	E	0
2011	3	20	10	2.7	215	F	0
2011	3	20	11	2.2	248	D	0.01
2011	3	20	12	0.8	249	C	0.07
2011	3	20	13	1	313	C	0.08
2011	3	20	14	1.7	312	C	0.08
2011	3	20	15	3.1	322	D	0.07
2011	3	20	16	3	318	D	0.02
2011	3	20	17	4	327	D	0
2011	3	20	18	4.8	332	D	0.01
2011	3	20	19	4.7	336	D	0.01

2011	3	20	20	4.4	340	D	0.03
2011	3	20	21	4.3	346	D	0.03
2011	3	20	22	4.2	339	D	0.07
2011	3	20	23	4.5	340	D	0.1
2011	3	21	0	5.6	343	D	0.16

**From:** Baskett, Ron  
**To:** HOO Hoc; PMT02 Hoc; PMT01 Hoc; CMHT@nnsa.doe.gov; nitops@nnsa.doe.gov; alan.remick@nnsa.doe.gov; (b)(6) na30ecc@nr.doe.gov  
**Cc:** narac@llnl.gov  
**Subject:** RE: Update of forecast wind conditions for Fukushima Daiichi 1  
**Date:** Saturday, March 19, 2011 4:06:15 AM

---

Please be aware that the wind forecast at the Fukushima plant is to be onshore (wind directions from Easterly sector) for the period from 0000 through 0900 UTC on 20 March. The wind is forecast to shift from offshore (from the Northwest) to be from the East at 0000 UTC. For the 0000 through 0900 UTC period, the winds rotate counterclockwise to be from the Southeast before blowing offshore (from the Southwest) about 1000-1100 UTC.

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

**From:** Simpson, Matthew D. [mailto:simpson35@llnl.gov]  
**Sent:** Friday, March 18, 2011 11:50 PM  
**To:** hoo.hoc@nrc.gov; PMT02 Hoc; pmt01.hoc@nrc.gov; CMHT@nnsa.doe.gov; nitops@nnsa.doe.gov; alan.remick@nnsa.doe.gov; (b)(6) na30ecc@nr.doe.gov  
**Cc:** narac@llnl.gov  
**Subject:** RE: Update of forecast wind conditions for Fukushima Daiichi 1

Please find attached a spreadsheet containing the latest forecast wind conditions at the Fukushima Power Plant.

The forecast time series is derived from the latest NARAC WRF simulation with 5 km horizontal grid spacing.

Matthew Simpson  
NARAC Atmospheric Scientist

44/135

**From:** [Aluzzi, Fernando J.](#)  
**To:** [Simpson, Matthew D.](#); [HOO\\_Hoc:PMT02\\_Hoc:PMT01\\_Hoc:CMHT@nnsa.doe.gov](#); [nitops@nnsa.doe.gov](#);  
[alan.remick@nnsa.doe.gov](#); [\(b\)\(6\)](#) [na30ecc@nr.doe.gov](#)  
**Cc:** [narac@linl.gov](#)  
**Subject:** Update of forecast wind conditions for Fukushima Daiichi 1, March 19 06z forecast  
**Date:** Saturday, March 19, 2011 9:31:50 AM  
**Attachments:** [WRF\\_Fukushima\\_NPP\\_Forecast\\_2011-03-19\\_06z\\_5km.xlsx](#)

---

The forecast from the March 19, 06z WRF run is attached as an Excel document.

The time period from March 19 22z through March 20 14z is forecasting onshore flow along with much lighter winds. Precipitation is also being forecast as well starting at 12z on the 20th.

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Please find attached a spreadsheet containing the latest forecast wind conditions at the Fukushima Power Plant.

The forecast time series is derived from the latest NARAC WRF simulation with 5 km horizontal grid spacing.

Matthew Simpson  
NARAC Atmospheric Scientist

HH/136

Forecast Model: WRF

Horizontal Grid Spacing: 5 km

Vertical Levels: 44

Forecast Location: Fukushima NPP, Japan

Data Produced by Matthew Simpson (NARAC, 925 / 422-7627)

YEAR	MO	DY	HR	WSP	WDR	CLASS	RAIN
----	--	--	UTC	m/s	---	----	in/hr
2011	3	19	6	3.9	286	D	0
2011	3	19	7	4.2	276	E	0
2011	3	19	8	5.7	259	E	0
2011	3	19	9	11.9	275	D	0
2011	3	19	10	13.9	279	D	0
2011	3	19	11	12.9	272	D	0
2011	3	19	12	11.5	270	D	0
2011	3	19	13	1.9	262	F	0
2011	3	19	14	1.5	214	F	0
2011	3	19	15	2.1	269	F	0
2011	3	19	16	1.9	264	F	0
2011	3	19	17	1.8	255	F	0
2011	3	19	18	0.9	299	F	0
2011	3	19	19	1.4	349	F	0
2011	3	19	20	1.7	303	F	0
2011	3	19	21	2.4	308	F	0
2011	3	19	22	2.2	18	F	0
2011	3	19	23	1.1	90	C	0
2011	3	20	0	2.2	162	C	0
2011	3	20	1	1.8	201	C	0
2011	3	20	2	1	279	B	0
2011	3	20	3	3.3	127	C	0
2011	3	20	4	5.2	132	C	0
2011	3	20	5	3.2	142	C	0
2011	3	20	6	4.4	163	C	0
2011	3	20	7	3.2	172	D	0
2011	3	20	8	1.7	139	F	0
2011	3	20	9	1.9	141	D	0
2011	3	20	10	0.9	163	D	0
2011	3	20	11	1.1	251	E	0
2011	3	20	12	1	27	E	0.01
2011	3	20	13	1.9	40	C	0.06
2011	3	20	14	2.9	49	C	0.07
2011	3	20	15	2.1	353	C	0.06
2011	3	20	16	3.6	338	D	0.01
2011	3	20	17	4	342	D	0
2011	3	20	18	4.3	342	D	0
2011	3	20	19	5	343	D	0

2011	3	20	20	4.9	341	D	0.02
2011	3	20	21	4	334	D	0.02
2011	3	20	22	3.7	345	D	0.04
2011	3	20	23	4.9	345	C	0.04
2011	3	21	0	5.9	348	C	0.01
2011	3	21	1	5.1	355	C	0.01
2011	3	21	2	5.1	6	C	0.01
2011	3	21	3	4.8	22	C	0.01
2011	3	21	4	5.5	13	C	0.01
2011	3	21	5	4.9	9	C	0.01
2011	3	21	6	4.6	355	C	0

## Howell, Art

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**From:** Evans, Michele  
**Sent:** Saturday, April 09, 2011 11:29 AM  
**To:** Evans, Michele; Howell, Art; McCree, Victor; Dean, Bill; Satorius, Mark; Haney, Catherine; Moore, Scott; Sheron, Brian; Johnson, Michael; Leeds, Eric; Ferrell, Kimberly  
**Cc:** Pederson, Cynthia; Lew, David; Wiggins, Jim; Ordaz, Vonna; Uhle, Jennifer; Ruland, William; Boger, Bruce; Virgilio, Martin; Weber, Michael; Flanders, Scott; Lewis, Robert; Muessle, Mary; Mamish, Nader; Howell, Linda; FOIA Response.hoc Resource  
**Subject:** Names of staff being deployed to Japan

The following individuals have been identified for deploying to Japan for the 4<sup>th</sup> wave.

Steve Reynolds (RIII) will replace Elmo Collins. He will leave USA 4/12 and I have spoken to him.

I will be contacting the following individuals within an hour or so and asking them to travel on April 12:

Steve Garchow (RIV) – EOP/SAMG  
Carl Moore (RIII) – EOP/SAMG  
Jeff Mittman (NRR) – EOP/SAMG  
Dr. Heather Gepford (RII) – HP to assist in briefings and communicate to lay audience.  
Tony Huffert (RES)

I still need to identify 3 more staff and I will send another email to you with the details within an hour.

If you have any questions call me at (b)(6) Thank you.

Michele

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**From:** Evans, Michele  
**Sent:** Friday, April 08, 2011 2:51 PM  
**To:** Evans, Michele; Howell, Art; McCree, Victor; Dean, Bill; Satorius, Mark; Haney, Catherine; Moore, Scott; Sheron, Brian; Johnson, Michael; Leeds, Eric  
**Cc:** Pederson, Cynthia; Lew, David; Wiggins, Jim; Ordaz, Vonna; Uhle, Jennifer; Ruland, William; Boger, Bruce; Virgilio, Martin; Weber, Michael; Flanders, Scott; Lewis, Robert; Muessle, Mary; Mamish, Nader; Howell, Linda; FOIA Response.hoc Resource  
**Subject:** RE: ACTION: Identify 4th wave of NRC staff to Japan

ODs/RAs

Thanks for all of the input I have received so far. Since Wednesday, views regarding composition and length of stay of the site team to Japan have evolved.

First, be aware that the staff selected to go to Japan will be expected to be deployed for up to 3 weeks, instead of the previous 2 week commitment. Therefore, staff leaving the country on April 12/13, would return around May 3/4.

Second, approval has been given for Chuck to maintain a team of about 11 people for the immediate future. It has been decided that the protective measures component of the team, does not need to have the specific expertise that was previously noted. Any modeling work/analysis that would need to be done, would be completed here at HQs. Instead, Chuck has indicated that he is looking for **someone with a health physics background that could assist in briefings and can effectively communicate radiation exposure and contamination to a lay audience.**

I will be in contact with Chuck over the next 24 hours to further discuss the composition of his team of 11. If there is a skill set needed that hasn't been identified in this email or the one below, I will send you that information tomorrow.

I still plan to be able to identify at least 4 staff to support Chuck's original request by Sunday, so their travel could start on 4/12 or 4/13.

With regard to the new request above and any additional request that I learn from Chuck in the next 24 hours, please provide all nominees by COB on Monday 4/11. Those individuals would be expected to travel later in the week (target 4/14 or 4/15).

Sorry about this lengthy email. If something is not clear, feel free to call me or email.

Michele  
*Michele Evans*  
**Acting Deputy OD, NSIR**  
301-415-3236

---

**From:** Evans, Michele  
**Sent:** Wednesday, April 06, 2011 2:58 PM  
**To:** Howell, Art; McCree, Victor; Dean, Bill; Satorius, Mark; Haney, Catherine; Moore, Scott; Sheron, Brian; Johnson, Michael; Leeds, Eric  
**Cc:** Pederson, Cynthia; Lew, David; Wiggins, Jim; Ordaz, Vonna; Uhle, Jennifer; Ruland, William; Boger, Bruce; Virgilio, Martin; Weber, Michael; Flanders, Scott; Lewis, Robert; Muessle, Mary; Mamish, Nader  
**Subject:** ACTION: Identify 4th wave of NRC staff to Japan

ODs and RAs:

There is discussion of potentially sending an additional 6 or so staff to Japan.

These individuals would likely depart the USA on April 12 or 13, with a return date of about April 27. (For awareness, this time period spans religious holidays)

Specifically Chuck is looking for 4 individuals with severe accident experience. Lots of EOP/SAMG experience. He is looking for two protective measures staff. Specifically an ingestion pathway person and a "plume" person.

As always, looking for these skill sets combined with the best interpersonal skills.

**OD/RA ACTION:**

- 1. Please confirm that you received this email.**
- 2. Please identify potential candidates to me by COB Friday April 8.**

If you have any questions or need any clarification, please call me. Thank you.

*Michele Evans*  
**Acting Deputy OD, NSIR**  
301-415-3236

**From:** Yogt, Phil  
**To:** nitons@nnsa.doe.gov; CMHT@nnsa.doe.gov; HCO Hoc; PMT02 Hoc; PMT01 Hoc; (b)(6)  
(b)(6) alan.remick@nnsa.doe.gov; na30ecc@nr.doe.gov  
**Subject:** Latest forecast winds for Fukushima Daiichi 1  
**Date:** Saturday, March 19, 2011 4:29:52 PM  
**Attachments:** Fukushima Forecast 19March217.xlsx

---

Here is the forecast winds from our WRF model for the plant (also in attached excel spreadsheet).

Date	Hour (UTC)	Speed (m/s)	Dir	Stability	Precip
19-Mar	21	2.4	308	F	0
	22	2.2	18	F	0
	23	1.1	90	C	0
20-Mar	0	2.2	162	C	0
	1	1.8	201	C	0
	2	1	279	B	0
	3	3.3	127	C	0
	4	5.2	132	C	0
	5	3.2	142	C	0
	6	4.4	163	C	0
	7	3.2	172	D	0
	8	1.7	139	F	0
	9	1.9	141	D	0
	10	0.9	163	D	0
	11	1.1	251	E	0
	12	1	27	E	0.01
	13	1.9	40	C	0.06
	14	2.9	49	C	0.07
	15	2.1	353	C	0.06
	16	3.6	338	D	0.01
	17	4	342	D	0
	18	4.3	342	D	0
	19	5	343	D	0
	20	4.9	341	D	0.02
	21	4	334	D	0.02
	22	3.7	345	D	0.04
	23	4.9	345	C	0.04
0	5.9	348	C	0.01	
1	5.1	355	C	0.01	
2	5.1	6	C	0.01	
3	4.8	22	C	0.01	
4	5.5	13	C	0.01	
5	4.9	9	C	0.01	
6	4.6	355	C	0	

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NARAC Operations  
925-422-7627  
narac@llnl.gov

Date	Hour (UTC)	Speed (m/s)	Dir	Stability	Precip
19-Mar	21	2.4	308	F	0
	22	2.2	18	F	0
	23	1.1	90	C	0
20-Mar	0	2.2	162	C	0
	1	1.8	201	C	0
	2	1	279	B	0
	3	3.3	127	C	0
	4	5.2	132	C	0
	5	3.2	142	C	0
	6	4.4	163	C	0
	7	3.2	172	D	0
	8	1.7	139	F	0
	9	1.9	141	D	0
	10	0.9	163	D	0
	11	1.1	251	E	0
	12	1	27	E	0.01
	13	1.9	40	C	0.06
	14	2.9	49	C	0.07
	15	2.1	353	C	0.06
	16	3.6	338	D	0.01
	17	4	342	D	0
	18	4.3	342	D	0
	19	5	343	D	0
	20	4.9	341	D	0.02
	21	4	334	D	0.02
	22	3.7	345	D	0.04
23	4.9	345	C	0.04	
0	5.9	348	C	0.01	
1	5.1	355	C	0.01	
2	5.1	6	C	0.01	
3	4.8	22	C	0.01	
4	5.5	13	C	0.01	
5	4.9	9	C	0.01	
6	4.6	355	C	0	

**From:** [Simpson, Matthew D.](#)  
**To:** [HQO Hoc](#); [PMT02 Hoc](#); [PMT01 Hoc](#); [CMHT@nnsa.doe.gov](#); [nitops@nnsa.doe.gov](#); [alan.remick@nnsa.doe.gov](#);  
[\(b\)\(6\)](#); [ha30ecc@nr.doe.gov](#)  
**Cc:** [narak@nrc.gov](#)  
**Subject:** Update of forecast wind conditions for Fukushima Daiichi 1  
**Date:** Saturday, March 19, 2011 6:58:04 PM  
**Attachments:** [WRF Fukushima NPP Forecast 2011-03-19 12Z 5km.xlsx](#)

---

Please find attached a spreadsheet containing the latest forecast wind conditions at the Fukushima Power Plant.

The forecast time series is derived from the latest NARAC WRF simulation with 5 km horizontal grid spacing.

Fukushima Power Plant Forecast Summary:

19 March 23:00 Z to 20 March 08:00 Z: Primarily onshore wind is predicted with wind speeds ranging from 1 to 5 m/s.

20 March 08:00 Z to 20 March 21:00 Z: Winds are light (1-2 m/s) and highly variable with possible periods of onshore flow. Light precipitation is forecasted.

20 March 21:00 Z to end of forecast period: Wind speeds increase to 3-7 m/s and are from the north to northwest.

Matthew Simpson  
NARAC Atmospheric Scientist

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Forecast Model: WRF

Horizontal Grid Spacing: 5 km

Vertical Levels: 44

Forecast Location: Fukushima NPP, Japan

Data Produced by Matthew Simpson (NARAC, 925 / 422-7627)

YEAR	MO	DY	HR	WSP	WDR	CLASS	RAIN
----	--	--	UTC	m/s	---	----	in/hr
2011	3	19	22	1.7	25	F	0
2011	3	19	23	0.8	308	C	0
2011	3	20	0	0.8	31	B	0
2011	3	20	1	0.7	332	A	0
2011	3	20	2	5	145	C	0
2011	3	20	3	4.7	148	C	0
2011	3	20	4	4.1	138	C	0
2011	3	20	5	4.5	160	C	0
2011	3	20	6	4.7	180	C	0
2011	3	20	7	4.4	168	D	0
2011	3	20	8	3.2	166	E	0
2011	3	20	9	3.9	193	E	0
2011	3	20	10	3.8	182	D	0
2011	3	20	11	2.2	182	E	0
2011	3	20	12	1.5	183	E	0.01
2011	3	20	13	1.1	1	F	0.02
2011	3	20	14	1.3	342	E	0.03
2011	3	20	15	1.3	14	D	0.01
2011	3	20	16	1.5	14	D	0
2011	3	20	17	1.6	356	D	0
2011	3	20	18	1.6	205	F	0
2011	3	20	19	3.4	180	E	0
2011	3	20	20	2.4	238	F	0
2011	3	20	21	2.6	350	F	0
2011	3	20	22	2.1	3	D	0
2011	3	20	23	2.2	340	D	0
2011	3	21	0	4.1	345	D	0
2011	3	21	1	5	9	C	0
2011	3	21	2	5.4	14	C	0
2011	3	21	3	6.2	10	C	0
2011	3	21	4	6.3	16	C	0
2011	3	21	5	7	17	C	0
2011	3	21	6	6.3	16	C	0
2011	3	21	7	5.5	28	C	0
2011	3	21	8	2.8	37	D	0
2011	3	21	9	2.3	340	F	0
2011	3	21	10	3	308	E	0
2011	3	21	11	3.2	290	E	0

2011

3

21

12

3.4

286

E

0

**From:** NITOPS  
**To:** CMHT; HQQ Hoc; NARAC; PMT01 Hoc; PMT02 Hoc; Hoc\_PMT12  
**Subject:** FW: Update of forecast wind conditions for Fukushima Daiichi 1  
**Date:** Saturday, March 19, 2011 7:01:18 PM  
**Attachments:** WRF Fukushima NPP Forecast 2011-03-19 12Z 5km.xlsx

---

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

From: Simpson, Matthew D. [mailto:simpson35@llnl.gov]

Sent: Saturday, March 19, 2011 6:58 PM

To: hoo.hoc@nrc.gov; PMT02 Hoc; pmt01.hoc@nrc.gov; CMHT; NITOPS; Remick, Alan; (b)(6)

(b)(6) na30ecc@nr.doe.gov

cc: hoo.hoc@nrc.gov

Subject: Update of forecast wind conditions for Fukushima Daiichi 1

Please find attached a spreadsheet containing the latest forecast wind conditions at the Fukushima Power Plant.

The forecast time series is derived from the latest NARAC WRF simulation with 5 km horizontal grid spacing.

Fukushima Power Plant Forecast Summary:

19 March 23:00 Z to 20 March 08:00 Z: Primarily onshore wind is predicted with wind speeds ranging from 1 to 5 m/s.

20 March 08:00 Z to 20 March 21:00 Z: Winds are light (1-2 m/s) and highly variable with possible periods of onshore flow. Light precipitation is forecasted.

20 March 21:00 Z to end of forecast period: Wind speeds increase to 3-7 m/s and are from the north to northwest.

Matthew Simpson  
NARAC Atmospheric Scientist

44/140

Forecast Model: WRF

Horizontal Grid Spacing: 5 km

Vertical Levels: 44

Forecast Location: Fukushima NPP, Japan

Data Produced by Matthew Simpson (NARAC, 925 / 422-7627)

YEAR	MO	DY	HR	WSP	WDR	CLASS	RAIN
----	--	--	UTC	m/s	---	----	in/hr
2011	3	19	22	1.7	25	F	0
2011	3	19	23	0.8	308	C	0
2011	3	20	0	0.8	31	B	0
2011	3	20	1	0.7	332	A	0
2011	3	20	2	5	145	C	0
2011	3	20	3	4.7	148	C	0
2011	3	20	4	4.1	138	C	0
2011	3	20	5	4.5	160	C	0
2011	3	20	6	4.7	180	C	0
2011	3	20	7	4.4	168	D	0
2011	3	20	8	3.2	166	E	0
2011	3	20	9	3.9	193	E	0
2011	3	20	10	3.8	182	D	0
2011	3	20	11	2.2	182	E	0
2011	3	20	12	1.5	183	E	0.01
2011	3	20	13	1.1	1	F	0.02
2011	3	20	14	1.3	342	E	0.03
2011	3	20	15	1.3	14	D	0.01
2011	3	20	16	1.5	14	D	0
2011	3	20	17	1.6	356	D	0
2011	3	20	18	1.6	205	F	0
2011	3	20	19	3.4	180	E	0
2011	3	20	20	2.4	238	F	0
2011	3	20	21	2.6	350	F	0
2011	3	20	22	2.1	3	D	0
2011	3	20	23	2.2	340	D	0
2011	3	21	0	4.1	345	D	0
2011	3	21	1	5	9	C	0
2011	3	21	2	5.4	14	C	0
2011	3	21	3	6.2	10	C	0
2011	3	21	4	6.3	16	C	0
2011	3	21	5	7	17	C	0
2011	3	21	6	6.3	16	C	0
2011	3	21	7	5.5	28	C	0
2011	3	21	8	2.8	37	D	0
2011	3	21	9	2.3	340	F	0
2011	3	21	10	3	308	E	0
2011	3	21	11	3.2	290	E	0

2011

3

21

12

3.4

286

E

0

**From:** Simpson, Matthew D.  
**To:** HQO; Hec: PMT02; Hec: PMT01; Hec: CMHT@nnsa.doe.gov; nitops@nnsa.doe.gov; alan.remick@nnsa.doe.gov; (b)(6); ha30ecc@nr.doe.gov  
**Cc:** narac@lnl.gov  
**Subject:** Update of forecast wind conditions for Fukushima Daiichi 1  
**Date:** Saturday, March 19, 2011 10:45:58 PM  
**Attachments:** WRF Fukushima NPP Forecast 2011-03-19 18Z (5km).xlsx

---

Please find attached a spreadsheet containing the latest forecast wind conditions at the Fukushima Power Plant.

The forecast time series is derived from the latest NARAC WRF simulation with 5 km horizontal grid spacing.

**Fukushima Power Plant Forecast Summary:**

20 March 02:00 Z to 20 March 08:00 Z: Southeastery (onshore) winds continue with speeds ranging from 2 to 5 m/s.

20 March 08:00 Z to 21 March 09:00 Z: Wind speeds range from 1 to 7 m/s; wind direction varies between northwesterly and northeasterly with possible periods of onshore flow. Two-tenths of an inch of precipitation is forecasted.

21 March 09:00 Z to end of forecast period: Winds are northwesterly (offshore) at 3 - 4 m/s.

Matthew Simpson  
NARAC Atmospheric Scientist

11/14/11

Forecast Model: WRF

Horizontal Grid Spacing: 5 km

Vertical Levels: 44

Forecast Location: Fukushima NPP, Japan

Data Produced by Matthew Simpson (NARAC, 925 / 422-7627)

YEAR	MO	DY	HR	WSP	WDR	CLASS	RAIN
----	--	--	UTC	m/s	---	----	in/hr
2011	3	20	2	3.8	92	C	0
2011	3	20	3	3.5	129	C	0
2011	3	20	4	3.3	142	C	0
2011	3	20	5	4	157	C	0
2011	3	20	6	3.4	165	C	0
2011	3	20	7	2	181	D	0
2011	3	20	8	2.2	166	E	0
2011	3	20	9	2.4	177	E	0
2011	3	20	10	4.5	205	D	0
2011	3	20	11	2.8	214	E	0.01
2011	3	20	12	2.7	202	E	0.02
2011	3	20	13	2.5	356	D	0.04
2011	3	20	14	1.9	352	D	0.07
2011	3	20	15	1	356	C	0.03
2011	3	20	16	3.3	346	D	0.01
2011	3	20	17	3.4	345	D	0
2011	3	20	18	2	322	D	0
2011	3	20	19	1.3	348	F	0
2011	3	20	20	1.5	47	F	0
2011	3	20	21	2.7	26	D	0
2011	3	20	22	2.8	1	C	0
2011	3	20	23	3.2	358	C	0
2011	3	21	0	4.5	6	C	0
2011	3	21	1	4	10	C	0
2011	3	21	2	4.1	30	C	0
2011	3	21	3	5.3	25	C	0
2011	3	21	4	6.7	9	C	0
2011	3	21	5	6.7	15	C	0
2011	3	21	6	7.1	17	C	0
2011	3	21	7	5.7	28	C	0
2011	3	21	8	3.4	17	D	0
2011	3	21	9	2.3	353	F	0
2011	3	21	10	2.7	335	F	0
2011	3	21	11	2.8	319	F	0
2011	3	21	12	3.4	298	E	0
2011	3	21	13	4	302	E	0
2011	3	21	14	3.7	301	E	0
2011	3	21	15	3.4	306	E	0

2011	3	21	16	3.3	324	E	0
2011	3	21	17	3.5	319	D	0
2011	3	21	18	2.9	312	F	0



From: JapanEmbassy, TaskForce [<mailto:JapanEmbassyTaskForce@state.gov>]  
<<mailto:JapanEmbassyTaskForce@state.gov>>  
<<mailto:JapanEmbassyTaskForce@state.gov>>  
<<mailto:JapanEmbassyTaskForce@state.gov>> >

Sent: Saturday, March 19, 2011 10:01 PM

To: HAMAGUCHI AYUMU; JapanEmbassy, TaskForce

Cc: TANAKA KANEMITSU; NAKAGAWA TOMOHIRO

Subject: RE: monitoring data (latest version)

Hamaguchi-san,

Our NRC experts have asked if there is any available onsite meteorological data from March 13 and March 14? We are attempting to fill in a blank spot in our meteorological timeline. Any information that you can send us would be very much appreciated.

Best regards

SBU

This email is UNCLASSIFIED

Jennifer Clever

Japan Emergency Command Center

U.S. Embassy, Tokyo

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

From: HAMAGUCHI AYUMU [<mailto:ayumu.hamaguchi@mofa.go.jp>]  
<<mailto:ayumu.hamaguchi@mofa.go.jp>>  
<<mailto:ayumu.hamaguchi@mofa.go.jp>>  
<<mailto:ayumu.hamaguchi@mofa.go.jp>> >

Sent: Saturday, March 19, 2011 9:49 PM

To: JapanEmbassy, TaskForce

Cc: TANAKA KANEMITSU; NAKAGAWA TOMOHIRO

Subject: FW: monitoring data (latest version)

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

From: HAMAGUCHI AYUMU

Sent: Saturday, March 19, 2011 9:32 PM

To: (b)(6)

Cc: 'TokyoPolMilUnit@state.gov'; (b)(6)  
'cmht@nnsa.doe.gov'; (b)(6) (b)(6)  
(b)(6)

Subject: monitoring data (latest version)

Huntington-san, Craig-san;

This is the latest version of monitoring data.

v/r,

Ayumu HAMAGUCHI

SOFA Division (MOFA)

<<...>> <<...>> <<...>> <<...>>

**From:** JapanEmbassy, TaskForce  
**To:** Alex Robinson; Uises, Anthony; (b)(6)  
(b)(6) CAT 5; Cherry, Ronald C.; crmht@nnsa.doe.gov; Coleman, Michael; Crain Haas; Curry  
Wright; (b)(6) DART Liaison; (b)(6)  
(b)(6) HOO Hoc; Trapp, James; (b)(6) JapanEmbassy, TaskForce;  
(b)(6) (b)(6) John Okon; (b)(6) (b)(6) Lewis.  
(b)(6) Brian M; LIAU, HOC; LIAUZ, HOC; Mearns, Jeremy M; (b)(6) Morales, Russell A;  
(b)(6) ITOPS@nnsa.doe.gov; Paul Guss; Hoc, PMT12; PMT01 Hoc; PRLH, PHNS, RDCON;  
(b)(6) Richard Reed; (b)(6) Schiller,  
Bryan S; SES-O; Taskforce-1; Theodore Shaw; (b)(6) Thur.  
Randy R; Timothy Halladay; (b)(6) Uchida, Koichi; (b)(6)  
**Subject:** FW: NRC Weather Data Request for 13/14 Mar  
**Date:** Sunday, March 20, 2011 5:22:01 AM  
**Attachments:** RE 320 10時SPEEDI単位量放出図形イメージの送付(No4).msg  
RE 320 10時SPEEDI単位量放出図形イメージの送付(No3).msg  
RE 320 10時SPEEDI単位量放出図形イメージの送付(No2).msg

Apologies if you have received this information already. Craig wants to make sure you have all seen this.

SBU

This email is UNCLASSIFIED

Jennifer Clever

Japan Emergency Command Center  
U.S. Embassy, Tokyo

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

**From:** (b)(6)  
**Sent:** Sunday, March 20, 2011 5:23 PM  
**To:** JapanEmbassy, TaskForce  
**Subject:** FW: NRC Weather Data Request for 13/14 Mar

This was an RFI that came in last night but I didn't see that it was answered. Please pass on to the NRC rep as appropriate. Couldn't get the on sight ACTUAL weather so we asked the NUSTEC folks for their predictive model data that is based on weather forecasts. They apparently did not start operations until the 14th. The data for the 14th are in the attachments to the 4 e-mail I have attached below. If you can't open the attachments I will send messages one by one. (Seems to work that way.)

Having said all that we have send METI generated documents from the 12th that have very precise weather information for the site. We are trying to find the source of the documents we have (but I don't have a copy of at the moment). If the nustec forecasts aren't good enough, perhaps you could attempt to contact METI on behalf of the NRC.

Thanks.

VR,

Craig

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

**From:** JapanEmbassy, TaskForce [mailto:JapanEmbassyTaskForce@state.gov]  
<mailto:[mailto:JapanEmbassyTaskForce@state.gov]>  
<mailto:[mailto:JapanEmbassyTaskForce@state.gov]>  
<mailto:[mailto:JapanEmbassyTaskForce@state.gov]> >

44/143

Sent: Saturday, March 19, 2011 10:01 PM

To: HAMAGUCHI AYUMU; JapanEmbassy, TaskForce

Cc: TANAKA KANEMITSU; NAKAGAWA TOMOHIRO

Subject: RE: monitoring data (latest version)

Hamaguchi-san,

Our NRC experts have asked if there is any available onsite meteorological data from March 13 and March 14? We are attempting to fill in a blank spot in our meteorological timeline. Any information that you can send us would be very much appreciated.

Best regards

SBU

This email is UNCLASSIFIED

Jennifer Clever

Japan Emergency Command Center

U.S. Embassy, Tokyo

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

From: HAMAGUCHI AYUMU [mailto:[ayumu.hamaguchi@mofa.go.jp](mailto:ayumu.hamaguchi@mofa.go.jp)]  
<mailto:[ayumu.hamaguchi@mofa.go.jp](mailto:ayumu.hamaguchi@mofa.go.jp)>  
<mailto:[ayumu.hamaguchi@mofa.go.jp](mailto:ayumu.hamaguchi@mofa.go.jp)>  
<mailto:[ayumu.hamaguchi@mofa.go.jp](mailto:ayumu.hamaguchi@mofa.go.jp)> >

Sent: Saturday, March 19, 2011 9:49 PM

To: JapanEmbassy, TaskForce

Cc: TANAKA KANEMITSU; NAKAGAWA TOMOHIRO

Subject: FW: monitoring data (latest version)

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

From: HAMAGUCHI AYUMU

Sent: Saturday, March 19, 2011 9:32 PM

To: (b)(6)

Cc: 'TokyoPolMilUnit@state.gov'; (b)(6)

'cmht@nnsa.doe.gov'; (b)(6)

(b)(6)

Subject: monitoring data (latest version)

Huntington-san, Craig-san;

This is the latest version of monitoring data.

v/r,

Ayumu HAMAGUCHI

SOFA Division (MOFA)

<<...>> <<...>> <<...>> <<...>>

**From:** [Yoot, Phil](#)  
**To:** [CMHT@nnsa.doe.gov](#); [nitons@nnsa.doe.gov](#); [HOO Hoc](#); [PMT02 Hoc](#); [PMT01 Hoc](#); [na30ecc@nr.doe.gov](#); (b)(6); [alan.remick@nnsa.doe.gov](#)  
**Cc:** [narac@lnl.gov](#)  
**Subject:** Latest forecast for Fukushima Daiichi 1  
**Date:** Sunday, March 20, 2011 3:48:38 PM  
**Attachments:** [Fukushima\\_Forecast\\_20March12Z.xlsx](#)

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The latest forecast from our 1200Z WRF run is in the table below, and the attached spreadsheet.

Date	Hr (UTC)	Speed (m/s)	Dir	Stability	Precip
20-Mar	20	2.9	353	F	0
	21	2.7	8	F	0
	22	3.4	11	D	0
	23	4.1	341	C	0
21-Mar	0	3.7	338	C	0
	1	4.3	2	C	0.05
	2	5.8	12	C	0.04
	3	6.7	9	C	0.04
	4	6.6	17	C	0.01
	5	5.9	16	C	0
	6	5.5	17	C	0
	7	4.3	5	D	0
	8	2.9	1	D	0
	9	2.6	331	C	0
	10	3.4	314	D	0
	11	3.8	308	D	0
	12	4.1	306	E	0
	13	3.8	297	E	0
	14	3.7	303	E	0
	15	3	325	E	0
	16	4.2	326	D	0
	17	4.6	311	E	0
	18	4.7	318	E	0
	19	4.8	325	E	0
	20	5.3	327	D	0
	21	5.6	327	D	0
	22	5.7	328	D	0
23	5.3	332	D	0	
22-Mar	0	4.7	350	C	0
	1	4.9	6	C	0
	2	4.8	18	C	0
	3	4.5	32	C	0
	4	4.1	51	C	0
	5	3.8	67	C	0
	6	3.2	70	C	0

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NARAC Operations  
925-422-7627  
narac@llnl.gov

Date	Hr (UTC)	Speed (m/s)	Dir	Stability	Precip
20-Mar	20	2.9	353	F	0
	21	2.7	8	F	0
	22	3.4	11	D	0
	23	4.1	341	C	0
21-Mar	0	3.7	338	C	0
	1	4.3	2	C	0.05
	2	5.8	12	C	0.04
	3	6.7	9	C	0.04
	4	6.6	17	C	0.01
	5	5.9	16	C	0
	6	5.5	17	C	0
	7	4.3	5	D	0
	8	2.9	1	D	0
	9	2.6	331	C	0
	10	3.4	314	D	0
	11	3.8	308	D	0
	12	4.1	306	E	0
	13	3.8	297	E	0
	14	3.7	303	E	0
	15	3	325	E	0
	16	4.2	326	D	0
	17	4.6	311	E	0
	18	4.7	318	E	0
	19	4.8	325	E	0
	20	5.3	327	D	0
	21	5.6	327	D	0
	22	5.7	328	D	0
23	5.3	332	D	0	
22-Mar	0	4.7	350	C	0
	1	4.9	6	C	0
	2	4.8	18	C	0
	3	4.5	32	C	0
	4	4.1	51	C	0
	5	3.8	67	C	0
	6	3.2	70	C	0

**Scott, Michael**

---

**From:** Scott, Michael  
**Sent:** Sunday, March 20, 2011 9:41 AM  
**To:** Dembek, Stephen  
**Subject:** GOING TO JAPAN - QUESTION

Hi Steve. I'm leaving Tuesday for Japan. I have an  Should I use that or my

Thanks for info.

Mike

44/145

**From:** PMT01 Hoc  
**To:** Vogt, Phil  
**Cc:** CMHT@nnsa.doe.gov; nitops@nnsa.doe.gov; HOO Hoc; PMT02 Hoc; Hoc, PMT12; na30ecc@nr.doe.gov; (b)(6); alan.remick@nnsa.doe.gov; narac@llnl.gov  
**Subject:** RE: Latest forecast for Fukushima Daiichi 1  
**Date:** Sunday, March 20, 2011 5:08:34 PM

---

Hello Phil:

Checked the 12Z WRF model run and while it is a slightly smaller data set (5 fewer hours) than the preceding 06Z run (sent at 10:28 AM earlier today, the common hours in the 12Z run are identical to the 06Z run. Please advise whether it is reasonable to expect some portion of downstream WRF model runs to have the same values and under what circumstances that may occur.

If you have time, please also advise on the following:

- The methodology by which stability class is estimated (it appears to me that its variation reasonably follows time of day and/or wind speed).
- How does the stability algorithm handle the relationship of stability class to the occurrence of precipitation, and whether there is some adjustment in a coastal environment between concurrent onshore and offshore flow?
- If the model generates an hourly dry-bulb temperature and whether there is a distinction in the output between liquid and frozen precipitation.
- Whether and, if so, how terrain is accounted for.

Thanks,

Mike Mazaika.  
NRC  
PMT-Meteorology

**From:** Vogt, Phil [mailto:vogt4@llnl.gov]  
**Sent:** Sunday, March 20, 2011 3:49 PM  
**To:** CMHT@nnsa.doe.gov; nitops@nnsa.doe.gov; HOO Hoc; PMT02 Hoc; PMT01 Hoc; na30ecc@nr.doe.gov; 'McMichael, Lukas C CIV SEA 08 NR'; alan.remick@nnsa.doe.gov  
**Cc:** narac@llnl.gov  
**Subject:** Latest forecast for Fukushima Daiichi 1

The latest forecast from our 1200Z WRF run is in the table below, and the attached spreadsheet.

Date	Hr (UTC)	Speed (m/s)	Dir	Stability	Precip
20-Mar	20	2.9	353	F	0
	21	2.7	8	F	0
	22	3.4	11	D	0
	23	4.1	341	C	0
21-Mar	0	3.7	338	C	0
	1	4.3	2	C	0.05

44 / 146

	2	5.8	12	C	0.04
	3	6.7	9	C	0.04
	4	6.6	17	C	0.01
	5	5.9	16	C	0
	6	5.5	17	C	0
	7	4.3	5	D	0
	8	2.9	1	D	0
	9	2.6	331	C	0
	10	3.4	314	D	0
	11	3.8	308	D	0
	12	4.1	306	E	0
	13	3.8	297	E	0
	14	3.7	303	E	0
	15	3	325	E	0
	16	4.2	326	D	0
	17	4.6	311	E	0
	18	4.7	318	E	0
	19	4.8	325	E	0
	20	5.3	327	D	0
	21	5.6	327	D	0
	22	5.7	328	D	0
	23	5.3	332	D	0
22-Mar	0	4.7	350	C	0
	1	4.9	6	C	0
	2	4.8	18	C	0
	3	4.5	32	C	0
	4	4.1	51	C	0
	5	3.8	67	C	0
	6	3.2	70	C	0

NARAC Operations  
925-422-7627  
[narac@llnl.gov](mailto:narac@llnl.gov)



Horizontal Grid Spacing: 5 km

Vertical Levels: 44

Forecast Location: Fukushima NPP, Japan

Data Produced by Matthew Simpson (NARAC, 925 / 422-7627)

YEAR	MO	DY	HR	WSP	WDR	CLASS	RAIN	Temp (2m)
----	--	--	UTC	m/s	---	----	in/hr	(F)
2011	3	20	23	4.1	351	D	0	43
2011	3	21	0	5.3	8	C	0.02	43
2011	3	21	1	6.8	4	C	0.06	42
2011	3	21	2	7.5	359	C	0.09	41
2011	3	21	3	6.9	359	C	0.03	41
2011	3	21	4	6.3	12	C	0.01	41
2011	3	21	5	5.4	18	C	0.01	41
2011	3	21	6	5.5	11	C	0.02	40
2011	3	21	7	4.8	355	C	0.01	39
2011	3	21	8	3.3	33	D	0	39
2011	3	21	9	1.3	20	E	0	38
2011	3	21	10	2.2	323	F	0	36
2011	3	21	11	2.8	301	D	0	37
2011	3	21	12	3	304	D	0	37
2011	3	21	13	3.6	298	E	0	35
2011	3	21	14	3.5	281	E	0	34
2011	3	21	15	2.7	279	F	0	34
2011	3	21	16	2.3	278	F	0	35
2011	3	21	17	2.3	310	F	0	35
2011	3	21	18	2.6	310	D	0	36
2011	3	21	19	4.2	343	D	0	35
2011	3	21	20	4.4	346	D	0	35
2011	3	21	21	4.4	323	D	0.01	34
2011	3	21	22	3.8	311	C	0.01	35
2011	3	21	23	4.3	331	C	0.02	36
2011	3	22	0	3.2	330	C	0.02	36
2011	3	22	1	2.3	339	C	0.01	38
2011	3	22	2	1.8	32	C	0	39
2011	3	22	3	2.9	76	C	0.02	39
2011	3	22	4	3.7	107	C	0.02	39
2011	3	22	5	3.6	124	C	0	38
2011	3	22	6	2.4	120	C	0	38
2011	3	22	7	2.4	138	C	0.01	38
2011	3	22	8	2.3	188	C	0	36
2011	3	22	9	1.9	199	F	0	34
2011	3	22	10	0.8	222	C	0	35
2011	3	22	11	1.2	336	C	0	35
2011	3	22	12	2.5	328	C	0	34

From: [PMT01.Hoc](mailto:PMT01.Hoc)  
To: [Simpson\\_Matthew.D](mailto:Simpson_Matthew.D)  
Cc: [Vogt\\_Phil](mailto:Vogt_Phil); [Harvey\\_Brad](mailto:Harvey_Brad); [Quinnan\\_Kevin](mailto:Quinnan_Kevin); [Galietta\\_Thomas](mailto:Galietta_Thomas); [Brown\\_David](mailto:Brown_David); [Brandon\\_Lou](mailto:Brandon_Lou); [Hoc\\_PMT12](mailto:Hoc_PMT12); [HOO\\_Hoc](mailto:HOO_Hoc)  
Subject: RE: Latest forecast for Fukushima Daiichi 1  
Date: Sunday, March 20, 2011 9:15:36 PM

---

Matthew:

Thanks for the reply; got the dry-bulb temperature in the re-issue of the 12Z WRF run. If possible, could that temperature output be provided in degrees-C rather than degrees-F (sorry, should have specified the units in my question).

No need to look into the "F" stability question any further at this point.

Thanks,

Mike  
PMT-Meteorology

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

From: Simpson, Matthew D. [[mailto:simpson35@lnl.gov](mailto:mailto:simpson35@lnl.gov)]  
Sent: Sunday, March 20, 2011 7:57 PM  
To: PMT01 Hoc  
Subject: RE: Latest forecast for Fukushima Daiichi 1

Hi Mike,

I added the 2 meter dry-bulb temperature to my last forecast email and will continue to include it in future correspondence.

It is difficult for me to give you a great answer about your F stability case that you describe without diving deep into the case. My initial thoughts are that the precipitation during the period you describe is very light and would be classified as a trace by the NWS. No cumulus parametrization is used in the inner WRF domain since it has sufficient resolution to explicitly resolve most convection. Given that Fukushima is along the coast with high humidity, trace amounts of precip can be forecasted time to time. Given the small amount of rainfall, the precipitation is having little to no effect on the stability during this period.

I will also point out that on paper F looks much different than E stability, but in reality a small difference in Obukhov length values can result in a different stability class since a Table approach is used. This is no different than the weakness (flaw?) associated with using the standard P-G table for calculating stability. As with any model prediction, there is an error bar.

The methodology I am using is only calculating stability A - F. If you have any peer reviewed documentation on G stability calculation, I can look into modifying my code if it will help you produce better results.

-Matthew

.....  
Matthew/Phil:

Thanks for the prompt reply. Yes, if you could include the dry-bulb temperature in future WRF transmittals we can use that as an additional input to the RASCAL model meteorological data set. That info might help us make a distinction in the RASCAL code as to what the precip form is.

One of the reasons that I asked about the stability classification methodology was that in the 12Z run for 19 March on Day 20, Hour 13 (Hour 22, local Japan Standard Time) there was a precipitation event (the second hour of an estimated 4-hour event with light precip) with a stability class of F. I was OK with the time of occurrence and wind speed (i.e., 1.1 m/sec) but not with the precip or even associated cloud cover if it was not forecast to be raining/snowing. Adjacent hours before and after were classified as D or E stability which was more of what I expected to see.

One more stability-related question comes to mind: does the inverse Obukhov length classification method extend to Class G (consistent with NRC guidance) or is it limited to Class F (consistent with EPA guidance)?

Thanks again,

Mike Mazaika.  
NRC  
PMT-Meteorology

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

From: Simpson, Matthew D. [[mailto:simpson35@lnl.gov](mailto:mailto:simpson35@lnl.gov)]  
Sent: Sunday, March 20, 2011 5:53 PM  
To: PMT01 Hoc; Vogt, Phil  
Cc: CMHT@nnsa.doe.gov; nitops@nnsa.doe.gov; HOO Hoc; PMT02 Hoc; Hoc, PMT12; na30ecc@nr.doe.gov; (b)(6)

44/148

alan.remick@nnsa.doe.gov; narak@llnl.gov  
Subject: RE: Latest forecast for Fukushima Daiichi 1

Hi Mike,

It appears the the 06 Z weather forecast was inadvertently sent out at the 12 Z forecast. We apologize. I am currently running the 12 Z forecast and will send it out in 30 minutes.

To answer your model questions:

1. I am using a methodology of calculating stability class from the inverse obukhov length (predicted by WRF) based on Table 1 from the paper "Estimating Atmospheric Stability from Monostatic Acoustic Sounder Records", Atmospheric Environment Vol. 23, No. 10, pp. 2079-2084, 1989. This in my opinion is a more physically based approach to stability calculation and takes full advantage of running a computationally expensive numerical model.
2. The inverse obukhov length is indirectly affected by precipitation since surface sensible heat flux is a key variable in the calculation of the obukhov length. Precipitation typically increases surface latent heat fluxes, as a result the surface sensible heat flux (ie buoyant instability) is reduced. The net result is that precipitation will increase surface stability in the model.
3. Yes, the model does predict the dry-bulb temperature. If you would like us to add the 2 m AGL dry-bulb temperature to the forecast let me know. I am running WRF with mixed phase microphysics, meaning the model is parameterizing both liquid and frozen water droplets.
4. Terrain is included in the model. I am using the USGS 30 second (~900 m) terrain / land use data set for the inner model domain from which the forecasts are derived.

Feel free to call if you want additional detail concerning your questions. 925 / 422 - 7627

Matthew Simpson  
NARAC Atmospheric Scientist

=====  
Hello Phil:

Checked the 12Z WRF model run and while it is a slightly smaller data set (5 fewer hours) than the preceding 06Z run (sent at 10:28 AM earlier today, the common hours in the 12Z run are identical to the 06Z run. Please advise whether it is reasonable to expect some portion of downstream WRF model runs to have the same values and under what circumstances that may occur.

If you have time, please also advise on the following:

- \* The methodology by which stability class is estimated (it appears to me that its variation reasonably follows time of day and/or wind speed).
- \* How does the stability algorithm handle the relationship of stability class to the occurrence of precipitation, and whether there is some adjustment in a coastal environment between concurrent onshore and offshore flow?
- \* If the model generates an hourly dry-bulb temperature and whether there is a distinction in the output between liquid and frozen precipitation.
- \* Whether and, if so, how terrain is accounted for.

Thanks,

Mike Mazaika.  
NRC  
PMT-Meteorology

From: Vogt, Phil [mailto:vogt1@llnl.gov]  
Sent: Sunday, March 20, 2011 3:49 PM  
To: CMHT@nnsa.doe.gov; nitops@nnsa.doe.gov; HOO Hoc; PMT02 Hoc; PMT01 Hoc; na30ecc@nr.doe.gov; 'McMichael, Lukas C CIV SEA 08 NR'; alan.remick@nnsa.doe.gov  
Cc: narak@llnl.gov  
Subject: Latest forecast for Fukushima Daiichi 1

The latest forecast from our 1200Z WRF run is in the table below, and the attached spreadsheet.  
Date

Hr (UTC)  
Speed (m/s)  
Dir  
Stability  
Precip  
20-Mar  
20  
2.9  
353  
F  
0  
  
21  
2.7  
8  
F  
0  
  
22  
3.4  
11  
D  
0  
  
23  
4.1  
341  
C  
0  
21-Mar  
0  
3.7  
338  
C  
0  
  
1  
4.3  
2  
C  
0.05

2  
5.8  
12  
C  
0.04

3  
6.7  
9  
C  
0.04

4  
6.6  
17  
C  
0.01

5  
5.9  
16  
C  
0

6  
5.5  
17  
C  
0

7  
4.3  
5  
D  
0

8  
2.9  
1  
D  
0

9  
2.6  
331  
C  
0

10  
3.4  
314  
D  
0

11  
3.8  
308  
D  
0

12  
4.1  
306  
E  
0

13  
3.8  
297  
E  
0

14  
3.7  
303  
E  
0

15  
3  
325  
E  
0

16

4.2

326

D

0

17

4.6

311

E

0

18

4.7

318

E

0

19

4.8

325

E

0

20

5.3

327

D

0

21

5.6

327

D

0

22

5.7

328

D

0

23

5.3

332

D

0

22-Mar

0

4.7

350

C

0

1

4.9

6

C

0

2

4.8

18

C

0

3

4.5

32

C

0

4

4.1

51

C

0

5

3.8

67

C

0

6

3.2

70

C

0

NARAC Operations  
925-422-7627  
narac@llnl.gov <<mailto:narac@llnl.gov>>

**From:** [Simpson, Matthew D.](#)  
**To:** [HQO Hoc; PMT02 Hoc; PMT01 Hoc; CMHT@nnsa.doe.gov; nitops@nnsa.doe.gov; alan.remick@nnsa.doe.gov;](#)  
[\(b\)\(6\)](#) [ha30ecc@nr.doe.gov](#)  
[nara@nra.gov](#)  
**Cc:** [nara@nra.gov](#)  
**Subject:** Update of forecast wind conditions for Fukushima Daiichi 1  
**Date:** Monday, March 21, 2011 3:06:55 AM  
**Attachments:** [WRF Fukushima NPP Forecast 2011-03-21 00Z \(5km\).xlsx](#)

---

Please find attached a spreadsheet containing the latest forecast wind conditions at the Fukushima Power Plant.

The forecast time series is derived from the latest NARAC WRF simulation with 5 km horizontal grid spacing.

NOTE: Period of onshore wind during forecast period.

Fukushima Power Plant Forecast Summary:

21 March 09:00 Z to 22 March 01:00 Z:                      Northwesterly to Westerly (offshore) winds with speeds ranging from 2 to 4 m/s. Light precipitation is forecasted.

22 March 01:00 Z to 22 March 08:00 Z:                      Weak Easterly winds (onshore) are forecast with speeds around 1 to 2 m/s.

22 March 08:00 Z to end of forecast period:              Winds return to northwesterly (offshore) at 6 - 8 m/s.

Matthew Simpson  
NARAC Atmospheric Scientist

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Forecast Model: WRF

Horizontal Grid Spacing: 5 km

Vertical Levels: 44

Forecast Location: Fukushima NPP, Japan

Data Produced by Matthew Simpson (NARAC, 925 / 422-7627)

YEAR	MO	DY	HR	WSP	WDR	CLASS	Temp (2m)	RAIN
----	--	--	UTC	m/s	---	----	(C)	in/hr
2011	3	21	4	7.6	11	C	8	0.01
2011	3	21	5	6.9	19	C	8	0
2011	3	21	6	7.5	9	C	7	0
2011	3	21	7	7.5	0	D	6	0
2011	3	21	8	6.8	352	D	5	0
2011	3	21	9	3.1	318	D	4	0
2011	3	21	10	3	309	E	4	0
2011	3	21	11	2.5	325	F	3	0
2011	3	21	12	2.1	329	F	3	0
2011	3	21	13	2.4	310	D	3	0.01
2011	3	21	14	3.1	307	C	2	0.02
2011	3	21	15	3.3	277	D	3	0
2011	3	21	16	3.8	275	E	1	0
2011	3	21	17	3	288	E	2	0
2011	3	21	18	3	321	E	2	0
2011	3	21	19	2.5	329	E	2	0
2011	3	21	20	2	340	E	2	0
2011	3	21	21	3.3	332	D	2	0.01
2011	3	21	22	3.6	333	C	2	0.02
2011	3	21	23	3.2	327	C	1	0.06
2011	3	22	0	3.6	326	C	2	0.05
2011	3	22	1	2.2	318	C	3	0.03
2011	3	22	2	1.6	359	B	4	0.01
2011	3	22	3	1.5	17	B	5	0
2011	3	22	4	1.6	91	C	5	0
2011	3	22	5	2	129	C	4	0
2011	3	22	6	1.7	148	C	4	0.01
2011	3	22	7	2.3	134	C	3	0
2011	3	22	8	0.7	14	B	3	0
2011	3	22	9	0.4	207	B	3	0
2011	3	22	10	2.5	356	F	1	0
2011	3	22	11	4.9	328	C	2	0
2011	3	22	12	5.7	333	C	1	0
2011	3	22	13	5.3	334	D	0	0
2011	3	22	14	6.9	340	D	0	0
2011	3	22	15	7.6	346	D	0	0
2011	3	22	16	7.6	340	D	0	0
2011	3	22	17	6.2	333	D	-1	0

2011	3	22	18	5.7	319	D	-1	0
2011	3	22	19	7	312	D	-1	0
2011	3	22	20	6.2	306	D	-1	0
2011	3	22	21	6.5	311	D	-1	0
2011	3	22	22	8	330	C	0	0
2011	3	22	23	7.4	334	C	1	0
2011	3	23	0	7.9	335	C	2	0

**From:** Voct, Phil  
**To:** (b)(6); MHT@nnsa.doe.gov; nltops@nnsa.doe.gov; HQO Hoc; PMT02 Hoc; PMT01 Hoc; alan.fleming@nnsa.doe.gov; n330ecc@nr.doe.gov; (b)(6)  
**Cc:** n3rac@lnl.gov  
**Subject:** Latest forecast for Fukushima Daiichi 1  
**Date:** Monday, March 21, 2011 1:50:15 PM  
**Attachments:** Fukushima\_Forecast\_21March06Z.xlsx

The table below shows our WRF model forecast for the plant based on our 0600 UTC WRF run (see also attached spreadsheet).

Date	Hr (UTC)	Speed (m/s)	Dir	Stability	T (°C)	Precip
21-Mar	18	3.7	322	D	2	0
	19	3.2	326	D	2	0
	20	3.6	331	D	2	0.01
	21	5.4	343	D	0	0.02
	22	5.6	321	C	0	0.05
	23	5.2	325	C	0	0.06
22-Mar	0	4.3	336	C	1	0.04
	1	3.2	345	C	2	0.03
	2	3	347	C	3	0.02
	3	2.3	3	C	4	0
	4	3.7	37	C	4	0
	5	3.5	38	C	5	0
	6	3.9	41	C	4	0
	7	3.4	28	C	3	0
	8	2	14	C	3	0.01
	9	4.1	0	C	2	0.01
	10	2.2	307	D	2	0.01
	11	3.4	291	E	0	0
	12	4.4	322	E	0	0
	13	5.7	337	D	0	0
	14	4.7	312	D	0	0
	15	5.8	304	D	0	0
	16	7.1	305	D	0	0
	17	7.1	301	D	0	0
	18	7.1	303	D	0	0
	19	4.7	343	D	-1	0
	20	4.2	334	D	-2	0
	21	5	325	D	-3	0
	22	5.8	339	C	0	0
	23	7.7	332	C	1	0
23-Mar	0	7.6	329	C	2	0
	1	6.9	335	C	3	0
	2	8.5	326	C	4	0
	3	8.8	323	C	4	0

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23	4	8.6	332	C	4	0
23	5	9.3	322	C	4	0
23	6	8.5	327	C	4	0

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925-422-7627  
narak@llnl.gov

Date	HR	WSP	WDR	CLASS	T (°C)	RAIN
21-Mar	18	3.7	322	D		2 0
	21	19	3.2	326	D	2 0
	21	20	3.6	331	D	2 0.01
	21	21	5.4	343	D	0 0.02
	21	22	5.6	321	C	0 0.05
	21	23	5.2	325	C	0 0.06
22-Mar	0	4.3	336	C		1 0.04
	22	1	3.2	345	C	2 0.03
	22	2	3	347	C	3 0.02
	22	3	2.3	3	C	4 0
	22	4	3.7	37	C	4 0
	22	5	3.5	38	C	5 0
	22	6	3.9	41	C	4 0
	22	7	3.4	28	C	3 0
	22	8	2	14	C	3 0.01
	22	9	4.1	0	C	2 0.01
	22	10	2.2	307	D	2 0.01
	22	11	3.4	291	E	0 0
	22	12	4.4	322	E	0 0
	22	13	5.7	337	D	0 0
	22	14	4.7	312	D	0 0
	22	15	5.8	304	D	0 0
	22	16	7.1	305	D	0 0
	22	17	7.1	301	D	0 0
	22	18	7.1	303	D	0 0
	22	19	4.7	343	D	-1 0
	22	20	4.2	334	D	-2 0
	22	21	5	325	D	-3 0
	22	22	5.8	339	C	0 0
	22	23	7.7	332	C	1 0
23-Mar	0	7.6	329	C		2 0
	23	1	6.9	335	C	3 0
	23	2	8.5	326	C	4 0
	23	3	8.8	323	C	4 0
	23	4	8.6	332	C	4 0
	23	5	9.3	322	C	4 0
	23	6	8.5	327	C	4 0

**From:** Simon, Matthew D.  
**To:** HQO Hoc; PMT02 Hoc; PMT01 Hoc; CMHT@nnsa.doe.gov; nltops@nnsa.doe.gov; alan.remick@nnsa.doe.gov;  
(b)(6) ja30ecc@nr.doe.gov  
**Cc:** narac@nl.gov  
**Subject:** Update of forecast wind conditions for Fukushima Daiichi 1  
**Date:** Monday, March 21, 2011 7:57:37 PM  
**Attachments:** WRF Fukushima NPP Forecast 2011-03-21 18Z (5km).xlsx

---

Please find attached a spreadsheet containing the latest forecast wind conditions at the Fukushima Power Plant.

The forecast time series is derived from the latest NARAC WRF simulation with 5 km horizontal grid spacing.

NOTE: Period of onshore wind during forecast period.

Fukushima Power Plant Forecast Summary:

22 March 00:00 Z to 22 March 09:00 Z: Northerly to Northeasterly (onshore) winds  
with speeds around 3 to 4 m/s.

22 March 09:00 Z to end of forecast period: Northerly to Northwesterly wind directions with  
wind speeds around 4 to 6 m/s. Periods of moderate precipitation, three-tenths of an inch of rain  
forecasted.

Matthew Simpson  
NARAC Atmospheric Scientist

HHH/151

Forecast Model: WRF

Horizontal Grid Spacing: 5 km

Vertical Levels: 44

Forecast Location: Fukushima NPP, Japan

Data Produced by Matthew Simpson (NARAC, 925 / 422-7627)

YEAR	MO	DY	HR	WSP	WDR	CLASS	Temp (2m)	RAIN
----	--	--	UTC	m/s	---	----	(C)	in/hr
2011	3	22	0	4.7	354	C	3	0
2011	3	22	1	4.7	13	C	5	0
2011	3	22	2	4.5	12	C	5	0
2011	3	22	3	4.1	26	C	6	0
2011	3	22	4	3.7	43	C	6	0
2011	3	22	5	2.3	48	C	5	0
2011	3	22	6	3	61	C	6	0
2011	3	22	7	2.6	72	C	5	0
2011	3	22	8	1.6	99	E	4	0
2011	3	22	9	0.8	353	F	3	0
2011	3	22	10	2.3	299	F	2	0
2011	3	22	11	2.6	289	D	3	0
2011	3	22	12	2.1	306	D	3	0.02
2011	3	22	13	2.7	331	D	3	0.02
2011	3	22	14	5.2	7	C	2	0.01
2011	3	22	15	5.3	343	C	1	0.04
2011	3	22	16	4.8	341	C	0	0.04
2011	3	22	17	5.9	335	D	0	0.03
2011	3	22	18	6.3	339	D	0	0.02
2011	3	22	19	5.2	342	D	0	0.04
2011	3	22	20	5.4	342	D	0	0.04
2011	3	22	21	5.7	344	D	0	0.02
2011	3	22	22	4.8	340	C	0	0
2011	3	22	23	5.8	338	C	1	0
2011	3	23	0	5.5	349	C	2	0
2011	3	23	1	5.7	0	C	3	0
2011	3	23	2	5.1	10	C	4	0
2011	3	23	3	5.1	12	C	5	0
2011	3	23	4	6.5	13	C	4	0
2011	3	23	5	5.4	8	C	3	0
2011	3	23	6	4.9	21	C	1	0.03
2011	3	23	7	2.5	340	C	1	0.02
2011	3	23	8	4.9	325	D	0	0
2011	3	23	9	5.8	308	D	-1	0
2011	3	23	10	6.3	311	D	-1	0
2011	3	23	11	6.7	309	D	-1	0
2011	3	23	12	6.3	300	D	-2	0
2011	3	23	13	5.7	299	D	-2	0

2011	3	23	14	3.7	296	E	-2	0
2011	3	23	15	4.3	289	E	-2	0
2011	3	23	16	3.8	280	E	-2	0
2011	3	23	17	3.6	271	E	-3	0
2011	3	23	18	4.5	267	D	-2	0

**Howell, Art**

---

**From:** Maier, Bill  
**Sent:** Wednesday, March 23, 2011 10:10 AM  
**To:** Turtill, Richard; OST05 Hoc; LIA04 Hoc; McNamara, Nancy; Tiff, Doug; Trojanowski, Robert; Woodruff, Gena; Barker, Allan; Logaras, Herral; Erickson, Randy; Browder, Rachel  
**Cc:** Howell, Linda; Howell, Art; Collins, Elmo  
**Subject:** FW: Modeling Results from DOE Publicly Posted

Here is what DOE is posting based on the AMS flyovers.

Bill Maier

---

**From:** Hartson, Sarah [<mailto:sarah.hartson@oak.doe.gov>]  
**Sent:** Wednesday, March 23, 2011 9:20 AM  
**To:** [Lee.Shin@calema.ca.gov](mailto:Lee.Shin@calema.ca.gov); Maier, Bill; [Jerold.fenner@hhs.gov](mailto:Jerold.fenner@hhs.gov); [Robberson.Bill@epamail.epa.gov](mailto:Robberson.Bill@epamail.epa.gov); Lusk, Jeff  
**Cc:** NITOPS; Gipson, Anthony  
**Subject:** Modeling Results

Guys, Please follow the link below for the latest press release from DOE on modeling efforts in Japan. Thanks, Sarah

[www.energy.gov/japan2011](http://www.energy.gov/japan2011)

Sarah Hartson  
Regional Response Coordinator  
RAP Region 7  
NNSA/Livermore Site Office  
Operations Management  
Ph: (925) 423-3250  
Fax: (925) 422-2832  
Cell: (b)(6)  
Cell (Blackberry): (b)(6)  
Pager: (b)(6)

4/15/11

**From:** Koshy, Thomas  
**To:** Case, Michael  
**Subject:** RE: Nominees for 3rd Team to Japan  
**Date:** Thursday, March 24, 2011 2:58:15 PM

(b)(6)  
(b)(6)  
I have (b)(6) also. 6

**Thomas Koshy, Chief**  
**Mechanical & Electrical Engineering Branch**  
**Division of Engineering**  
**Office of Research**  
**U S Nuclear Regulatory Commission**  
**Tel: (301) 251-7663**

**From:** Case, Michael  
**Sent:** Thursday, March 24, 2011 1:58 PM  
**To:** Hogan, Rosemary; Boyce, Tom (RES); Csontos, Aladar; Koshy, Thomas; Sydnor, Russell; Gavrilas, Mirela  
**Cc:** Richards, Stuart; Rivera-Lugo, Richard  
**Subject:** FW: Nominees for 3rd Team to Japan

Hey folks. Can you take a look at the attached to see if we have any nominees for the 3<sup>rd</sup> team to Japan? They are looking for severe accident, SAMG, B.5.b, and accident recovery skills that are not traditional DE skills but we may have folks out there with hidden talents.

Let me know names as soon as you can but before Monday 0900.

For your info, they are putting together the task force doing the 90 day evaluation of the Japan event. So far, Marty Virgilio is the head and is joined on the team by Gary Holahan, Charlie Miller, Jack Grobe, Bruce Mallet, an OGC rep, an admin rep and Nathan Sanfilippo from the EDO's staff.

**From:** Case, Michael  
**Sent:** Thursday, March 24, 2011 1:47 PM  
**To:** Coyne, Kevin; Correia, Richard; Gibson, Kathy; Richards, Stuart; Case, Michael  
**Cc:** Rini, Brett; Sheron, Brian; Uhle, Jennifer  
**Subject:** Nominees for 3rd Team to Japan

The Agency is trying to put together another team to go to Japan leaving on or about April 2<sup>nd</sup> and returning April 16<sup>th</sup>. They are seeking individuals willing to go with skills in the following areas:

Severe Accident Management Knowledge  
B.5.b Knowledge

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Accident Recovery Knowledge  
Political Savvy

Additional background info is on the attached sheet. **Please forward your nominees to Brian/Jennifer/Brett by 0800 Monday** (due at noon to Michele Evans). DSA currently has one nominee that will be forwarded shortly. Background info on nominated candidates should include the person's skills in relation to those identified areas above, any OD endorsement, and passport status.

## Ng, Raymond

---

**From:** Passehl, Dave  
**Sent:** Friday, March 25, 2011 2:17 PM  
**To:** Valos, Nicholas  
**Subject:** RE: PROMPT ACTION REQUIRED: Looking for Third Team for Japan Support

Nick you are going to make the world a safer place. They picked the right guy.

Dave Passehl  
SRA Region III  
630.829.9872

---

**From:** Valos, Nicholas  
**Sent:** Friday, March 25, 2011 1:50 PM  
**To:** Lara, Julio  
**Subject:** RE: PROMPT ACTION REQUIRED: Looking for Third Team for Japan Support

Julio,

See attached file on my qualifications for the assignment. Feel free to shorten the write up.

Nick

---

**From:** Lara, Julio  
**Sent:** Friday, March 25, 2011 12:22 PM  
**To:** Valos, Nicholas  
**Subject:** FW: PROMPT ACTION REQUIRED: Looking for Third Team for Japan Support  
**Importance:** High

---

**From:** Lara, Julio  
**Sent:** Friday, March 25, 2011 12:14 PM  
**To:** West, Steven  
**Cc:** Shear, Gary  
**Subject:** RE: PROMPT ACTION REQUIRED: Looking for Third Team for Japan Support  
**Importance:** High

Nick Valos is interested and can support. I believe he has the requisite background and experience (former licensed SRO, Chief Examiner in all reactor technologies, lead Regional inspector in B.5.b inspections, well-versed in severe accident mitigation strategies. I fully endorse him as candidate.

However, he does

(b)(6)

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**From:** West, Steven  
**Sent:** Friday, March 25, 2011 7:39 AM  
**To:** Cameron, Jamnes; Duncan, Eric; Giessner, John; Kunowski, Michael; Lara, Julio; Riemer, Kenneth; Ring, Mark  
**Cc:** Shear, Gary; Reynolds, Steven; Boland, Anne; Loudon, Patrick; Satorius, Mark; Pederson, Cynthia  
**Subject:** PROMPT ACTION REQUIRED: Looking for Third Team for Japan Support

This is a very quick turnaround request. I need your reply no later than first thing Monday (03/28) morning; say prior to the 8:15 meeting.

The agency is planning to replace the current site team in Japan. The third team will include four staff members with a collective, good understanding of severe accident management, B5b, and accident recovery.

Specifically, we are looking for staff with all or some of the following skill sets who are willing to travel to Japan on or about April 2. They would return to the States on about April 16.

- a. Severe Accident management knowledge
- b. B5b knowledge
- c. Accident Recovery knowledge

To maintain our safety focus, we have been reluctant to nominate resident inspectors for assignment in Japan. However, given that the focus is now on a very narrow skill set for a short period of time, if any of our residents have the requisite skills, we would consider nominating them for this assignment.

Please give me the names of anyone in your branch, yourself included, who you believe we should consider for this assignment. Anyone selected will need to provide a brief summary of their background as it applies to the above skill sets. I know there are many who would like to volunteer and help, but it's important that we only nominate individuals who match the requested skill sets.

Steve

**Steven West, Director**  
Division of Reactor Projects  
NRC, Region III  
630-829-9600  
[Steven.West@nrc.gov](mailto:Steven.West@nrc.gov)



**Beasley, Benjamin**

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**From:** Beasley, Benjamin  
**Sent:** Friday, March 25, 2011 10:02 AM  
**To:** Coyne, Kevin  
**Subject:** FW: Volunteers Needed - Reactor Safety Team Support for Ops Center

Kevin,

Four from OEGIB are willing.

Ben

---

**From:** Beasley, Benjamin  
**Sent:** Friday, March 25, 2011 9:32 AM  
**To:** Criscione, Lawrence; Lane, John; Kauffman, John; Ibarra, Jose  
**Subject:** FW: Volunteers Needed - Reactor Safety Team Support for Ops Center

Still interested? I would like an affirmative response before I send your name up.

Name	Availability	Experience	IRC day shift	IRC evening shift	IRC night shift	Japan
Ben Beasley	Immediately	Systems analysis, severe accidents	Yes	Yes	Yes	(b)(6)
Larry Criscione	Immediately	Systems analysis, operations	Yes	Yes	Yes	Yes
Jose Ibarra	Immediately	Systems analysis	Yes	Yes	No	(b)(6)
John Lane	Immediately	Severe accidents, Containment systems	No	Yes	Yes	Yes

---

**From:** Coyne, Kevin  
**Sent:** Friday, March 25, 2011 9:10 AM  
**To:** RES\_DRA  
**Subject:** Volunteers Needed - Reactor Safety Team Support for Ops Center

Good morning –

We just received a request from the ops center for volunteers for reactor safety team support. The critical needs are for folks with a strong background in systems analysis (including containments), severe accidents, and Level 2/3 PRA.

If you can support, please provide your name and availability to me by 11:30 am. I know we collected names last week, but please go ahead and resubmit your name if you are still interested in helping out.

Thanks!

14/155



**Kauffman, John**

---

**From:** Kauffman, John  
**Sent:** Friday, March 25, 2011 9:38 AM  
**To:** Beasley, Benjamin  
**Subject:** RE: Volunteers Needed - Reactor Safety Team Support for Ops Center

Ben,  
(b)(6)

**From:** Beasley, Benjamin  
**Sent:** Friday, March 25, 2011 9:32 AM  
**To:** Criscione, Lawrence; Lane, John; Kauffman, John; Ibarra, Jose  
**Subject:** FW: Volunteers Needed - Reactor Safety Team Support for Ops Center

Still interested? I would like an affirmative response before I send your name up.

Name	Availability	Experience	IRC day shift	IRC evening shift	IRC night shift	Japan
Ben Beasley	Immediately	Systems analysis, severe accidents	Yes	Yes	Yes	(b)(6)
Larry Criscione	Immediately	Systems analysis, operations	Yes	Yes	Yes	Yes
Jose Ibarra	Immediately	Systems analysis	Yes	Yes	No	(b)(6)
John Kauffman	Immediately	Systems analysis (Mark I SRO)	Yes	Yes	Yes	Yes
John Lane	Immediately	Severe accidents, Containment systems	No	Yes	Yes	Yes

---

**From:** Coyne, Kevin  
**Sent:** Friday, March 25, 2011 9:10 AM  
**To:** RES\_DRA  
**Subject:** Volunteers Needed - Reactor Safety Team Support for Ops Center

Good morning –

We just received a request from the ops center for volunteers for reactor safety team support. The critical needs are for folks with a strong background in systems analysis (including containments), severe accidents, and Level 2/3 PRA.

If you can support, please provide your name and availability to me by 11:30 am. I know we collected names last week, but please go ahead and resubmit your name if you are still interested in helping out.

144/156



Thanks!

Kevin

**From:** [Sydnor, Russell](#)  
**To:** [Case, Michael](#)  
**Cc:** [Richards, Stuart](#)  
**Subject:** FW: Nominees for 3rd Team to Japan  
**Date:** Friday, March 25, 2011 8:11:53 AM

Mike, I have one potential candidate from (b)(6). He does not have the technical skill set listed below, but does have some background in international relations that may be considered.

Russ

**From:** Hardin, Leroy  
**Sent:** Thursday, March 24, 2011 2:06 PM  
**To:** Sydnor, Russell  
**Subject:** RE: Nominees for 3rd Team to Japan

(b)(6)

**From:** Sydnor, Russell  
**Sent:** Thursday, March 24, 2011 2:03 PM  
**To:** Betancourt, Luis; Birla, Sushil; Burton, Thomas; Concepcion, Milton; Dion, Jeanne; Halverson, Derek; Hardin, Leroy; Rebstock, Paul; Sturzebecher, Karl; Waterman, Michael; Yang, Yaguang  
**Subject:** FW: Nominees for 3rd Team to Japan

If any of you have skill sets listed in the attached and would be available for a temporary duty, let me know ASAP>

Russell Sydnor  
Branch Chief  
NRC/RES/DE/DICB  
301-251-7405  
[Russell.Sydnor@nrc.gov](mailto:Russell.Sydnor@nrc.gov)

**From:** Case, Michael  
**Sent:** Thursday, March 24, 2011 1:58 PM  
**To:** Hogan, Rosemary; Boyce, Tom (RES); Csontos, Aladar; Koshy, Thomas; Sydnor, Russell; Gavrilas, Mirela  
**Cc:** Richards, Stuart; Rivera-Lugo, Richard  
**Subject:** FW: Nominees for 3rd Team to Japan

Hey folks. Can you take a look at the attached to see if we have any nominees for the 3<sup>rd</sup> team to Japan? They are looking for severe accident, SAMG, B.5.b, and accident recovery skills that are not traditional DE skills but we may have folks out there with hidden talents.

Let me know names as soon as you can but before Monday 0900.

44/157

For your info, they are putting together the task force doing the 90 day evaluation of the Japan event. So far, Marty Virgilio is the head and is joined on the team by Gary Holahan, Charlie Miller, Jack Grobe, Bruce Mallet, an OGC rep, an admin rep and Nathan Sanfilippo from the EDO's staff.

**From:** Case, Michael

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

**To:** Coyne, Kevin; Correia, Richard; Gibson, Kathy; Richards, Stuart; Case, Michael

**Cc:** Rini, Brett; Sheron, Brian; Uhle, Jennifer

**Subject:** Nominees for 3rd Team to Japan

The Agency is trying to put together another team to go to Japan leaving on or about April 2<sup>nd</sup> and returning April 16<sup>th</sup>. They are seeking individuals willing to go with skills in the following areas:

Severe Accident Management Knowledge

B.5.b Knowledge

Accident Recovery Knowledge

Political Savvy

Additional background info is on the attached sheet. **Please forward your nominees to Brian/Jennifer/Brett by 0800 Monday** (due at noon to Michele Evans). DSA currently has one nominee that will be forwarded shortly. Background info on nominated candidates should include the person's skills in relation to those identified areas above, any OD endorsement, and passport status.

**Pruett, Troy**

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**From:** Vegel, Anton  
**Sent:** Monday, March 28, 2011 7:53 PM  
**To:** Pruet, Troy; Kennedy, Kriss; Howell, Art  
**Cc:** Farnholtz, Thomas; Lantz, Ryan; Maier, Bill  
**Subject:** Fw: California Coastal Commission Report on the Implications of the Tohoku Earthquake to Coastal California

Fyi!

---

**From:** Wang, Alan  
**To:** Hay, Michael; Vegel, Anton; Dricks, Victor; Uselding, Lara; Peck, Michael; Miller, Geoffrey  
**Sent:** Mon Mar 28 19:20:20 2011  
**Subject:** FW: California Coastal Commission Report on the Implications of the Tohoku Earthquake to Coastal California

FYI The California Coastal Commission has prepared a preliminary report on the implications of the Tohoku Earthquake to coastal California, and it has just been released. It can be found at:

[http://www.coastal.ca.gov/energy/Tohoku\\_Earthquake\\_Report.pdf](http://www.coastal.ca.gov/energy/Tohoku_Earthquake_Report.pdf)

Alan

---

**From:** Kammerer, Annie  
**Sent:** Monday, March 28, 2011 5:43 PM  
**To:** OPA Resource; Burnell, Scott; Harrington, Holly; McIntyre, David  
**Cc:** Ake, Jon; Munson, Clifford; Bensi, Michelle; Weaver, Thomas; Hogan, Rosemary; Markley, Michael; Polickoski, James; Wang, Alan  
**Subject:** FW: California Coastal Commission Report on the Implications of the Tohoku Earthquake to Coastal California

FYI. The California Coastal Commission has issued a report that is of interest.

Dr. Annie Kammerer, P.E.  
US NRC/RES/DE  
(301) 251-7695 Office

(b)(6) Mobile

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**From:** Barbara Byron [<mailto:Bbyron@energy.state.ca.us>]  
**Sent:** Monday, March 28, 2011 1:35 PM  
**To:** Kammerer, Annie  
**Subject:** California Coastal Commission Report on the Implications of the Tohoku Earthquake to Coastal California

Our California Coastal Commission prepared a preliminary report on the implications of the Tohoku Earthquake to coastal California, and it has just been released. It can be found at:

HH/158

[http://www.coastal.ca.gov/energy/Tohoku\\_Earthquake\\_Report.pdf](http://www.coastal.ca.gov/energy/Tohoku_Earthquake_Report.pdf)

This is a public document; feel free to share this link with any who might be interested.

## Howell, Art

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**From:** Collins, Elmo  
**Sent:** Monday, March 28, 2011 12:18 PM  
**To:** Howell, Art  
**Subject:** FW: Draft task force charter  
**Attachments:** Draft charter.docx  
  
**Importance:** High

---

**From:** Sanfilippo, Nathan  
**Sent:** Monday, March 28, 2011 11:38 AM  
**To:** Leeds, Eric; Johnson, Michael; Wiggins, Jim; Moore, Scott; Haney, Catherine; Sheron, Brian; Burns, Stephen; Dean, Bill; McCree, Victor; Satorius, Mark; Collins, Elmo; Zimmerman, Roy; Lew, David  
**Cc:** Grobe, Jack; Holahan, Gary; Miller, Charles; Virgilio, Martin; Davidson, Cynthia; Borchardt, Bill; Weber, Michael  
**Subject:** Draft task force charter  
**Importance:** High

All,

Attached is the draft task force charter for discussion at today's 4 PM teleconference.

**If you'd prefer to gather in person at HQ, the team will be in T-6C1.**

BRIDGELINE: 888-390-1019 PASSCODE (b)(6)

Thanks,  
Nathan

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**From:** Sanfilippo, Nathan  
**Sent:** Friday, March 25, 2011 4:16 PM  
**To:** Leeds, Eric; Johnson, Michael; Wiggins, Jim; Moore, Scott; Haney, Catherine; Sheron, Brian; Burns, Stephen; Dean, Bill; McCree, Victor; Satorius, Mark; Collins, Elmo; Zimmerman, Roy  
**Cc:** Grobe, Jack; Holahan, Gary; Miller, Charles; Virgilio, Martin  
**Subject:** Monday's telecon to discuss the draft task force charter  
**Importance:** High

All,

I just wanted to give you a little background for the scheduler you received for a Monday 4 PM teleconference.

The senior level agency task force to evaluate the need for agency actions following the events in Japan has been formed. It will be led by Charlie Miller, and includes Gary Holahan, Jack Grobe, and myself. The task force is writing its charter and will have a draft ready around lunchtime on Monday. We intend to send you that draft so it can be discussed at the 4 PM teleconference, at which time feedback is welcome. We realize this is a short turnaround, but we wanted to involve you as we finalize the charter, get it approved, and get to work – as the clock is ticking.

Thanks for your support on Monday – and feel free to have someone else sit in on the call if you are not available.

Thanks,

144/1519

Nathan

***Nathan Sanfilippo***

Executive Technical Assistant  
Office of the Executive Director for Operations  
U.S. Nuclear Regulatory Commission  
301.415.3951  
[nathan.sanfilippo@nrc.gov](mailto:nathan.sanfilippo@nrc.gov)

**Nelson, Robert**

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**From:** Nelson, Robert *NR*  
**Sent:** Tuesday, March 29, 2011 2:29 PM  
**To:** Cheok, Michael  
**Cc:** Giitter, Joseph  
**Subject:** RE: ACTION:: nonimations for the NEA high level task group on Fukushima  
**Attachments:** image001.gif

(b)(6)

NELSON

**From:** Cheok, Michael *NR*  
**Sent:** Tuesday, March 29, 2011 2:06 PM  
**To:** Bahadur, Sher; Blount, Tom; Brown, Frederick; Cheok, Michael; Evans, Michele; Galloway, Melanie; Giitter, Joseph; Givvines, Mary; Hiland, Patrick; Holian, Brian; Howe, Allen; Lee, Samson; Lubinski, John; McGinty, Tim; Nelson, Robert; Quay, Theodore; Ruland, William; Skeen, David; Westreich, Barry; Thomas, Brian  
**Cc:** Silk, Anne  
**Subject:** FW: ACTION:: nonimations for the NEA high level task group on Fukushima

As discussed at the LT meeting this morning, the ET is looking for nominees from the LT for the NEA task group evaluating lessons-learned from the Fukushima event. The nominees should be a NRR SES. The initial meeting for this NEA group is likely to be in May in Paris. See attached for more details. This NRC representative would obviously be working with our NRC Near Term task group (Charlie, Jack Gary) to trade lessons-learned etc.

The LT decision this morning was for each LT member to indicate interest (i.e., self nominate) to me (via e-mail by next Monday, 4/4), and I will compile the names for the LT to determine a list of 3 people to forward to the ET. We will do this during the Tuesday (4/5) LT meeting (Anne – please put this on the schedule). Eric would like to get the nominees by mid next week.

Thanks

**From:** Leeds, Eric *NR*  
**Sent:** Tuesday, March 29, 2011 7:48 AM  
**To:** Cheok, Michael  
**Cc:** Ruland, William; Grobe, Jack; Boger, Bruce; Virgilio, Martin; Miller, Charles; Johnson, Michael; Astwood, Heather; Rosales-Cooper, Cindy; Cullingford, Michael  
**Subject:** ACTION:: CNRA conference call notes and actions

Mike –

As Chair of the LT, please see the attachment for the assignment that we discussed yesterday. As we discussed, I'd like a member of the expanded LT to be a key contributor to the international NEA task group evaluating the impact of the Fukushima event. I'll look forward to receiving the names of potential candidates.

Thanks!

Eric J. Leeds, Director  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission

*4/4/11 60*

301-415-1270

**From:** [Diane.JACKSON@oecd.org](mailto:Diane.JACKSON@oecd.org) [mailto:[Diane.JACKSON@oecd.org](mailto:Diane.JACKSON@oecd.org)]

**Sent:** Tuesday, March 29, 2011 4:41 AM

**To:** [greg.rzentkowski@cnsccsn.gc.ca](mailto:greg.rzentkowski@cnsccsn.gc.ca); [jean-christophe.niel@asn.fr](mailto:jean-christophe.niel@asn.fr); [nakamura-koichiro1@meti.go.jp](mailto:nakamura-koichiro1@meti.go.jp); [adeline.clos@asn.fr](mailto:adeline.clos@asn.fr); Cullingford, Michael; Astwood, Heather; [mike.weightman@hse.gsi.gov.uk](mailto:mike.weightman@hse.gsi.gov.uk); [michael.hertrich@bmu.bund.de](mailto:michael.hertrich@bmu.bund.de); [ohmura-tetsuo@meti.go.jp](mailto:ohmura-tetsuo@meti.go.jp); [len.creswell@hse.gsi.gov.uk](mailto:len.creswell@hse.gsi.gov.uk); [marta.ziakova@ujd.gov.sk](mailto:marta.ziakova@ujd.gov.sk); Leeds, Eric; Johnson, Michael

**Subject:** CNRA conference call notes and actions

Dear CNRA bureau members –

The CNRA Chair and Vice-chairs held a conference call yesterday evening to discuss CNRA actions in response to the Fukushima events. Please find attached the notes and actions from the conference call. Comments are always welcome.

Best,



**Diane Jackson**, Nuclear Safety Specialist  
Nuclear Safety Division, OECD Nuclear Energy Agency (NEA)  
Tel.: +33 (0)1 45 24 10 55, [Diane.Jackson@oecd.org](mailto:Diane.Jackson@oecd.org)

## Howell, Art

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**From:** Kennedy, Kriss  
**Sent:** Wednesday, March 30, 2011 4:09 PM  
**To:** Howell, Art; Veigel, Anton; Pruett, Troy  
**Subject:** FW: Third NRC Team to Japan  
**Attachments:** 3rd Staff Deployment to Japan Final.docx

FYI

**From:** Evans, Michele  
**Sent:** Wednesday, March 30, 2011 3:29 PM  
**To:** Call, Michel; Salay, Michael; Hay, Michael; Bernhard, Rudolph; LIA03 Hoc; LIA02 Hoc  
**Cc:** Doane, Margaret; Mamish, Nader; Lee, Richard; Case, Michael; Sheron, Brian; Haney, Catherine; Ordaz, Vonna; McCree, Victor; Kennedy, Kriss; Casto, Chuck; Monninger, John; Virgilio, Martin; Weber, Michael; Borchardt, Bill; Bahadur, Sher; Ruland, William; Leeds, Eric; Johnson, Michael; Holahan, Gary; Pederson, Cynthia; Camper, Larry; Wiggins, Jim; Dorman, Dan; Collins, Elmo  
**Subject:** Third NRC Team to Japan

Thank you for volunteering for deployment to Japan. This work is of highest priority for the agency and your efforts are enormously appreciated.

At this time we've identified 4 additional technical staff to support the team in Japan. **The plan is for Mike Salay (RES), Michel Call (NMSS), Mike Hay (RIV), and Rudy Bernhard (RIL) to leave the USA on Saturday, April 2.** The intent is that your stay will be two weeks or less.

An additional staff member with International Programs expertise will be identified by OIP to support and provide relief in the near term.

The Operations Center Liaison Team (LT) will be contacting you later today to handle the logistic for your trip. This includes items such as flights, passports, country clearances, health immunizations, international blackberry service, dosimetry and KI tablets.

In addition, HR has requested that I provide you the information below:

-Please contact NRC Health Services at your earliest convenience on 301-415-8400 to schedule an appointment with Dr. Cadoux for health screening and counseling. If at all possible, it is important that you meet with Dr. Cadoux face-to-face. However, if you are located in the Region or if you are notified and deployed in a very short time frame so that medical screening is not possible, this screening will be conducted by phone. Please be aware that medical services available in Tokyo are limited at this time. Additionally, working conditions are such that controlling diet, sleep, exercise, and routine may be impossible. All of these factors can impact your health. Please review any medical conditions that you may have with Dr. Cadoux so that he can provide you with advice and counseling on managing your medical condition while deployed.

-Before you deploy we recommend that you speak briefly with the NRC Employee Assistance Program counselor, Sarah Linnerooth. Sarah can be reached on 301-415-7113. While you are deployed, EAP services are available to both you and your family, including extended family members such as Grandparents. The telephone number for EAP service is 1-800-896-0276. More information is available on the EAP on the web at [www.eapconsultants.com](http://www.eapconsultants.com). To learn more about the EAP and the services provided click on the member services tab. The NRC passcode is "nuclear". Please be sure to share this information with your family.

At this point, I ask that you hold any questions that you may have until the LT contacts you directly. However, after that time, if you have any additional questions or concerns that have not been addressed, please call or email me.

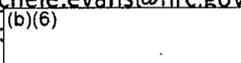
• Thank you.

*Michele Evans*

**Acting Deputy OD, NSIR**

[Michele.evans@nrc.gov](mailto:Michele.evans@nrc.gov)

BB: (b)(6)



**Baca, Bernadette**

---

**From:** Alferink, Beth  
**Sent:** Wednesday, March 30, 2011 11:36 AM  
**To:** Hay, Michael  
**Cc:** Andrews, Tom  
**Subject:** NISA webpage

<http://www.nisa.meti.go.jp/english/>

*Beth S. Alferink*  
Emergency Response Coordinator

US Nuclear Regulatory Commission - Region IV  
612 E. Lamar Blvd., Suite 400  
Arlington, TX 76011

[Beth.Alferink@nrc.gov](mailto:Beth.Alferink@nrc.gov)

(817)860-8169 (office)

(b)(6) (mobile)

44/162

## Howell, Art

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**From:** Leeds, Eric  
**Sent:** Thursday, March 31, 2011 3:05 PM  
**To:** Dean, Bill; Lew, David; McCree, Victor; Wert, Leonard; Satorius, Mark; Pederson, Cynthia; Reynolds, Steven; Howell, Art; Kennedy, Kriss  
**Cc:** Wiggins, Jim; Evans, Michele; Sheron, Brian; Uhle, Jennifer; Johnson, Michael; Flanders, Scott; Grobe, Jack; Miller, Charles; Holahan, Gary  
**Subject:** FYI: NRR Comm Team SitRep - 3/31

Please see below. I highly recommend you click on the link and check out the site – much more user friendly. Making progress!

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

---

**From:** Nelson, Robert  
**Sent:** Thursday, March 31, 2011 3:15 PM  
**To:** Leeds, Eric; Grobe, Jack; Boger, Bruce; LIA06 Hoc; Steger (Tucci), Christine; Landau, Mindy; Roberts, Darrell; Kennedy, Kriss; Lara, Julio; Croteau, Rick; Burnell, Scott; Bahadur, Sher; Blount, Tom; Brown, Frederick; Cheok, Michael; Evans, Michele; Ferrell, Kimberly; Galloway, Melanie; Giitter, Joseph; Givvines, Mary; Hiland, Patrick; Holian, Brian; Howe, Allen; Lee, Samson; Lubinski, John; McGinty, Tim; Quay, Theodore; Ruland, William; Skeen, David; Thomas, Brian; Westreich, Barry  
**Cc:** Burkhardt, Janet; Orf, Tracy; Broaddus, Doug; Campbell, Stephen; Carlson, Robert; Chernoff, Harold; Kulesa, Gloria; Markley, Michael; Pascarelli, Robert; Salgado, Nancy; Simms, Sophonia; Wall, Scott; Guzman, Richard; Lyon, Fred; Meighan, Sean; Nguyen, Quynh; Oesterle, Eric; Polickoski, James; Tam, Peter; Thomas, Eric  
**Subject:** FYI: NRR Comm Team SitRep - 3/31

1. NRR Q&A database is up & running. Try it, you'll like it! Link:

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

All have read access. Updates limited to selected NRR/DORL staff. Suggested additional Qs & As should be sent to Mike Markley & Eric Oesterle

Kudos to Mike Markley, Tracey Orf, Eric Oesterle & Janet Burkhardt for their ingenuity, creativity and efforts to envision and develop this tool in a very short period of time while managing the overall NRR Q&A process.

2. Met with Mindy Landau and her staff to coordinate communication activities.
3. Updated/developed 3 EPZ Qs & As; added to the database.
4. Continued to work with Eric Leeds on NGA presentation for 4/4.
5. Heads-Up: We got another expansive FOIA, this one from Greenpeace.
6. Short turnaround green tickets are beginning to impact licensing activities. Details to follow in e-mail with narrower distribution.

*R. A. Nelson*

Robert A. Nelson  
NRR External Communications Coordinator, Japan Event  
Deputy Director  
Division of Operating Reactor Licensing

4/4/11/3

Office of Nuclear Reactor Regulation



United States Nuclear Regulatory Commission  
*Protecting People and the Environment*

☒ E-mail: [robert.nelson@nrc.gov](mailto:robert.nelson@nrc.gov) | ☎ Office: (301) 415-1453 | 📱 Cell: (b)(6) | 📠 Fax: (301) 415-2102

PS I turn 61 on Sunday

## Howell, Art

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**From:** Kennedy, Kriss  
**Sent:** Thursday, March 31, 2011 9:54 AM  
**To:** Uselding, Lara; Dricks, Victor; Maier, Bill; Walker, Wayne; Miller, Geoffrey; Gaddy, Vincent; Lantz, Ryan; Clark, Jeff; Howell, Art; Collins, Elmo; Vogel, Anton  
**Cc:** Pruet, Troy  
**Subject:** FW: Updated EPZ Qs & As  
**Attachments:** Evac to 50 QA\_OPA approved.docx

**Importance:** High

FYI

**From:** Nelson, Robert  
**Sent:** Thursday, March 31, 2011 9:04 AM  
**To:** Roberts, Darrell; Croteau, Rick; Lara, Julio; Kennedy, Kriss; LIA06 Hoc; Landau, Mindy  
**Cc:** West, Steven; Shear, Gary; Hay, Michael; Guzman, Richard; Lyon, Fred; Markley, Michael; Meighan, Sean; Nguyen, Quynh; Oesterle, Eric; Polickoski, James; Tam, Peter; Thomas, Eric  
**Subject:** FYI: Updated EPZ Qs & As  
**Importance:** High

The attached Q&As on the 50-mile EPZ have been finalized and vetted through OPA and are approved for use.

*Robert A. Nelson*

Robert A. Nelson  
NRR External Communications Coordinator, Japan Event  
Deputy Director  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation



E-mail: [robert.nelson@nrc.gov](mailto:robert.nelson@nrc.gov) | Office: (301) 415-1453 | Cell: (b)(6) | Fax: (301) 415-2102

174/164

**Q: Is there a 50-mile emergency planning zone (EPZ) around U.S. reactors?**

There are two emergency planning zones (EPZ) established around a nuclear power plant. The first zone, the 10-mile EPZ, is where exposure from a radiological release event would likely be from the radioactive plume and it is in this EPZ where protective actions such as sheltering and/or evacuation would be appropriate. Beyond the 10-mile EPZ and out to the 50-mile EPZ is the ingestion exposure pathway where exposure to radionuclides would likely be from ingestion of contaminated food/milk and surface water. These zones are not limits but rather provide for a comprehensive emergency planning framework that would allow expansion of the response efforts beyond the zones should radiological conditions warrant such expansion.

**Q. Why did the NRC decide to recommend evacuation out to 50 miles from the Fukushima Daiichi facility for U.S. citizens in Japan?**

The decision to expand evacuation of U.S. citizens out to 50 miles from the Fukushima Daiichi facility was a conservative decision that was made out of consideration of several factors including an abundance of caution resulting from limited and unverifiable information concerning event progression at several units at the Fukushima Daiichi facility. The NRC based its assessment on information available at the time regarding the condition of the units conditions at Fukushima Daiichi that included significant damage to Units 1, 2, and 3 that appeared to be a result of hydrogen explosions. Prior to the earthquake and tsunami, Unit 4 was in a refueling outage and its entire core had been transferred to the spent fuel pool only 3 months earlier so the fuel was quite fresh. Radiation monitors showed significantly elevated readings in some areas of the plant site which would challenge plant crews attempting to stabilize the plant. Based on analysis results, there were indications from some offsite contamination sampling smears that fuel damage had occurred. There was a level of uncertainty about whether or not efforts to stabilize the plant in the very near term were going to be successful. Changing meteorological conditions resulted in the winds shifting rapidly from blowing out to sea to blowing back onto land.

**Q. How did the NRC develop its computer-based projections that supported the evacuation decision?**

The NRC uses the RASCAL computer code to perform offsite radiation dose projections. The RASCAL computer program contains information about U.S. nuclear reactor design types, radiation release pathways from the nuclear power plant to the environment, radionuclide source terms and meteorology. However, RASCAL is not capable of evaluating concurrent and multiple nuclear plant failures. So, to approximate the events unfolding at the Fukushima Daiichi facility, the NRC developed a model that aggregated information from the three operating reactors and the spent fuel pool. This aggregate

model was then evaluated using the RASCAL computer code. The radiation doses calculated by the RASCAL code were predicted to exceed the protective action guidelines (PAGs) established by the U.S. Environmental Protection Agency (EPA) well beyond the 10-mile exposure pathway EPZ and beyond the 30 kilometer sheltering zone recommended by the Japanese authorities. Subsequent aerial monitoring by the U.S. Department of Energy (DOE) fixed-wing aircraft monitoring showed elevated radiation dose rates that were in excess of the EPA relocation PAGs to a distance beyond 25 miles from the facility.

**Q. Did the NRC consult the Department of Energy (DOE) or the Nuclear Energy Institute (NEI) for assistance in developing the protective action recommendation?**

Although the DOE assisted in providing radiation dose rate information to support the analysis performed by the NRC, the protective action recommendation was made by the NRC.

**Quayle, Lisa**

---

**From:** Padilla, William  
**Sent:** Thursday, March 31, 2011 5:00 PM  
**To:** Collins, Elmo; ET02 Hoc; Heard, Robert; Reyes, Debra; LIA02 Hoc; LIA03 Hoc; CSC  
**Cc:** Turner, Joseph; Sullivan, Allen; Brusoe, Eric; Hincke, John; Bissett, Ryan  
**Subject:** Re: Op Center - Laptop

Mr. Collins,

No problem. If you and the Ops Ctr are OK with that I'm fine with it. Please hold-on to AT&T device as a backup. If you continue to have problems then let us know and we can make the switch.

Thanks,  
Bill

Sent from an NRC Blackberry  
William Padilla

(b)(6)

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**From:** Collins, Elmo  
**To:** Padilla, William; ET02 Hoc; Heard, Robert; Reyes, Debra; LIA02 Hoc; LIA03 Hoc; CSC  
**Cc:** Turner, Joseph; Sullivan, Allen; Brusoe, Eric; Hincke, John; Bissett, Ryan  
**Sent:** Thu Mar 31 17:46:30 2011  
**Subject:** RE: Op Center - Laptop

Bill

It appears that the issues with my Region IV device have been resolved and I am receiving e-mail. I'd like to continue to use my Region IV device. If possible, we can cancel this request. Please inform.

Elmo

---

**From:** Padilla, William  
**Sent:** Thursday, March 31, 2011 5:38 PM  
**To:** ET02 Hoc; Heard, Robert; Reyes, Debra; LIA02 Hoc; LIA03 Hoc; CSC  
**Cc:** Turner, Joseph; Sullivan, Allen; Brusoe, Eric; Hincke, John; Bissett, Ryan; Collins, Elmo  
**Subject:** Re: Op Center - Laptop

CSC,

This change needs to be made on the BES using ticket #509379. Per Ops Ctr, this needs to be done ASAP.

Ops Ctr,  
I have Cc'd Mr. Collins so that he is aware that his existing device will lose e-mail connectivity once this change occurs.

Regards,  
Bill

Sent from an NRC Blackberry

174/165

William Padilla  
301-728-1784

---

**From:** ET02 Hoc  
**To:** Heard, Robert; Reyes, Debra; LIA02 Hoc; LIA03 Hoc  
**Cc:** Turner, Joseph; Sullivan, Allen; Brusoe, Eric; Hincke, John; Bissett, Ryan; Padilla, William  
**Sent:** Thu Mar 31 17:05:31 2011  
**Subject:** RE: Op Center - Laptop

Bill Cook is returning from Japan – we need to switch his blackberry to Elmo Collins

---

**From:** Heard, Robert  
**Sent:** Thursday, March 31, 2011 4:11 PM  
**To:** ET02 Hoc; Reyes, Debra; LIA02 Hoc; LIA03 Hoc  
**Cc:** Turner, Joseph; Sullivan, Allen; Brusoe, Eric; Hincke, John; Bissett, Ryan; Padilla, William  
**Subject:** RE: Op Center - Laptop

All:

I have updated the helpdesk ticket with the latest information from the operations center on this device swap.

According to the OIP staff here in the Ops Center, they are not sure if Todd Jackson has left Japan or is planning to leave. They have sent him an e-mail trying to confirm this so we shouldn't move blackberries until we receive confirmation on their status. We'll let you know when we know. Thanks...karen "

I have annotated in the ticket that the device should not be swapped until we get word from the ops center.

Rob

---

**From:** ET02 Hoc  
**Sent:** Wednesday, March 30, 2011 9:40 PM  
**To:** Reyes, Debra; LIA02 Hoc; LIA03 Hoc  
**Cc:** Turner, Joseph; Sullivan, Allen; Brusoe, Eric; Heard, Robert; Hincke, John; Bissett, Ryan  
**Subject:** RE: Op Center - Laptop

All,

William Cook will be leaving his BlackBerry with Elmo Collins. A ticket has been created for this transfer #509379. Elmo brought a Region IV laptop with him. I have recommended that Dan Dorman leave his laptop in Japan, just in case Elmo or another member of the team need it.

Cris Brown

---

**From:** Reyes, Debra  
**Sent:** Tuesday, March 29, 2011 2:27 PM  
**To:** ET02 Hoc; LIA02 Hoc; LIA03 Hoc  
**Cc:** Turner, Joseph; Sullivan, Allen; Brusoe, Eric; Heard, Robert; Hincke, John; Bissett, Ryan; Reyes, Debra  
**Subject:** Op Center - Laptop

Good afternoon,

The attached list of OIS provided international laptops has been updated. The first five of the eleven on this list have not been configured with the generic encryption software password that is requested upon initial power

on. The remaining six have been configured with the generic password, so that any user can login with the generic user id and password (instructions are attached). However, to login into Citrix you will need to login using your NRC user id and password (which authenticates users to the secure NRC network).

Please note that the generic login will not work on laptops provided by the Regions or Program Offices. All future international laptops issued by OIS will be configured with the generic login, so that the

Also attached are instructions for importing Citrix certificates and the mobile broadband card user guide:

- (1) Japan Project Loaner Laptop Guide User Reference Guide
- (2) How to Import MPKI (Citrix) Certificates for the Japan Project
- (3) Verizon Mobile Broadband Card User Guide for the Japan Project

## Howell, Art

---

**From:** Leeds, Eric  
**Sent:** Friday, April 01, 2011 3:14 PM  
**To:** Dean, Bill; Lew, David; McCree, Victor; Wert, Leonard; Satorius, Mark; Pederson, Cynthia; Howell, Art; Kennedy, Kriss  
**Subject:** FYI: NRR Comm team SitRep - 4/1

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

---

**From:** Nelson, Robert  
**Sent:** Friday, April 01, 2011 2:52 PM  
**To:** Boger, Bruce; Burnell, Scott; LIA06 Hoc; Leeds, Eric; Roberts, Darrell; Kennedy, Kriss; Lara, Julio; Croteau, Rick; Landau, Mindy; Steger (Tucci), Christine; Bahadur, Sher; Blount, Tom; Brown, Frederick; Cheok, Michael; Evans, Michele; Ferrell, Kimberly; Galloway, Melanie; Gitter, Joseph; Givvines, Mary; Hiland, Patrick; Holian, Brian; Howe, Allen; Lee, Samson; Lubinski, John; McGinty, Tim; Quay, Theodore; Ruland, William; Skeen, David; Thomas, Brian; Westreich, Barry  
**Cc:** Hay, Michael; West, Steven; Shear, Gary; Orf, Tracy; Stang, John; Broaddus, Doug; Campbell, Stephen; Carlson, Robert; Chernoff, Harold; Kulesa, Gloria; Markley, Michael; Pascarelli, Robert; Salgado, Nancy; Simms, Sophonia; Wall, Scott; Guzman, Richard; Lyon, Fred; Meighan, Sean; Nguyen, Quynh; Oesterle, Eric; Polickoski, James; Tam, Peter; Thomas, Eric  
**Subject:** FYI: NRR Comm team SitRep - 4/1

1. Responded to 6 quick turn-around Qs & As from Region I to support a meeting with the NH State Legislature on Monday
2. Responded to three quick turn-around Qs from OCA regarding hydrogen generation/recombiners to support a Congressional hearing on Wednesday. Many thanks to Tracey Orf & John Stang who researched all plant tech specs for related tech spec requirements.
3. Responded to a Q from the Chairman's office.
4. Screened one potentially sensitive licensing action on Thursday – result was normal processing. None was awaiting review on Friday.
5. Continued support for Eric Leeds brief to NGA on 4/4. Expect to complete by COB but will support this weekend if needed.

*R. A. Nelson*

Robert A. Nelson  
NRR External Communications Coordinator, Japan Event  
Deputy Director  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation



E-mail: [robert.nelson@nrc.gov](mailto:robert.nelson@nrc.gov) | Office: (301) 415-1453 | Cell: (b)(6) | Fax: (301) 415-2102

4/1/11/66

**Quayle, Lisa**

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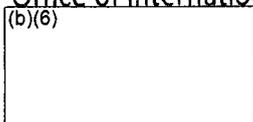
**From:** Stahl, Eric  
**Sent:** Sunday, April 03, 2011 6:49 PM  
**To:** 'bannai-toshihiro@meti.go.jp'; 'satoh.takashi@tepco.co.jp'; 'nei-hisanori@meti.go.jp'; 'oshima-toshiyuki@meti.go.jp'; 'koyama-masaomi@meti.go.jp'  
**Cc:** Casto, Chuck; Emche, Danielle; Collins, Elmo  
**Subject:** NRC Meetings for 4 April 2011  
**Attachments:** NRC Meetings 04-April-2011.docx

Dear Bannai-san and Satoh-san,

Please find the schedule for NRC meetings today (attached). If you have any questions or concerns, please let me know.

Best regards,  
Eric

**Eric Stahl**  
U.S. Nuclear Regulatory Commission  
Office of International Programs

(b)(6)  


HHH/167

**U.S. Nuclear Regulatory Commission Meetings  
Monday, 4 April 2011**

<b>Time</b>	<b>Organization-Topic</b>	<b>Location</b>
1100	NISA & TEPCO-Daily Status	TEPCO
1400	NISA-Shielding/Confinement Task Force	NISA
1900	Cabinet Meeting	Cabinet

**Quayle, Lisa**

---

**From:** 大島 俊之 [oshima-toshiyuki@meti.go.jp]  
**Sent:** Sunday, April 03, 2011 7:19 PM  
**To:** Stahl, Eric; bannai-toshihiro@meti.go.jp; satoh.takashi@tepcoco.jp; nei-hisanori@meti.go.jp; koyama-masaomi@meti.go.jp  
**Cc:** Casto, Chuck; Emche, Danielle; Collins, Elmo  
**Subject:** RE: NRC Meetings for 4 April 2011

Dear Eric

Good morning.  
We will have the fuel removal meeting at 16:00 today.  
Please add this meeting to your time sheet.

Best regards

Toshi

> -----Original Message-----

> From: Stahl, Eric [mailto:Eric.Stahl@nrc.gov]  
> Sent: Monday, April 04, 2011 8:49 AM  
> To: 'bannai-toshihiro@meti.go.jp'; 'satoh.takashi@tepcoco.jp';  
> 'nei-hisanori@meti.go.jp'; 'oshima-toshiyuki@meti.go.jp';  
> 'koyama-masaomi@meti.go.jp'  
> Cc: Casto, Chuck; Emche, Danielle; Collins, Elmo  
> Subject: NRC Meetings for 4 April 2011

> Dear Bannai-san and Satoh-san,

> Please find the schedule for NRC meetings today (attached). If you  
> have any questions or concerns, please let me know.

> Best regards,

> Eric

> Eric Stahl

> U.S. Nuclear Regulatory Commission

> Office of International Programs

> (b)(6)

4/11/11

**Quayle, Lisa**

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**From:** Ross-Lee, MaryJane  
**Sent:** Sunday, April 03, 2011 12:29 PM  
**To:** Collins, Elmo  
**Subject:** Fw: Iodine Scavenging Technique

For consideration.

Sent from my blackberry

MJ (b)(6)

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**From:** Voth, Marcus  
**To:** McGovern, James; Ross-Lee, MaryJane; Sloan, Scott  
**Sent:** Mon Mar 21 07:43:25 2011  
**Subject:** Iodine Scavenging Technique

Scott,

Per our discussion, please confirm that either you or MJ enters this into the appropriate channels for action.

Marc

---

**From:** McGovern, James  
**Sent:** Friday, March 18, 2011 9:28 AM  
**To:** Ross-Lee, MaryJane  
**Cc:** Voth, Marcus  
**Subject:** FW:

MJ,

I am not sure if Marc is in today, His calendar indicates that he is scheduled to be off but he also mentioned in an e-mail that he would be in.

I know that you are working in the Ops center and will have up-to-date status at Fukushima and may have direct contact with our people there so, for what it may be worth, I'm sending this forwarded message.

Certainly there are many experts working on the problems at the reactors and they are struggling with many, many variables but sometimes some possibilities can be missed. So I offer this information, based on our experience with controlling fresh fission-product iodine as a possible way to keep the iodine from evaporating from the coolant water around the cores.

Maybe you can contact the right person that we have at Fukushima to evaluate this idea as an option.

I will be out of the house today but if necessary my cell phone number is 848-667-0391

Jim

---

**From:** McGovern, James  
**Sent:** Thursday, March 17, 2011 9:22 PM  
**To:** Voth, Marcus  
**Subject:**

Marc,

4/4/11/69

Not sure what to do.

Watching events unfold in Japan, I am sure the people dealing with the damaged reactors are having to contend with airborne iodine. I don't know if any of NRC's experts on the scene are helping with this problem and what measures are being taken to control it.

I have a suggestion that draws from our experience at CI.

We were very successful at keeping iodine in solutions by using silver nitrate dissolved in dilute acid solution (HCl, I believe it was). When in contact with iodine the silver nitrate disassociates and the silver binds to the iodine forming silver iodide, which has a very strong chemical bond and becomes a stable particulate precipitant that stays in solution and that can be filtered out as a particle.

Also, when decontaminating iodine from surfaces, we found sodium sulfate much more effective than sodium hydroxide which, at that time was commonly used for this purpose.

If any of the NRC staff are involved in controlling the contamination at Fukushima and they don't already have this information perhaps it will be helpful when they resume dumping water on those reactors. The silver nitrate solutions will be very effective in keeping the iodine from evaporating.

Maybe you know how to get this info to the right people.

Jim

**Quayle, Lisa**

---

**From:** Stahl, Eric  
**Sent:** Monday, April 04, 2011 6:28 PM  
**To:** 'bannai-toshihiro@meti.go.jp'; 'sato.h.takashi@tepco.co.jp'; 'nei-hisanori@meti.go.jp'; 'oshima-toshiyuki@meti.go.jp'; 'koyama-masaomi@meti.go.jp'  
**Cc:** Casto, Chuck; Emche, Danielle; Collins, Elmo  
**Subject:** NRC Meetings for 5 April 2011  
**Attachments:** NRC Meetings 05-April-2011.docx

Dear Bannai-san and Satoh-san,

Please find the schedule for NRC meetings today (attached). If you have any questions or concerns, please let me know.

Best regards,  
Eric

**Eric Stahl**  
U.S. Nuclear Regulatory Commission  
Office of International Programs

(b)(6)

HHH/170

**U.S. Nuclear Regulatory Commission Meetings  
Tuesday, 5 April 2011**

<b>Time</b>	<b>Organization-Topic</b>	<b>Location</b>
1100	NISA & TEPCO - Daily Status	TEPCO
1400	NISA - Shielding Task Force	NISA

## Imboden, Andy

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**From:** Imboden, Andy *NRR*  
**Sent:** Thursday, April 07, 2011 8:20 AM  
**To:** Galloway, Melanie; Azeem, Almas; Auluck, Rajender; Dias, Antonio; Pelton, David; Pham, Bo; Wertz, Trent; Wrona, David  
**Subject:** RE: ACTION: Identify 4th wave of NRC staff to Japan

Clarification needed in re: "plume" person  
What is the media? (e.g. plume in the atmosphere, plume in the groundwater, plume in the ocean ...)

**From:** Galloway, Melanie *NRR*  
**Sent:** Wednesday, April 06, 2011 3:58 PM  
**To:** Azeem, Almas; Auluck, Rajender; Dias, Antonio; Imboden, Andy; Pelton, David; Pham, Bo; Wertz, Trent; Wrona, David  
**Subject:** FW: ACTION: Identify 4th wave of NRC staff to Japan

Do not forward to staff. For BC consumption only. See highlighted skill set below.

Do we have anyone we would want to nominate? Last time we put forth (b)(6) Does "lots of EOP/SAMG experience" fit? The protective measures request is new for this team. 6

Please let me know of any recommendations by tomorrow. It is OK if we have no nominees.

Thanks.

**From:** Ruland, William *NRR*  
**Sent:** Wednesday, April 06, 2011 3:03 PM  
**To:** Givvines, Mary; Ferrell, Kimberly  
**Cc:** Lubinski, John; Bahadur, Sher; Giitter, Joseph; Howe, Allen; Nelson, Robert; Lee, Samson; Hiland, Patrick; Skeen, David; Brown, Frederick; Westreich, Barry; Holian, Brian; Galloway, Melanie; McGinty, Tim; Blount, Tom; Nguyen, Quynh; Wertz, Trent  
**Subject:** FW: ACTION: Identify 4th wave of NRC staff to Japan

For your action. Please give names directly to Michele with cc: to the ET.

**From:** Evans, Michele *NRR*  
**Sent:** Wednesday, April 06, 2011 2:58 PM  
**To:** Howell, Art; McCree, Victor; Dean, Bill; Satorius, Mark; Haney, Catherine; Moore, Scott; Sheron, Brian; Johnson, Michael; Leeds, Eric  
**Cc:** Pederson, Cynthia; Lew, David; Wiggins, Jim; Ordaz, Vonna; Uhle, Jennifer; Ruland, William; Boger, Bruce; Virgilio, Martin; Weber, Michael; Flanders, Scott; Lewis, Robert; Muessle, Mary; Mamish, Nader  
**Subject:** ACTION: Identify 4th wave of NRC staff to Japan

ODs and RAs: R

There is discussion of potentially sending an additional 6 or so staff to Japan.

These individuals would likely depart the USA on April 12 or 13, with a return date of about April 27. (For awareness, this time period spans religious holidays)

Specifically Chuck is looking for 4 individuals with severe accident experience. Lots of EOP/SAMG experience. He is looking for two protective measures staff. Specifically an ingestion pathway person and a "plume" person.

As always, looking for these skill sets combined with the best interpersonal skills.

**OD/RA ACTION:**

- 1. Please confirm that you received this email.**
- 2. Please identify potential candidates to me by COB Friday April 8.**

If you have any questions or need any clarification, please call me. Thank you.

*Michele Evans*  
**Acting Deputy OD, NSIR**  
301-415-3236

Hiltz, Thomas

---

**From:** Kazuhiko Hiruta [Hiruta@denjiren.com]  
**Sent:** Thursday, April 07, 2011 3:47 PM  
**To:** Kazuhiko Hiruta  
**Subject:** [WARNING: MESSAGE ENCRYPTED]Information Sheet Regarding Fukushima NPS (04/07/2011)  
**Attachments:** FEPC 110407\_Update to Information Sheet-22.doc; FEPC 0407\_1900\_Radiation\_Monitoring.pdf; FEPC 0407\_News\_No.45\_by\_JAIF.pdf

Dear friends,

Please find information about the incidents at Fukushima Nuclear Power Station. If you have questions, please feel free to contact me.

Best regards,  
Kazu

=====  
**Kazuhiko HIRUTA**  
**FEPC Washington Office**  
"The Federation of Electric Power Companies of Japan"  
1901 L Street NW Suite 600 Washington, DC 20036  
tel: 202-466-3507  
cell: (b)(6)  
fax: 202-466-6758  
=====

HH/17a

Update to Information Sheet Regarding the Tohoku Earthquake

The Federation of Electric Power Companies of Japan (FEPC) Washington DC Office

As of 3:00PM (EST), April 7, 2011

- Radiation Levels

- The concentration of radioactive nuclides from the seawater sampled at the screen device (installed to remove waste before the intake of seawater) of Unit 2 and sampled near the seawater discharge point (south side) of Fukushima Daiichi Nuclear Station were as follows:

Nuclides (half-life)	Concentration (Unit : Bq/cm <sup>3</sup> )			Ratio	
	Sampled at the screen of Unit 2 at 7:40AM on April 6 (a)	Sampled at south side discharge point at 2:05PM on April 6 (b)	Maximum Permissible Water Concentration (c)	a / c	b / c
I-131 (8 days)	$5.6 \times 10^3$	$3.7 \times 10^0$	$4.0 \times 10^{-2}$	140,000	93
Cs-134 (2 years)	$3.1 \times 10^3$	$2.4 \times 10^0$	$6.0 \times 10^{-2}$	52,000	40
Cs-137 (30 years)	$3.2 \times 10^3$	$2.5 \times 10^0$	$9.0 \times 10^{-2}$	36,000	28

- At 6:00PM (JST) on April 7, radiation level at main gate (approximately 3,281 feet from Unit 2 reactor building) of Fukushima Daiichi Nuclear Power Station: 99 micro Sv/hour.
- At 6:00PM on April 7, radiation level at west gate (approximately 3,609 feet from Unit 2 reactor building) of Fukushima Daiichi Nuclear Power Station: 56.8 micro Sv/hour.
- Measurement results of environmental radioactivity level around Fukushima Nuclear Power Station announced at 7:00PM on April 7 are shown in the attached PDF file. English version is available at:  
[http://www.mext.go.jp/english/radioactivity\\_level/detail/1304082.htm](http://www.mext.go.jp/english/radioactivity_level/detail/1304082.htm)
- For comparison, a human receives 2,400 micro Sv per year from natural radiation in the form of sunlight, radon, and other sources. One chest CT scan generates 6,900 micro Sv per scan.

- Plant Parameters

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
pressure inside the reactor core (gauge pressure, MPa)	0.375	-0.009	0.000	-	0.002	0.008
	4/7 12:00PM	4/7 12:00PM	4/7 12:00PM	-	4/7 12:00PM	4/7 12:00PM
pressure inside the	0.165	0.100	0.1059	-	-	-

primary containment vessel (absolute pressure, MPaabs)	4/7 12:00PM	4/7 12:00PM	4/7 12:00PM	-	-	-
water level inside the reactor core (meter) *1	-1.65	-1.5	-1.9	-	+1.801	+1.816
	4/7 12:00PM	4/7 12:00PM	4/7 12:00PM	-	4/7 12:00PM	4/7 12:00PM
temperature of the reactor vessel measured at the water supply nozzle (degrees Fahrenheit)	434.8	290.5	190.9 *2	-	-	-
	4/7 12:00PM	4/7 12:00PM	4/7 12:00PM	-	-	-
temperature of the spent fuel pool (degrees Fahrenheit)	-	123.8	-	-	96.8	69.8
	-	4/7 12:00PM	-	-	4/7 12:00PM	4/7 12:00PM
the temperature directly above the spent fuel pool by thermography measurement (degrees Fahrenheit)	75.2	-	140.0	134.6	-	-
	4/6 7:30AM	-	4/6 7:30AM	4/6 7:30AM	-	-
temperature directly above the primary containment vessel (degrees Fahrenheit)	84.2	-	89.6	-	-	-
	4/6 7:30	-	4/6 7:30	-	-	-
temperature directly above the second containment building (degrees Fahrenheit)	-	89.6	-	-	-	-
	-	4/6 7:30	-	-	-	-
Amount of water in total shot/injected to the spent fuel storage pool (tons)	90	299 - 314	5,048	1,493	-	-
	as of 4/7 7:00PM	as of 4/7 7:00PM	as of 4/7 7:00PM	as of 4/7 7:00PM	-	-

\*1: Minus figure means that water level is below the top of the fuel rods.

\*2: This figure is under investigation.

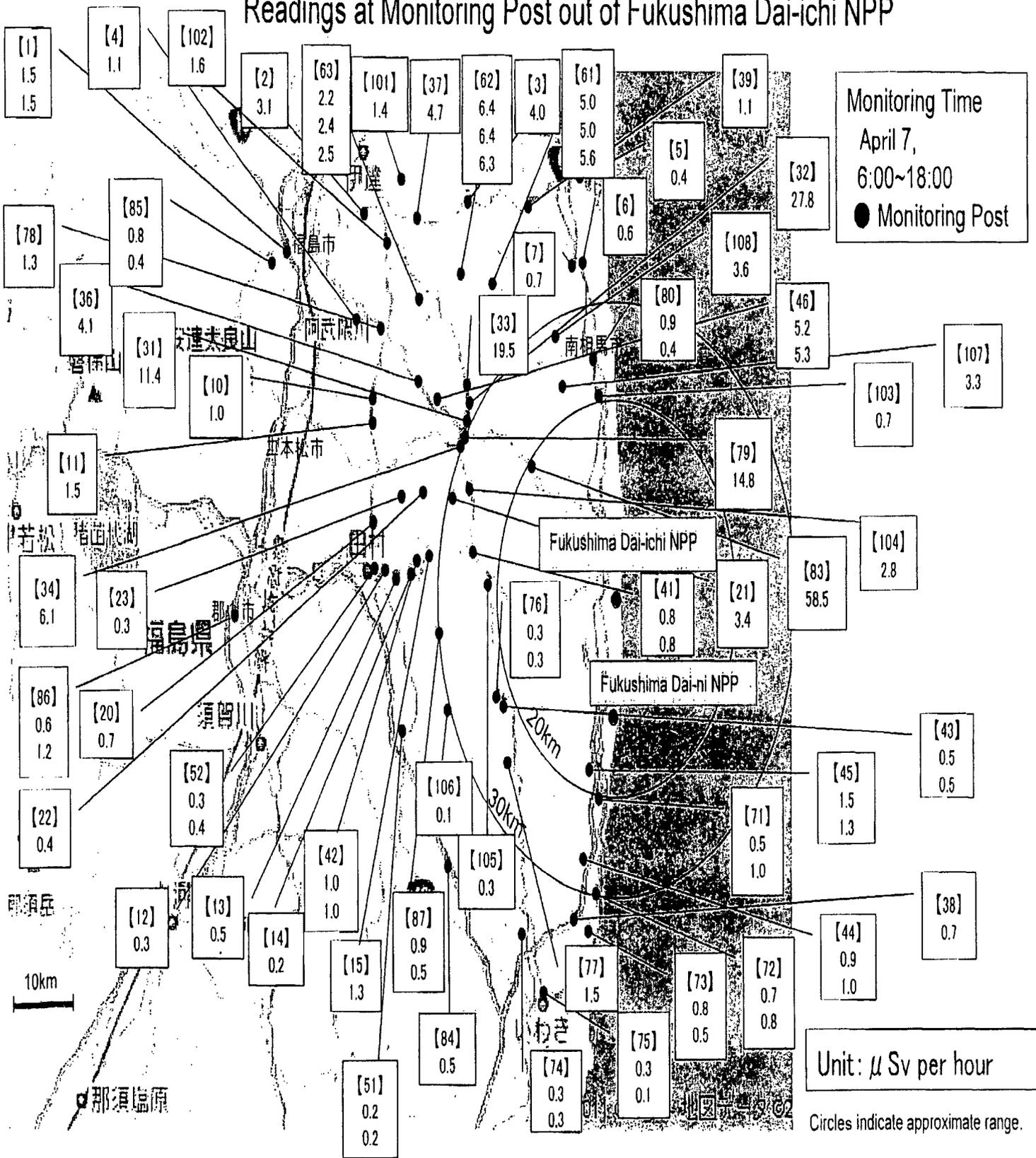
- Fukushima Daiichi Unit 1 reactor
  - At 1:31AM on April 7, TEPCO began the injection of nitrogen gas into the primary containment vessel to prevent an explosion by accumulated hydrogen gas.
  - As of 3:30PM on April 7, the injection of freshwater into the reactor core continues.
- Fukushima Daiichi Unit 2 reactor
  - At 1:29PM on April 7, TEPCO began to inject freshwater into the spent fuel pool, until 2:34PM (approximately 36 tons in total).

- As of 3:30PM on April 7, the injection of freshwater into the reactor core continues.
- Fukushima Daiichi Unit 3 reactor
  - At 6:53AM on April 7, TEPCO began to shoot water aimed at the spent fuel pool, until 8:53AM, with a specialized vehicle normally used for pumping concrete (approximately 70 tons in total).
  - As of 3:30PM on April 7, the injection of freshwater into the reactor core continues.
- Fukushima Daiichi Unit 4 reactor
  - At 6:23PM on April 7, injection of freshwater into the spent fuel pool commenced.
- Fukushima Daiichi Common Spent Fuel Pool
  - At 7:45AM on April 7, the temperature of the spent fuel pool: 82.4 degrees Fahrenheit.
- Others

Our official sources are:

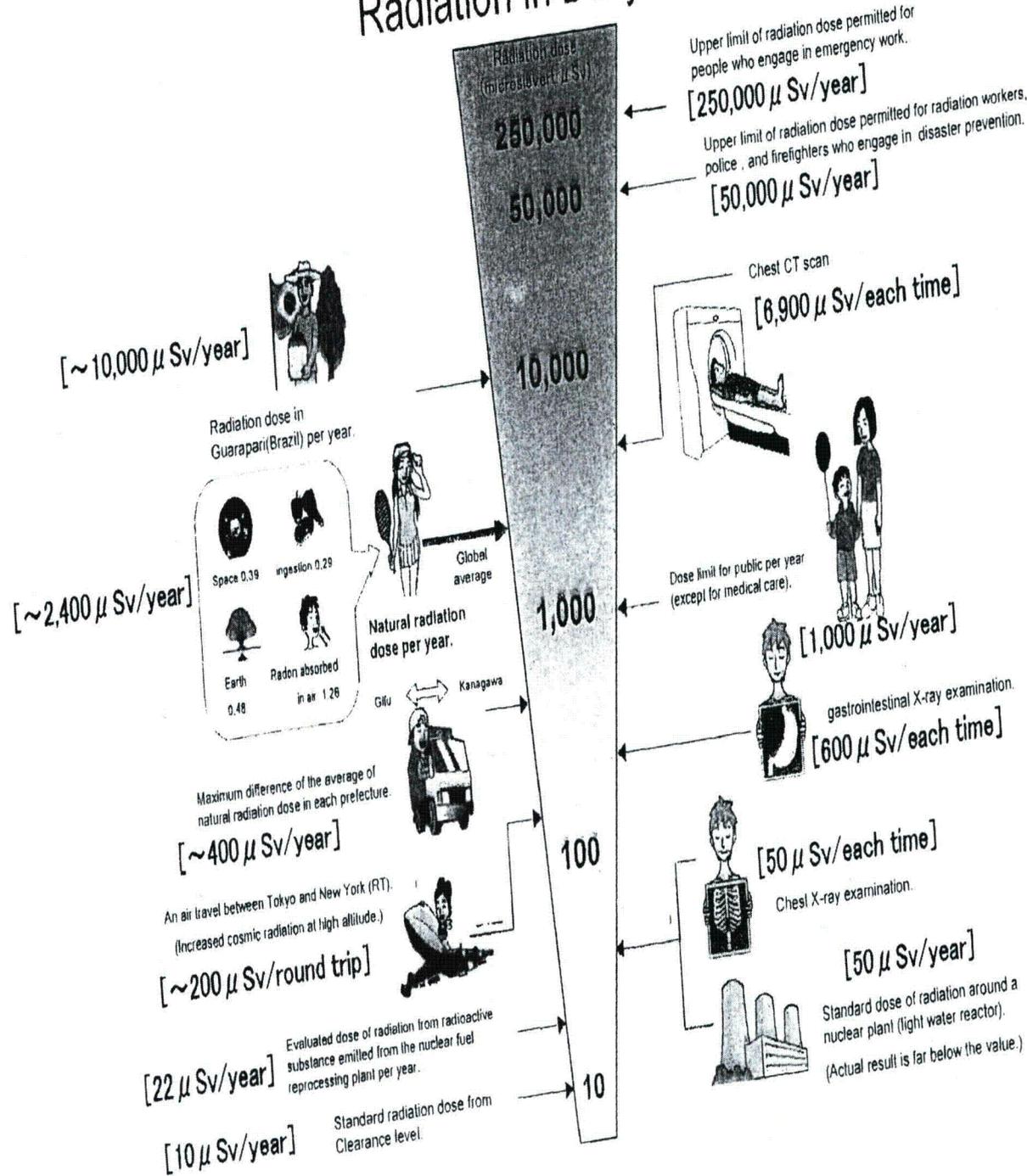
- Office of The Prime Minister of Japan
- Nuclear and Industrial Safety Agency (NISA)
- Tokyo Electric Power Company (TEPCO) Press Releases
- Ministry of Education, Culture, Sports, Science and Technology (MEXT)

# Readings at Monitoring Post out of Fukushima Dai-ichi NPP



# Radiation in Daily-life

※Unit:  $\mu\text{Sv}$



**Howell, Art**

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**From:** Evans, Michele  
**Sent:** Thursday, April 07, 2011 10:03 AM  
**To:** Howell, Art  
**Subject:** RE: ACTION: Identify 4th wave of NRC staff to Japan

I will be working with the names and communicating with Chuck and Elmo starting Friday. Trying for the final list by Sunday.

Meanwhile, there is some discussion that we will ask this wave to stay 3 weeks, not two. That will be decided later today.

Also, Elmo called me this morning. They'd like to get a PMT person to come sooner. I did mention your person - (b)(6)

(b)(6)

thanks  
Elmo

---

**From:** Howell, Art  
**Sent:** Thursday, April 07, 2011 10:47 AM  
**To:** Evans, Michele  
**Subject:** RE: ACTION: Identify 4th wave of NRC staff to Japan

Michele,

Any word on when the decision will be made of the 4<sup>th</sup> wave team members?

Art

---

**From:** Evans, Michele  
**Sent:** Wednesday, April 06, 2011 4:34 PM  
**To:** Howell, Art  
**Subject:** Re: ACTION: Identify 4th wave of NRC staff to Japan

Thanks.

Sent from an NRC Blackberry  
Michele Evans

---

**From:** Howell, Art  
**To:** Evans, Michele  
**Sent:** Wed Apr 06 17:20:52 2011  
**Subject:** RE: ACTION: Identify 4th wave of NRC staff to Japan

Michele,

Steve Garchow is also available.

Art

HH/173

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**From:** Evans, Michele  
**Sent:** Wednesday, April 06, 2011 2:30 PM  
**To:** Howell, Art  
**Subject:** RE: ACTION: Identify 4th wave of NRC staff to Japan

Does this mean they are available for the new dates?

---

**From:** Howell, Art  
**Sent:** Wednesday, April 06, 2011 3:21 PM  
**To:** Evans, Michele  
**Subject:** RE: ACTION: Identify 4th wave of NRC staff to Japan

Michele,

(b)(6)

Art

---

**From:** Evans, Michele  
**Sent:** Wednesday, April 06, 2011 1:58 PM  
**To:** Howell, Art; McCree, Victor; Dean, Bill; Satorius, Mark; Haney, Catherine; Moore, Scott; Sheron, Brian; Johnson, Michael; Leeds, Eric  
**Cc:** Pederson, Cynthia; Lew, David; Wiggins, Jim; Ordaz, Vonna; Uhle, Jennifer; Ruland, William; Boger, Bruce; Virgilio, Martin; Weber, Michael; Flanders, Scott; Lewis, Robert; Muesle, Mary; Mamish, Nader  
**Subject:** ACTION: Identify 4th wave of NRC staff to Japan

ODs and RAs:

There is discussion of potentially sending an additional 6 or so staff to Japan.

These individuals would likely depart the USA on April 12 or 13, with a return date of about April 27. (For awareness, this time period spans religious holidays)

Specifically Chuck is looking for 4 individuals with severe accident experience. Lots of EOP/SAMG experience. He is looking for two protective measures staff. Specifically an ingestion pathway person and a "plume" person.

As always, looking for these skill sets combined with the best interpersonal skills.

**OD/RA ACTION:**

- 1. Please confirm that you received this email.**
- 2. Please identify potential candidates to me by COB Friday April 8.**

If you have any questions or need any clarification, please call me. Thank you.

*Michele Evans*  
**Acting Deputy OD, NSIR**  
301-415-3236

## Howell, Art

---

**From:** Howell, Linda  
**Sent:** Friday, April 08, 2011 3:44 PM  
**To:** Howell, Art  
**Subject:** Fw: ACTION: Identify 4th wave of NRC staff to Japan

(b)(6)

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**From:** Evans, Michele  
**To:** Evans, Michele; Howell, Art; McCree, Victor; Dean, Bill; Satorius, Mark; Haney, Catherine; Moore, Scott; Sheron, Brian; Johnson, Michael; Leeds, Eric  
**Cc:** Pederson, Cynthia; Lew, David; Wiggins, Jim; Ordaz, Vonna; Uhle, Jennifer; Ruland, William; Boger, Bruce; Virgilio, Martin; Weber, Michael; Flanders, Scott; Lewis, Robert; Muessle, Mary; Mamish, Nader; Howell, Linda; FOIA Response.hoc Resource  
**Sent:** Fri Apr 08 14:51:03 2011  
**Subject:** RE: ACTION: Identify 4th wave of NRC staff to Japan

ODs/RAs

Thanks for all of the input I have received so far. Since Wednesday, views regarding composition and length of stay of the site team to Japan have evolved.

First, be aware that the staff selected to go to Japan will be expected to be deployed for up to 3 weeks, instead of the previous 2 week commitment. Therefore, staff leaving the country on April 12/13, would return around May 3/4.

Second, approval has been given for Chuck to maintain a team of about 11 people for the immediate future. It has been decided that the protective measures component of the team, does not need to have the specific expertise that was previously noted. Any modeling work/analysis that would need to be done, would be completed here at HQs. Instead, Chuck has indicated that he is looking for **someone with a health physics background that could assist in briefings and can effectively communicate radiation exposure and contamination to a lay audience.**

I will be in contact with Chuck over the next 24 hours to further discuss the composition of his team of 11. If there is a skill set needed that hasn't been identified in this email or the one below, I will send you that information tomorrow.

I still plan to be able to identify at least 4 staff to support Chuck's original request by Sunday, so their travel could start on 4/12 or 4/13.

With regard to the new request above and any additional request that I learn from Chuck in the next 24 hours, please provide all nominees by COB on Monday 4/11. Those individuals would be expected to travel later in the week (target 4/14 or 4/15).

Sorry about this lengthy email. If something is not clear, feel free to call me or email.

Michele  
*Michele Evans*  
Acting Deputy OD, NSIR  
301-415-3236

HH/174

**Galloway, Melanie**

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**From:** Galloway, Melanie *NRR*  
**Sent:** Friday, April 08, 2011 2:34 PM  
**To:** Plasse, Richard; Wrona, David  
**Subject:** RE: 4th team to Japan--possible nomination

Thanks.

**From:** Plasse, Richard *NRR*  
**Sent:** Friday, April 08, 2011 2:12 PM  
**To:** Galloway, Melanie; Wrona, David  
**Subject:** RE: 4th team to Japan--possible nomination

Dave asked me earlier this week. (b)(6)  
(b)(6) was available in late March til 4/20, and I can be available if there is a 5<sup>th</sup> team after 4/24.

**From:** Galloway, Melanie *NRR*  
**Sent:** Friday, April 08, 2011 2:07 PM  
**To:** Wrona, David; Plasse, Richard  
**Subject:** 4th team to Japan--possible nomination

Dave and Rich,

Would Rich be interested in having his name put forth as a candidate for the 4<sup>th</sup> team to Japan? The team would leave April 12 or 13<sup>th</sup> and should expect to be there for 3 weeks. Please let me know ASAP. Thanks.

Melanie

*R*

*44/175*

**Galloway, Melanie**

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**From:** Galloway, Melanie *NRR*  
**Sent:** Friday, April 08, 2011 2:35 PM  
**To:** Ferrell, Kimberly; Wilson, George; Brown, Frederick; Giitter, Joseph; Givvines, Mary; Hiland, Patrick; Holian, Brian; Lee, Samson; McGinty, Tim; Ruland, William; Skeen, David; Thomas, Brian; Westreich, Barry; Bahadur, Sher; Blount, Tom; Cheok, Michael; Howe, Allen; Lubinski, John; Lund, Louise; Nelson, Robert  
**Subject:** RE: ACTION: Identify 4th wave of NRC staff to Japan

DLR has no nominees for this team.

**From:** Ferrell, Kimberly *NRR*  
**Sent:** Friday, April 08, 2011 1:46 PM  
**To:** Wilson, George; Brown, Frederick; Ferrell, Kimberly; Giitter, Joseph; Givvines, Mary; Hiland, Patrick; Holian, Brian; Lee, Samson; McGinty, Tim; Ruland, William; Skeen, David; Thomas, Brian; Westreich, Barry; Bahadur, Sher; Blount, Tom; Cheok, Michael; Galloway, Melanie; Howe, Allen; Lubinski, John; Lund, Louise; Nelson, Robert  
**Subject:** RE: ACTION: Identify 4th wave of NRC staff to Japan

Please send any additional names to me and I will consolidate for the LT's review to support one list for Michele Evans. Attached are your supporting e-mails thus far.

So far we have:  
Joe Parillo\*  
Jeff Mittman  
Matthew Mitchell  
Dr. Stephen Arndt

<sup>1</sup> (Per Mike Cullingford) (b)(6)

(b)(6)

When I return from my meeting in TWFN (3:30 pm) I will resend this out to everyone for a final review. If you have comments about the existing list, please send them to everyone.

Thanks!  
Kimberly

**From:** Ruland, William *NRR*  
**Sent:** Friday, April 08, 2011 12:19 PM  
**To:** Lee, Samson; Evans, Michele  
**Cc:** Givvines, Mary; Evans, Michele; Cheok, Michael; Boger, Bruce; Leeds, Eric; Giitter, Joseph; Ferrell, Kimberly  
**Subject:** RE: ACTION: Identify 4th wave of NRC staff to Japan

Sorry for the confusion. My e-mail direction was to the LT chair—PMDA—to give the names to Michele, and I cc'ed the rest of the LT for information. Next time I'll be more explicit. Let's not make Michele read e-mails from each division. Also, we should not put forth more than once name per division with the idea that we should be giving names that are in proportion to our size in the agency.

Michele, please give me a call on a different matter.

Thanks.

Bill

*R*

*44/176*

**From:** Lee, Samson *NRR*  
**Sent:** Friday, April 08, 2011 8:46 AM  
**To:** Evans, Michele  
**Cc:** Ruland, William; Givvines, Mary; Evans, Michele; Cheok, Michael; Boger, Bruce; Leeds, Eric; Giitter, Joseph; Ferrell, Kimberly  
**Subject:** RE: ACTION: Identify 4th wave of NRC staff to Japan

Michele:

(b)(6)

Thanks,  
Sam

**From:** Ruland, William *NRR*  
**Sent:** Wednesday, April 06, 2011 3:03 PM  
**To:** Givvines, Mary; Ferrell, Kimberly  
**Cc:** Lubinski, John; Bahadur, Sher; Giitter, Joseph; Howe, Allen; Nelson, Robert; Lee, Samson; Hiland, Patrick; Skeen, David; Brown, Frederick; Westreich, Barry; Holian, Brian; Galloway, Melanie; McGinty, Tim; Blount, Tom; Nguyen, Quynh; Wertz, Trent  
**Subject:** FW: ACTION: Identify 4th wave of NRC staff to Japan

For your action. Please give names directly to Michele with cc: to the ET.

**From:** Evans, Michele *NRR*  
**Sent:** Wednesday, April 06, 2011 2:58 PM  
**To:** Howell, Art; McCree, Victor; Dean, Bill; Satorius, Mark; Haney, Catherine; Moore, Scott; Sheron, Brian; Johnson, Michael; Leeds, Eric  
**Cc:** Pederson, Cynthia; Lew, David; Wiggins, Jim; Ordaz, Vonna; Uhle, Jennifer; Ruland, William; Boger, Bruce; Virgilio, Martin; Weber, Michael; Flanders, Scott; Lewis, Robert; Muessle, Mary; Mamish, Nader  
**Subject:** ACTION: Identify 4th wave of NRC staff to Japan

ODs and RAs:

There is discussion of potentially sending an additional 6 or so staff to Japan.

These individuals would likely depart the USA on April 12 or 13, with a return date of about April 27. (For awareness, this time period spans religious holidays)

Specifically Chuck is looking for 4 individuals with severe accident experience. Lots of EOP/SAMG experience. He is looking for two protective measures staff. Specifically an ingestion pathway person and a "plume" person.

As always, looking for these skill sets combined with the best interpersonal skills.

**OD/RA ACTION:**

1. Please confirm that you received this email.
2. Please identify potential candidates to me by COB Friday April 8.

**Imboden, Andy**

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**From:** Imboden, Andy *NRR*  
**Sent:** Friday, April 08, 2011 8:36 AM  
**To:** Galloway, Melanie  
**Subject:** RE: Heads up: Chuck Casto has requested PM Support

(b)(6) My recommendation would be (b)(6) as the best possible candidate. 4

**From:** Galloway, Melanie *NRR*  
**Sent:** Friday, April 08, 2011 6:59 AM  
**To:** Imboden, Andy  
**Subject:** FW: Heads up: Chuck Casto has requested PM Support

Andy,

(b)(6) request for Japan? Would he be interested in going for 3 weeks?

Melanie

**From:** Glitter, Joseph *NRR*  
**Sent:** Thursday, April 07, 2011 8:22 PM  
**To:** Holian, Brian; Galloway, Melanie; McGinty, Tim; Blount, Tom; Howe, Allen; Nelson, Robert; Brown, Frederick; Westreich, Barry  
**Cc:** Ruland, William; Bahadur, Sher; Lubinski, John; Thomas, Brian; Evans, Michele; Hiland, Patrick; Skeen, David; Cheok, Michael; Lee, Samson  
**Subject:** Heads up: Chuck Casto has requested PM Support

In the call with Chairman tonight, Chuck Casto made a plea for a PM to join the 4<sup>th</sup> wave of the Japan Team. Ideally, the PM would have a BWR background and operations experience. I know we have a list of candidates that we can refer back to.

Chuck is also looking for someone with a health physics background that could assist in briefings and can effectively communicate radiation exposure and contamination to a lay audience. The 4<sup>th</sup> team will probably be asked to support a 3-week (rather than a 2-week) period.

R

44/177

**Baca, Bernadette**

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**From:** Stahl, Eric  
**Sent:** Friday, April 08, 2011 3:39 AM  
**To:** Hay, Michael; Call, Michel  
**Subject:** FW: nuclear plants using emergency diesel generators

**From:** Stahl, Eric  
**Sent:** Friday, April 08, 2011 1:16 AM  
**To:** 'Goldberg, Joshua W'  
**Cc:** Dresser, Heather L (EAP/J); Blamey, Alan; SES-O; Emche, Danielle  
**Subject:** RE: nuclear plants using emergency diesel generators

Hi Josh –

As I mentioned earlier, NRC's Japan Team held their daily meeting with representatives from NISA and TEPCO at 1100 JST. We received answers to your questions:

1. Has the normal power supply has been restored Rokkasho-mura and Higashi-dori?
  - **No. In addition, Northern Japan is facing significant power issues due to the latest earthquake.**
  
2. Does the Onagawa plant now have more than one out of three lines of power (2 out of 3 were cut due to the aftershock)?
  - **No. They still have one line of power into the site.**
  
3. Will continuing on diesel generators pose a major problem? (e.g. problems getting diesel fuel up to the affected area)
  - **No. NISA/TEPCO asserted that they do not anticipate any issues with providing additional diesel fuel to the sites. In addition, they confirmed that all cooling functions are operating on the sites.**

If you need anything else or if you have any additional questions, please let me know.

Thanks,  
Eric

**Eric Stahl**  
U.S. Nuclear Regulatory Commission  
Japan Team International Liaison  
Tel: +81-33-22-45-066  
Mob: (b)(6)

**From:** Goldberg, Joshua W [mailto:GoldbergJW@state.gov]  
**Sent:** Thursday, April 07, 2011 9:14 PM  
**To:** Stahl, Eric  
**Cc:** Dresser, Heather L (EAP/J); Blamey, Alan; SES-O  
**Subject:** FW: nuclear plants using emergency diesel generators

HH/178

Eric – thanks for speaking with me about the questions regarding power issues. Please see the highlighted three questions below that we are trying to find answers to. If you could please copy all with your response, that would be much appreciated.

Please contact us with any questions.

Regards,

Josh Goldberg  
Watch Officer  
Department of State Operations Center  
[goldbergjw@state.gov](mailto:goldbergjw@state.gov), (202) 647-1512

**From:** Wixom, Stephen L  
**Sent:** Thursday, April 07, 2011 5:47 PM  
**To:** Shelstad, Jeffrey (S/ES-O)  
**Cc:** SES-O; SES-O\_CMS; Dresser, Heather L (EAP/J); JapanEmbassy, TaskForce; 'Alan.Blamey@nrc.gov'  
**Subject:** Re: nuclear plants using emergency diesel generators

Jeff  
I directed your question to the Embassy nuclear team's Mr. Alan Blamey who will be responding to you shortly.  
Regards,  
Steve Wixom  
Emergency Duty Officer

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**From:** Shelstad, Jeffrey (S/ES-O)  
**To:** Wixom, Stephen L  
**Cc:** SES-O; SES-O\_CMS; Dresser, Heather L (EAP/J); JapanEmbassy, TaskForce  
**Sent:** Thu Apr 07 16:45:11 2011  
**Subject:** nuclear plants using emergency diesel generators

Mr Wixom –

As discussed on the phone just now, I am forwarding to your blackberry the press release from Japan MOFA about nuclear plants using emergency diesel power.

If you could please find out

1. has the normal power supply has been restored Rokkasho-mura and Higashi-dori?
2. Does the Onagawa plant now have more than one out of three lines of power (2 out of 3 were cut due to the aftershock)?
3. Will continuing on diesel generators pose a major problem? (e.g. problems getting diesel fuel up to the affected area)

Please “reply to all” with any response.

Many thanks,

Jeff

Jeff Shelstad  
Crisis Management Support  
State Department Operations Center (S/ES-O CMS)  
202 647 7640  
ShelstadJ2@state.gov  
SIPR: ShelstadJ2@state.sgov.gov

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**From:** PROTOCOLOFFICE-EM <protocoloffice-em@mofa.go.jp>  
**To:** PROTOCOLOFFICE-EM <protocoloffice-em@mofa.go.jp>  
**Sent:** Thu Apr 07 13:05:35 2011  
**Subject:** URGENT:NISA Press Release issued at 23:50, Thursday, 0:35 and 1:00, Friday

## URGENT (1:45) Friday, 8 April 2011

To All Missions (Embassies, Consular posts and International Organizations in Japan)

According to the NISA press release issued at 23:50, 0:35 and 1:00:

- The spent fuel reprocessing plant at Rokkasho-mura, Aomori Prefecture is in test operation and the uranium enrichment plant is NOT IN OPERATION. The Higashi-dori (Aomori Prefecture), Onagawa (Miyagi Prefecture), Fukushima Dai-ichi and Fukushima Dai-ni nuclear power plants are NOT IN OPERATION after the Tohoku-Pacific earthquake of March 11. Tokai Dai-ni nuclear power plant (Ibaraki Prefecture) is NOT IN OPERATION.
- The spent fuel reprocessing plant and the uranium enrichment plant at Rokkasho-mura keep power supply by the emergency diesel generator as the power supply from outside has been cut after the earthquake.
- The Higashi-dori nuclear power plant keeps power supply by the emergency diesel generator as the power supply from outside has been cut after the earthquake, and the cooling of the spent fuel rods continues. There is no fuel rod in the core of the plant.
- The Onagawa nuclear power plant keeps power supply from outside though two power lines out of the three have been cut. There is no significant change in the readings of the monitoring posts. The cooling of the spent fuel rods continues.
- There is no significant change in the readings of the monitoring posts of the Fukushima Dai-ichi nuclear power plant. Water injection into the reactor continues.
- There is no significant change of the parameters of the Fukushima Dai-ni nuclear power plant.
- There is no trouble seen with the Tokai Dai-ni nuclear power plant.

Contact: International Nuclear Energy Cooperation Division, Tel 03-5501-8227