From: Breskovic, Clarence
To: Breskovic, Clarence
Subject: Japan Update: Evcuations ordered around Fukishima
Date: Friday, March 11, 2011 11:38:00 AM

Contents

Japan Orders Evacuation of Residents Near N-plant

Kyodo: Gsdf Sent To Area Near Fukushima Nuke Plant To Assist Evacuation

3,000 Ordered To Evacuate Near Quake-hit Fukushima Nuclear Plant

Fukushima Pref. Warns of Radiation Leak at N-plant

Japan Orders Evacuation of Residents Near N-plant

Tokyo, March 11 (Jiji Press) -- The government on Friday ordered evacuation of residents in a 3-kilometer radius from a quake-hit Tokyo Electric Power Co. nuclear power plant in Fukushima Prefecture, northern Japan, citing a possible radiation leak.

The government, however, has confirmed no radiation leak so far. The evacuation order was issued after the 8.8-magnitude quake hit northern Japan to have all the three reactors at the power plant shut down automatically.

Chief Cabinet Secretary Yukio Edano said at a news conference that the government called for preemptive evacuation, urging the 5,862 residents to stay calm in following the order.

The government also instructed 45,345 residents living outside the area but in a 10-kilometer radius to stay at home.

According to the Nuclear and Industrial Safety Agency of the Ministry of Economy, Trade and Industry, cooling functions of the No. 2 reactor at the plant have stopped working, affected by a power outage caused by the quake.

The agency is unable to confirm cooling water levels at the reactor and the No.1 reactor. The plant's emergency diesel power generation equipment has stopped working, leading the company to dispatch power supply cars, according to the agency.

As the power supply cars have reached the plant, the company is proceeding with work to resupply electricity to restore cooling functions.

The Fukushima prefectural government has reported that cooling water levels at the No.2 reactor are dropping and warned that continued decline would expose nuclear fuel rods to air to generate radiation.

FE11

Reactors were also automatically shut down at the company's Fukushima No. 2 nuclear power station, with emergency supply of cooling water starting at one of them.

The nuclear safety agency said sufficient cooling water is supplied at the reactor, but tsunami prevented the agency from confirming whether pumps taking in sea water for two other reactors are working properly.

Kyodo: Gsdf Sent To Area Near Fukushima Nuke Plant To Assist Evacuation

Tokyo, March 12 Kyodo -- A total of around 160 Ground Self-Defense Force personnel and a number of large vehicles have been dispatched to an area near the Fukushima No. 1 nuclear plant in Fukushima Prefecture to help evacuate local residents, a senior SDF officer said late Friday.

More than 100 members of a GSDF special unit trained to deal with chemical disasters have been advancing toward the area, SDF chief Ryoichi Oriki said at a news conference at the Defense Ministry.

Some 3,000 residents near the nuclear plant have been ordered to evacuate due to a problem with a cooling system detected at one of the six reactors at the Tokyo Electric Power Co. plant.

Meanwhile, liaison officers from U.S. Forces Japan were being sent to the ministry to coordinate the disaster response of the SDF and U.S. forces, he added.

Around 300 aircraft and about 40 vessels of the SDF have been dispatched or are being prepared for dispatch to deal with the disaster, according to the ministry.

3,000 Ordered To Evacuate Near Quake-hit Fukushima Nuclear Plant

Tokyo, March 11 Kyodo -- (EDS: ADDING GOV'T SPOKESMAN'S COMMENTS) Japan declared a state of atomic power emergency Friday after the country, which has about 50 nuclear power reactors, was hit by a powerful earthquake, instructing around 3,000 residents near the Fukushima No. 1 plant to evacuate.

Japan's top government spokesman Yukio Edano told an evening press conference, "We have a situation where one of the reactors (of the plant) cannot be cooled down." But the chief Cabinet secretary said the evacuation instruction was only precautionary.

"No radiation has leaked outside the reactor. The incident poses no danger to the environment at the moment," Edano said.

The post-quake situation prompted the Vienna-based International Atomic Energy Agency to scramble for details from contacts with Japan's industry ministry, while saying in a statement that at least four nuclear power plants "closest to the quake have been safely shut down" after the 2:46 p.m. quake.

Tokyo Electric Power Co., the operator of the Fukushima plant, reported that the level of the water surrounding the fuel rods was going down in the reactor.

Radioactive materials could be emitted if part of a rod is exposed to the air.

But officials of the prefectural government dismissed a view that the plant is in any critical situation, saying the top of the water is 3.4 meters above the fuel rods at the troubled No. 2 reactor.

The evacuation advisory was issued for people living within a 3-kilometer radius of the plant, while those living within a 10-kilometer radius were asked to stay home, Edano said.

Prime Minister Naoto Kan declared the emergency even though no radiation leak has been detected after the magnitude 8.8 quake so that authorities can easily implement emergency relief measures, Edano said.

Japanese Defense Minister Toshimi Kitazawa ordered the Self-Defense Forces to act in response to the state of atomic power emergency. Also, the Defense Ministry dispatched a chemical corps of the Ground Self-Defense Force to the plant.

Motohisa Ikeda, senior vice industry minister, also left Tokyo for Fukushima on Friday evening by an SDF helicopter.

According to the industry ministry, a total of 11 nuclear reactors were automatically shut down at the Onagawa plant, Fukushima No. 1 and No. 2 plants and Tokai No. 2 plant after the biggest-magnitude quake in the country's modern history.

At the Onagawa plant in Miyagi Prefecture, a fire started at a building housing the turbine, the operator, Tohoku Electric Power Co., said, denying it detected any signs of radiation leaks.

Water spilled from pools containing fuel rods at the Kashiwazaki-Kariwa plant on the Sea of Japan coast in Niigata Prefecture and the Onagawa plant, the operators said, saying they saw no signs suggesting radiation leaks.

Hokkaido Electric Power Co. reported no problems at its Tomari No. 1, No. 2 and No. 3 plants on the northernmost main island.

There were no immediate signs of any problems at the Hamaoka nuclear plant on the Pacific coast in Shizuoka Prefecture, southwest of Tokyo, the prefectural government said.

Fukushima Pref. Warns of Radiation Leak at N-plant

Fukushima, March 11 (Jiji Press) -- The Fukushima prefectural government on Friday warned that water levels dropped at a reactor of a quake-hit Tokyo Electric Power Co. <9501> nuclear power plant, posing a threat of a radiation leak.

If the water levels at the No.2 reactor at the Fukushima No. 1 nuclear power station of the company keep falling, nuclear fuel rods would be exposed to air to generate radiation, according to the prefecture.

The prefecture urged residents in a 2-kilometer radius from the reactor to immediately evacuate.

From: NITOPS
To: "narac@llnl.gov"; HOO Hoc
Subject: FW: Hysplit run for Fukushima-Daiichi
Date: Friday, March 11, 2011 11:25:47 PM
Attachments: hysplit.t00z.FUKUSHIMA-DAIICHI-1.rsmc01.rsmc.pdf

---

Just FYI. New NOAA.

-Warren Wylupski

Warren Wylupski (Contractor)
Department of Energy/ National Nuclear Security Administration
NA-42 Office of Emergency Response
202.287.2344
warren.wylupski@nnsa.doe.gov

From: Steven Fine [mailto:steven.fine@noaa.gov]
Sent: Friday, March 11, 2011 11:21 PM
To: Albert.Mongeon
Cc: sdm; NITOPS; narac; Richard.Artz; Mark Paese; ARL Emerg; _NWS MetWatch; Barbara Stunder; Roland Draxler
Subject: Re: Hysplit run for Fukushima-Daiichi

All,

Here's a HYSPLIT simulation for a 7-day period:

Notes:

- Exercise run, not for an actual release
- Not for public distribution
-
- Plots alternate between day 1 exposure, day 1 deposition, day 2 exposure and dep, etc.
- Contour levels vary between the plots

Thanks to Barbara Stunder for conducting the simulation.

Steve

--
Steve Fine, Ph.D., Director
NOAA - Air Resources Laboratory
Voice: 301-713-0295x136
Fax: 301-713-0119
http://www.arl.noaa.gov/

On Fri, Mar 11, 2011 at 9:04 PM, <Albert.Mongeon@noaa.gov> wrote:

EE/2

Note to all:

This is a hypothetical run.

No radioactive material has been reported released.

v/r,

Al Mongeon

----- Original Message -----
From: sdm <Sdm@noaa.gov>
Date: Friday, March 11, 2011 7:37 pm
Subject: Hysplit run for Fukushima-Daiichi
To: Sdm@noaa.gov, nitops@nnsa.doe.gov, narac@llnl.gov, Steven.Fine@noaa.gov, Richard.Artz@noaa.gov, Albert Mongeon <Albert.Mongeon@noaa.gov>, Mark Paese <Mark.Paese@noaa.gov>, ARL Emerg <arl.emerg@noaa.gov>, _NWS MetWatch <nws.metwatch@noaa.gov>

> To all,
>
> As requested, please see attached hysplit model run for Fukushima-Daiichi.

U.S. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
RSMC Washington (NOAA ARL, NOAA NCEP)

Room 410 - W/NMC33
World Weather Building
5200 Auth Road
Camp Springs, Maryland USA

Tel (24 hrs - NCEP): 301-763-8298
Tel (Backup - ARL): 301-713-2614

Fax (24 hrs - NCEP): 301-763-8592
Fax (Backup - ARL): 301-713-4592

RSMC products created Sat Mar 12 02:46 UTC 2011

The following charts will follow:
- trajectory map
- several time-itegrated concentration maps
- total (dry + wet) deposition map

Please contact us if any problems arise with these products.

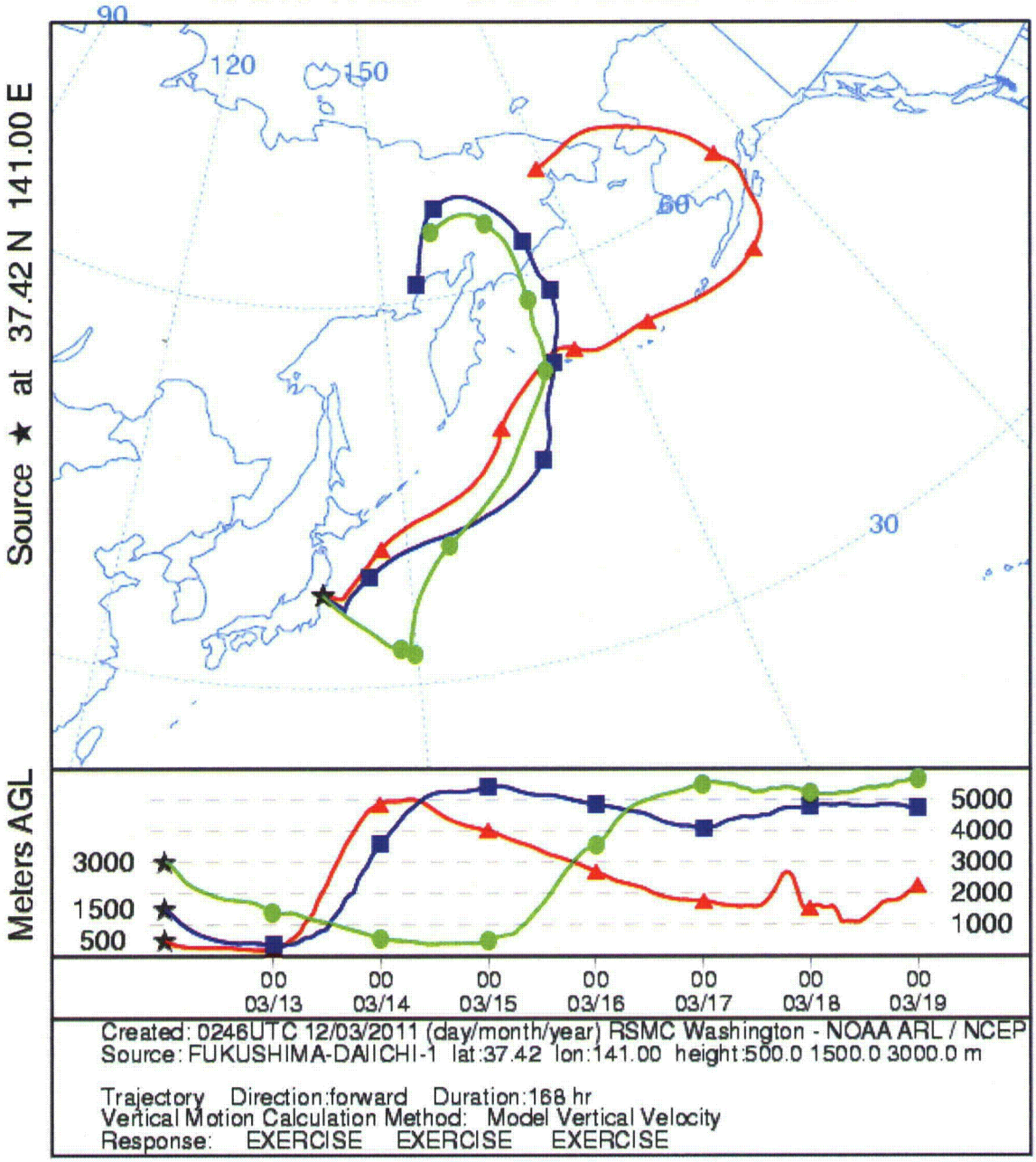
Source term and dispersion model details

RSMC Washington - NOAA ARL / NCEP

Response: EXERCISE EXERCISE EXERCISE

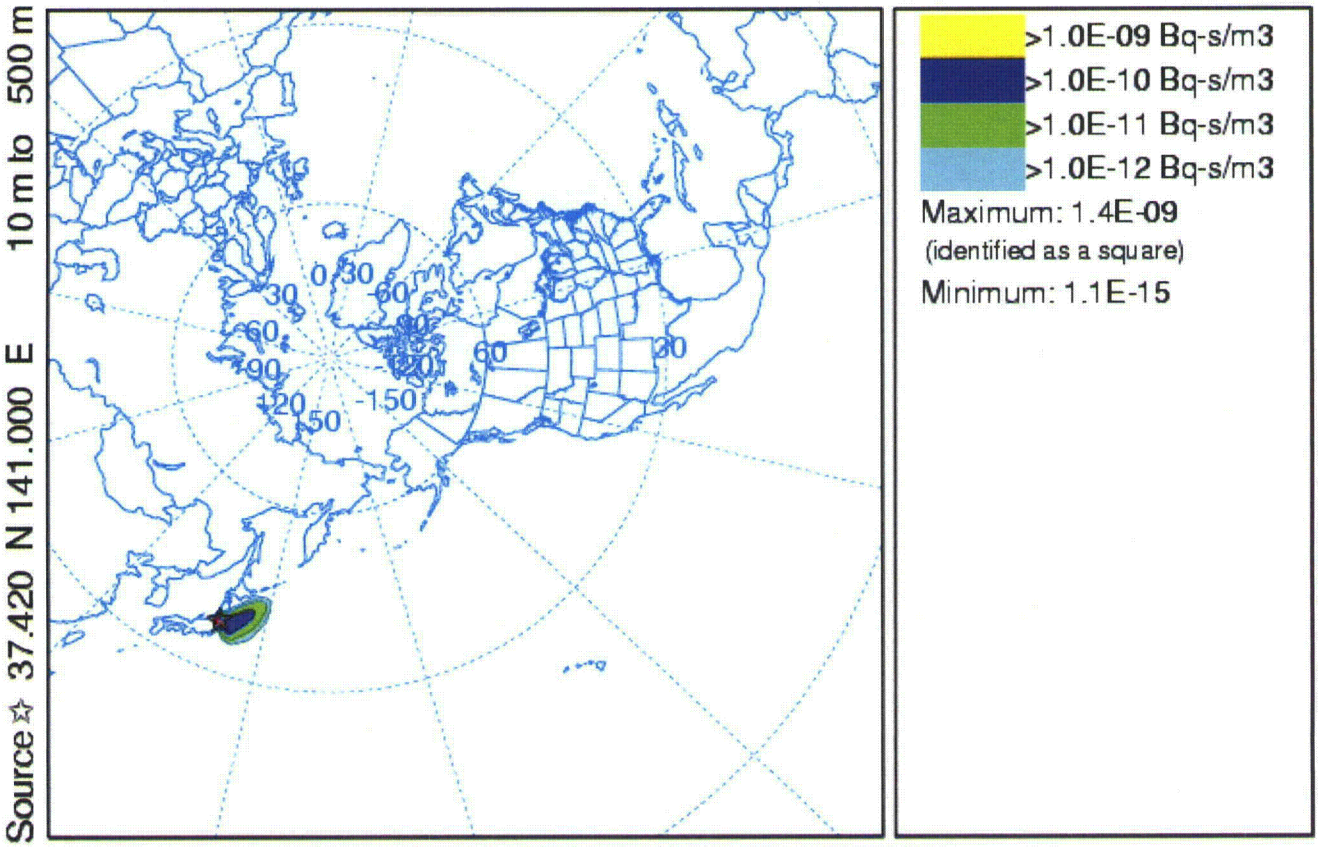
Location:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.00
Release Start (YYYY MM DD HH MM):2011 03 12 00 00
Meteorology: 1800 UTC 11 Mar 2011 GFS
Trajectories: 500.0, 1500.0, 3000.0 m AGL
Release ID:C137 Rate: .1666 Bq/hr Duration: 6.0 hr Particles: 50000
Distribution: Uniform between 10 and 500 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES

NOAA HYSPLIT MODEL
Forward trajectories starting at 00 UTC 12 Mar 11
18 UTC 11 Mar GFSG Forecast Initialization



NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 0000 12 Mar to 0000 13 Mar 11 (UTC)
C137 Release started at 0000 12 Mar 11 (UTC)



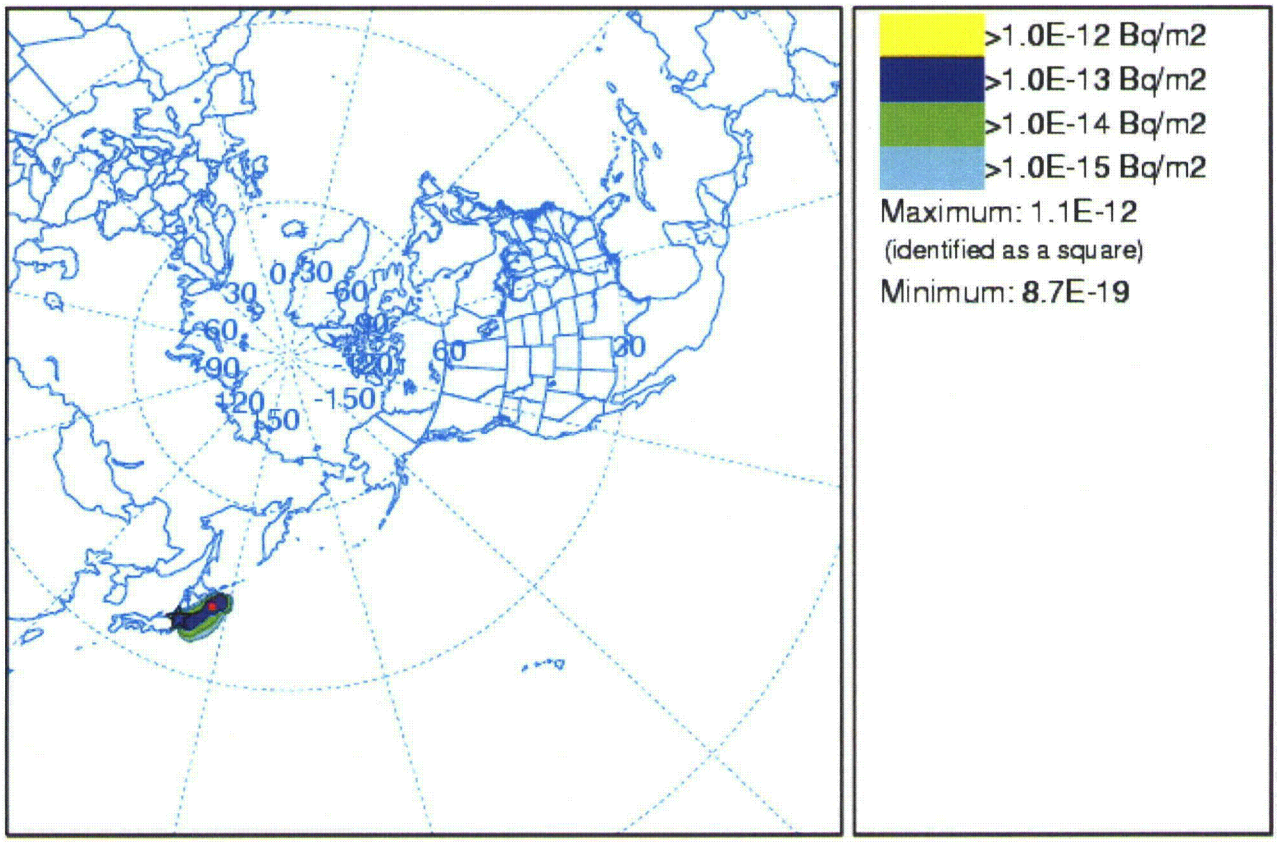
1800 11 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0246UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.00 hgt:10 to 500 m
Release ID:C137 Rate: .1666 Bq/hr Duration: 6.0 hr Particles: 50000
Distribution: Uniform between 10 and 500 m AGL
Dry Deposition Rate: .001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1800 UTC 11 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: EXERCISE EXERCISE EXERCISE

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from **0000** 12 Mar to **0000** 13 Mar 11 (UTC)
C137 Release started at **0000** 12 Mar 11 (UTC)

Source ☆ 37.420 N 141.000 E 10 m to 500 m



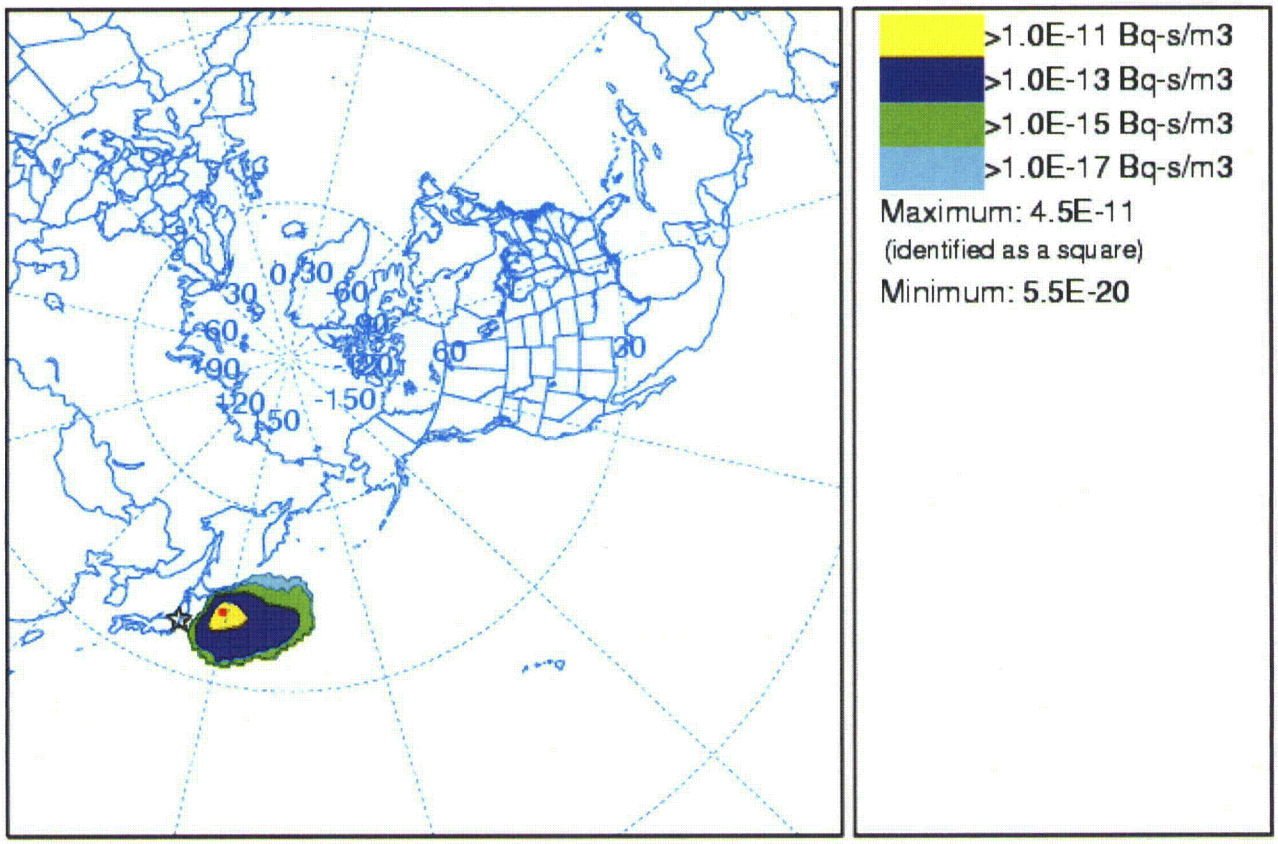
1800 11 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0246UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.00 hgt:10 to 500 m
Release ID:C137 Rate: .1666 Bq/hr Duration: 6.0 hr Particles: 50000
Distribution: Uniform between 10 and 500 m AGL
Dry Deposition Rate: .001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1800 UTC 11 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: EXERCISE EXERCISE EXERCISE

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 0000 13 Mar to 0000 14 Mar 11 (UTC)
C137 Release started at 0000 12 Mar 11 (UTC)

Source ☆ 37.420 N 141.000 E 10 m to 500 m



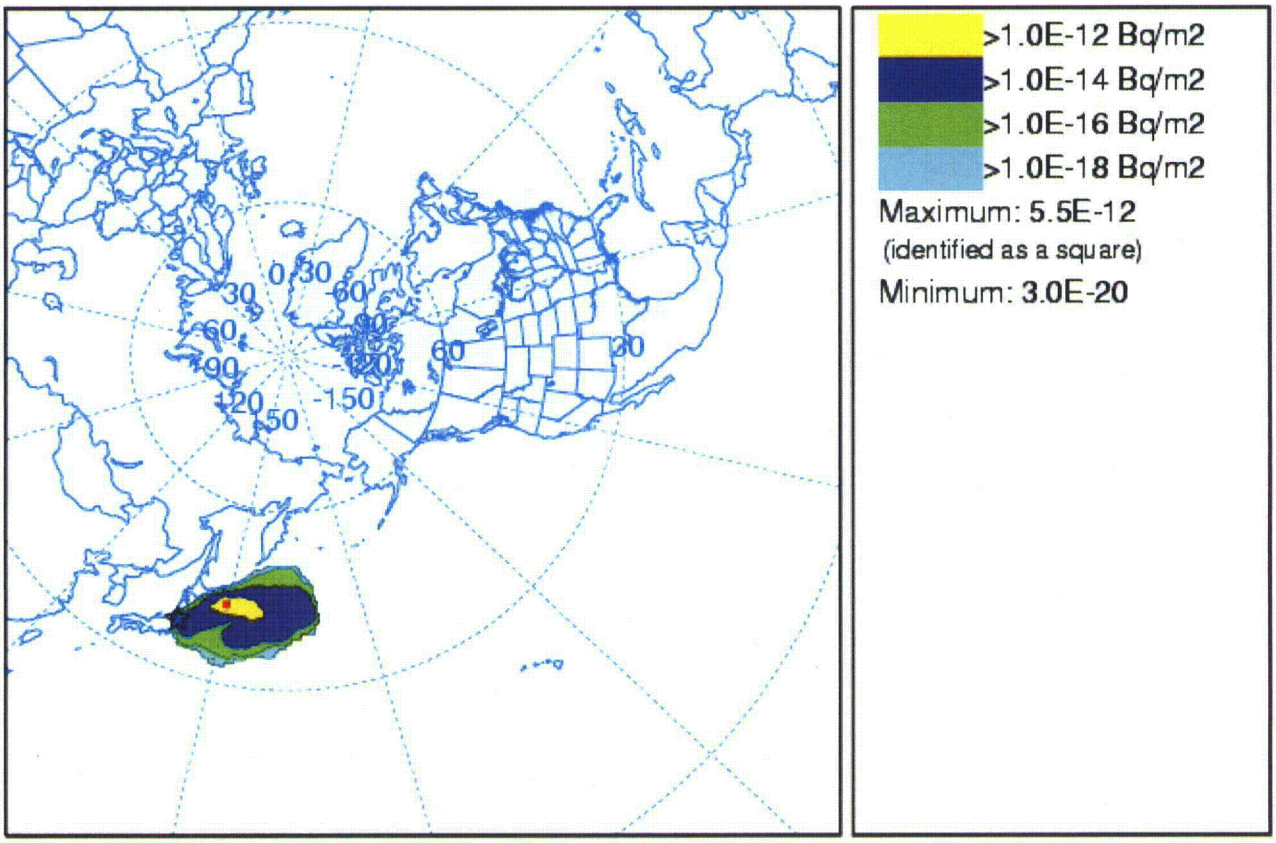
1800 11 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0246UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.00 hgt:10 to 500 m
Release ID:C137 Rate: .1666 Bq/hr Duration: 6.0 hr Particles: 50000
Distribution: Uniform between 10 and 500 m AGL
Dry Deposition Rate: .001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1800 UTC 11 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: EXERCISE EXERCISE EXERCISE

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from **0000** 12 Mar to **0000** 14 Mar 11 (UTC)
C137 Release started at **0000** 12 Mar 11 (UTC)

Source ☆ 37.420 N 141.000 E 10 m to 500 m



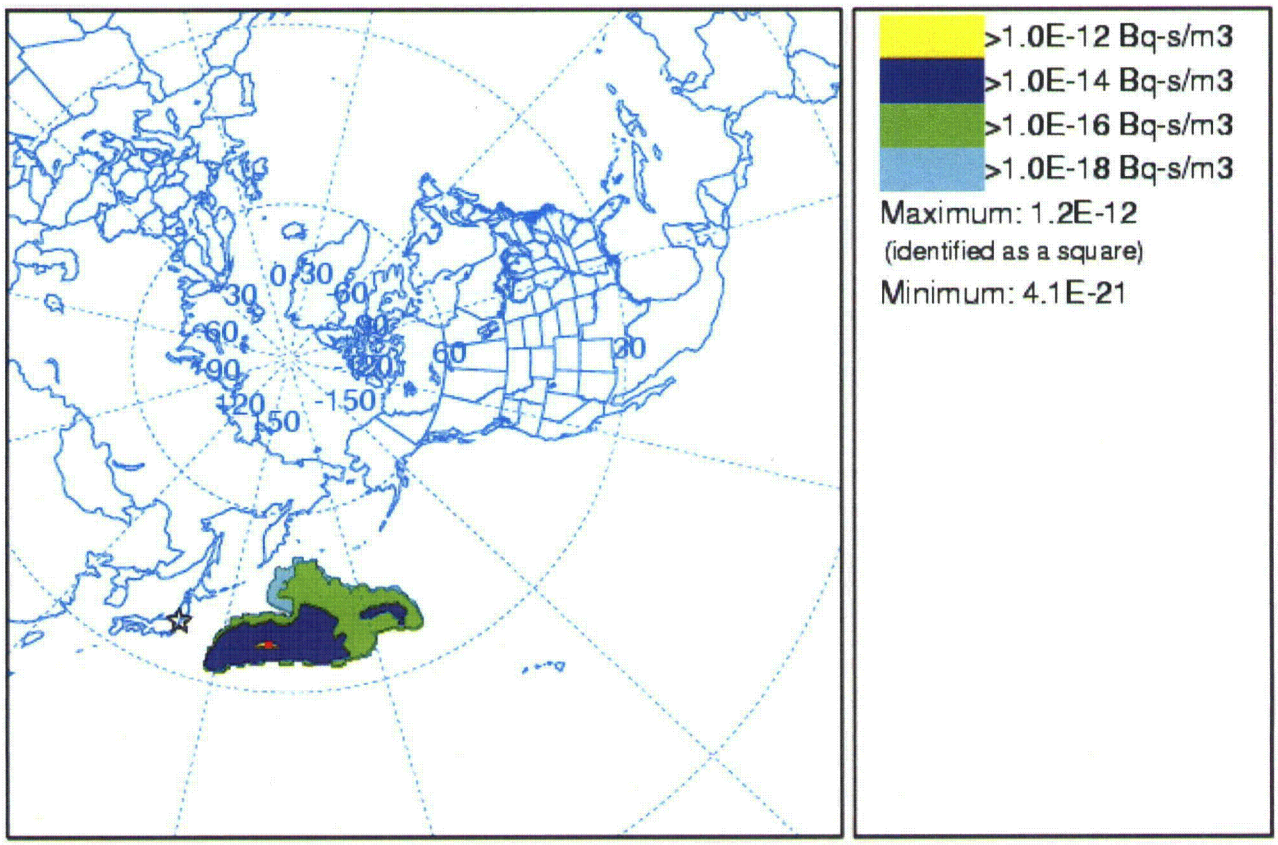
1800 11 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0246UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.00 hgt:10 to 500 m
Release ID:C137 Rate: .1666 Bq/hr Duration: 6.0 hr Particles: 50000
Distribution: Uniform between 10 and 500 m AGL
Dry Deposition Rate: .001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1800 UTC 11 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: EXERCISE EXERCISE EXERCISE

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 0000 14 Mar to 0000 15 Mar 11 (UTC)
C137 Release started at 0000 12 Mar 11 (UTC)

Source ☆ 37.420 N 141.000 E 10 m to 500 m

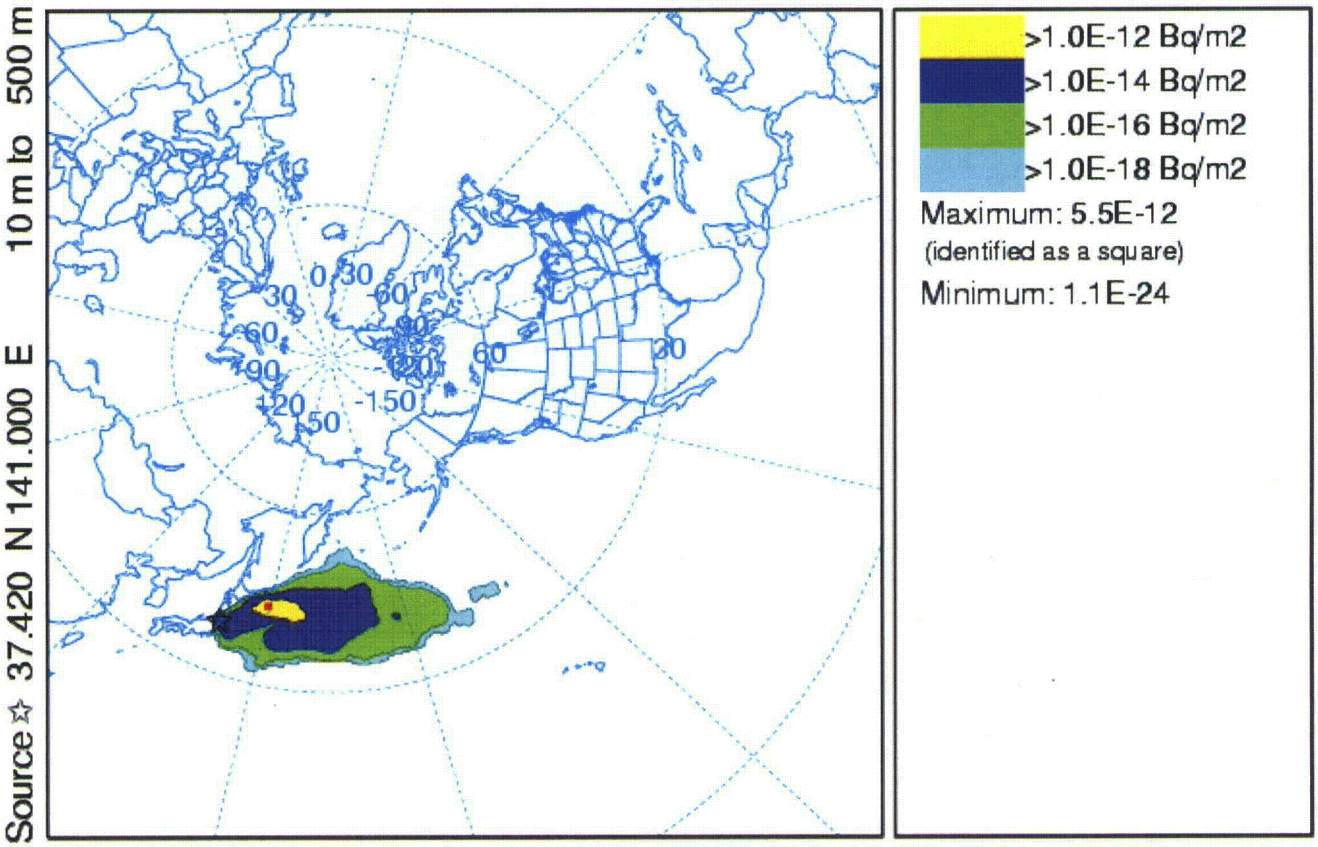


1800 11 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0246UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.00 hgt:10 to 500 m
Release ID:C137 Rate: .1666 Bq/hr Duration: 6.0 hr Particles: 50000
Distribution: Uniform between 10 and 500 m AGL
Dry Deposition Rate: .001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1800 UTC 11 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: EXERCISE EXERCISE EXERCISE

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from **0000** 12 Mar to **0000** 15 Mar 11 (UTC)
C137 Release started at **0000** 12 Mar 11 (UTC)

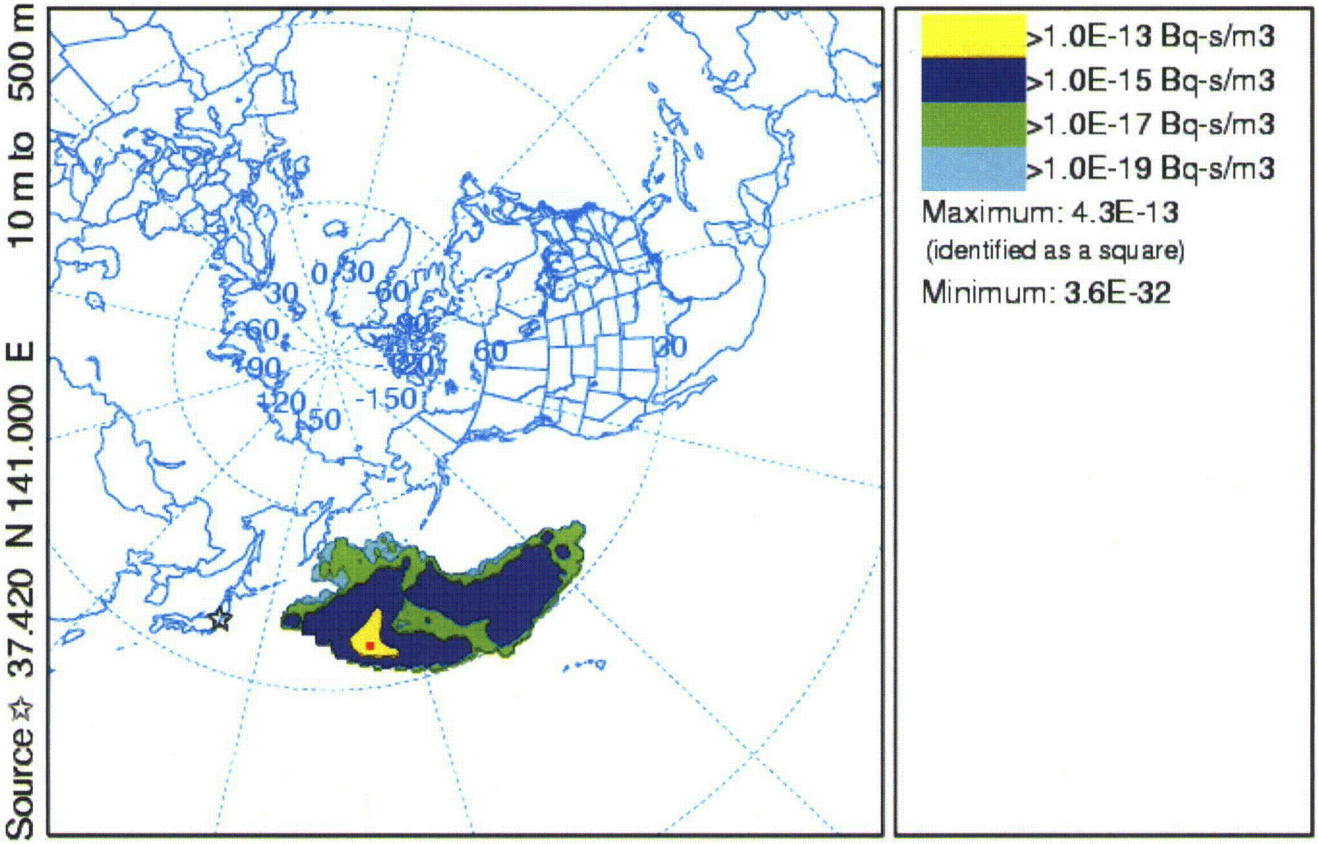


1800 11 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0246UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.00 hgt:10 to 500 m
Release ID:C137 Rate: .1666 Bq/hr Duration: 6.0 hr Particles: 50000
Distribution: Uniform between 10 and 500 m AGL
Dry Deposition Rate: .001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1800 UTC 11 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: EXERCISE EXERCISE EXERCISE

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 0000 15 Mar to 0000 16 Mar 11 (UTC)
C137 Release started at 0000 12 Mar 11 (UTC)



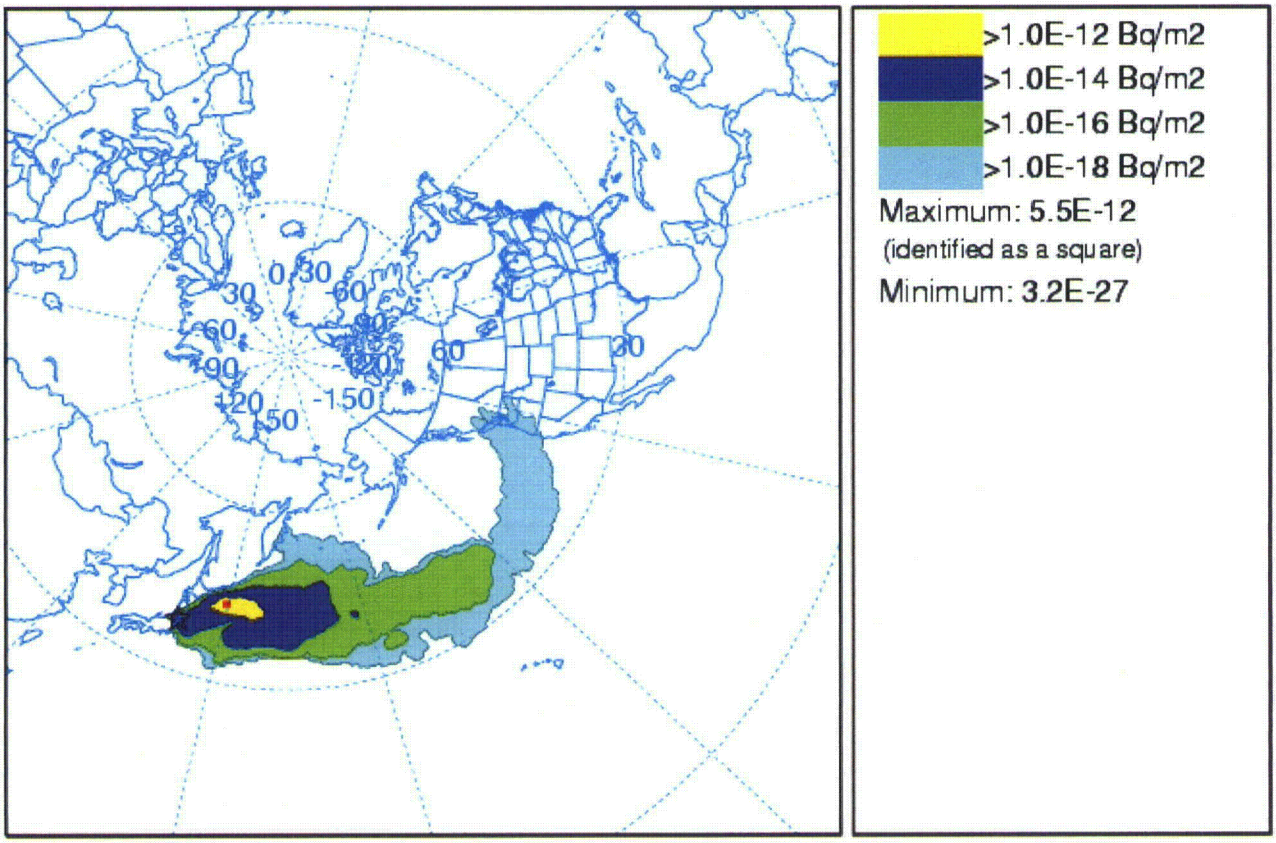
1800 11 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0246UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.00 hgt:10 to 500 m
Release ID:C137 Rate:.1666 Bq/hr Duration: 6.0 hr Particles: 50000
Distribution: Uniform between 10 and 500 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1800 UTC 11 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: EXERCISE EXERCISE EXERCISE

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from **0000** 12 Mar to **0000** 16 Mar 11 (UTC)
C137 Release started at **0000** 12 Mar 11 (UTC)

Source ☆ 37.420 N 141.000 E 10 m to 500 m



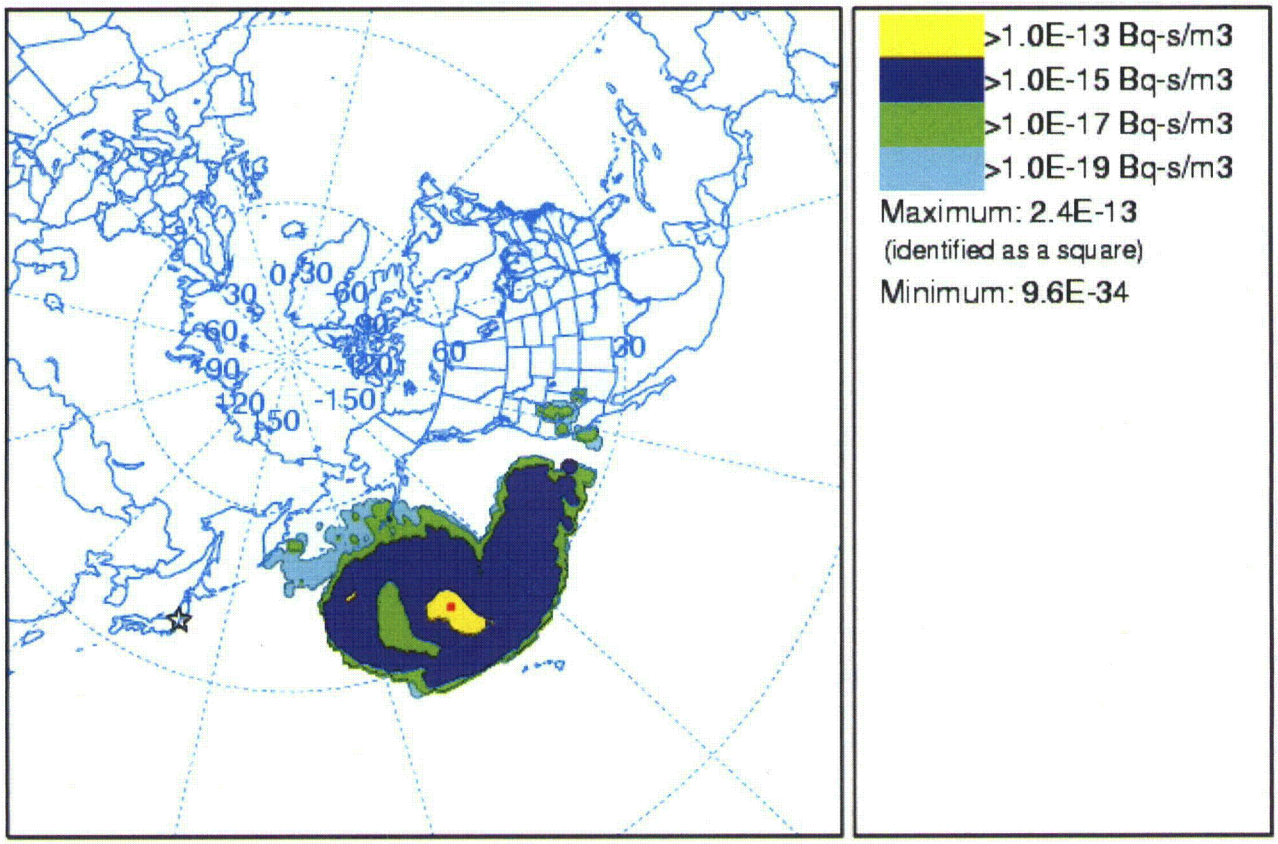
1800 11 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0246UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.00 hgt:10 to 500 m
Release ID:C137 Rate: .1666 Bq/hr Duration: 6.0 hr Particles: 50000
Distribution: Uniform between 10 and 500 m AGL
Dry Deposition Rate: .001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1800 UTC 11 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: EXERCISE EXERCISE EXERCISE

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 0000 16 Mar to 0000 17 Mar 11 (UTC)
C137 Release started at 0000 12 Mar 11 (UTC)

Source ☆ 37.420 N 141.000 E 10 m to 500 m



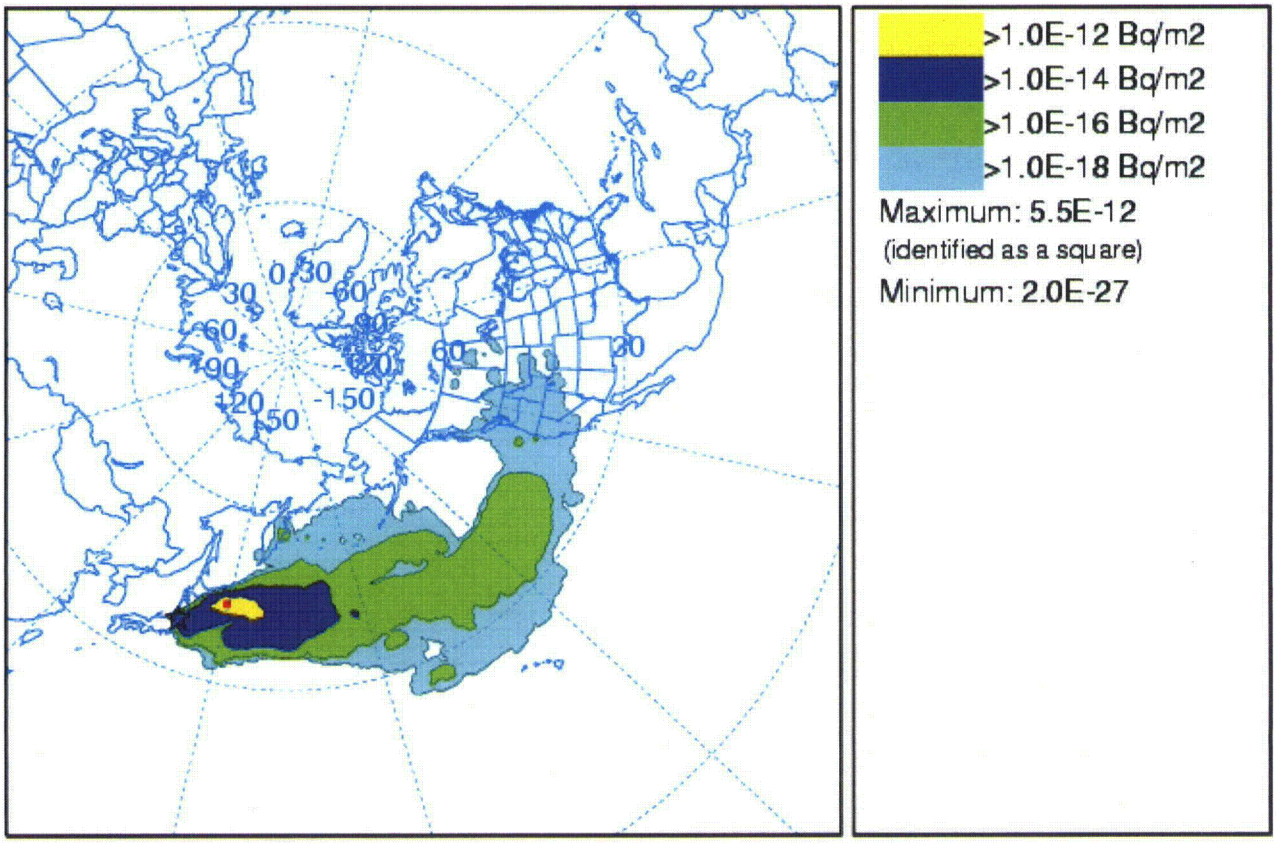
1800 11 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0246UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.00 hgt:10 to 500 m
Release ID:C137 Rate: .1666 Bq/hr Duration: 6.0 hr Particles: 50000
Distribution: Uniform between 10 and 500 m AGL
Dry Deposition Rate: .001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1800 UTC 11 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: EXERCISE EXERCISE EXERCISE

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from **0000** 12 Mar to **0000** 17 Mar 11 (UTC)
C137 Release started at **0000** 12 Mar 11 (UTC)

Source ☆ 37.420 N 141.000 E 10 m to 500 m

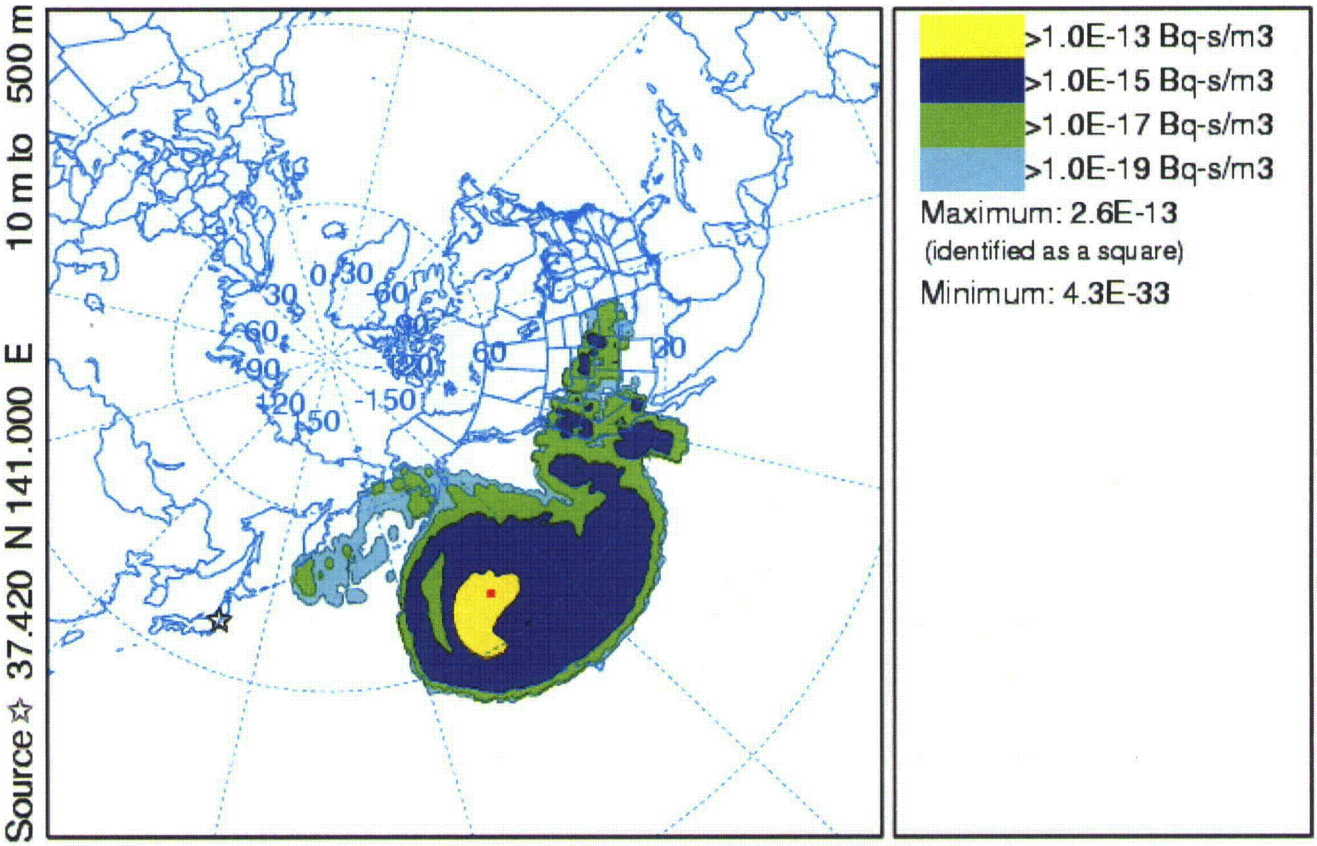


1800 11 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0246UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.00 hgt:10 to 500 m
Release ID:C137 Rate:.1666 Bq/hr Duration: 6.0 hr Particles: 50000
Distribution: Uniform between 10 and 500 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1800 UTC 11 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: EXERCISE EXERCISE EXERCISE

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 0000 17 Mar to 0000 18 Mar 11 (UTC)
C137 Release started at 0000 12 Mar 11 (UTC)

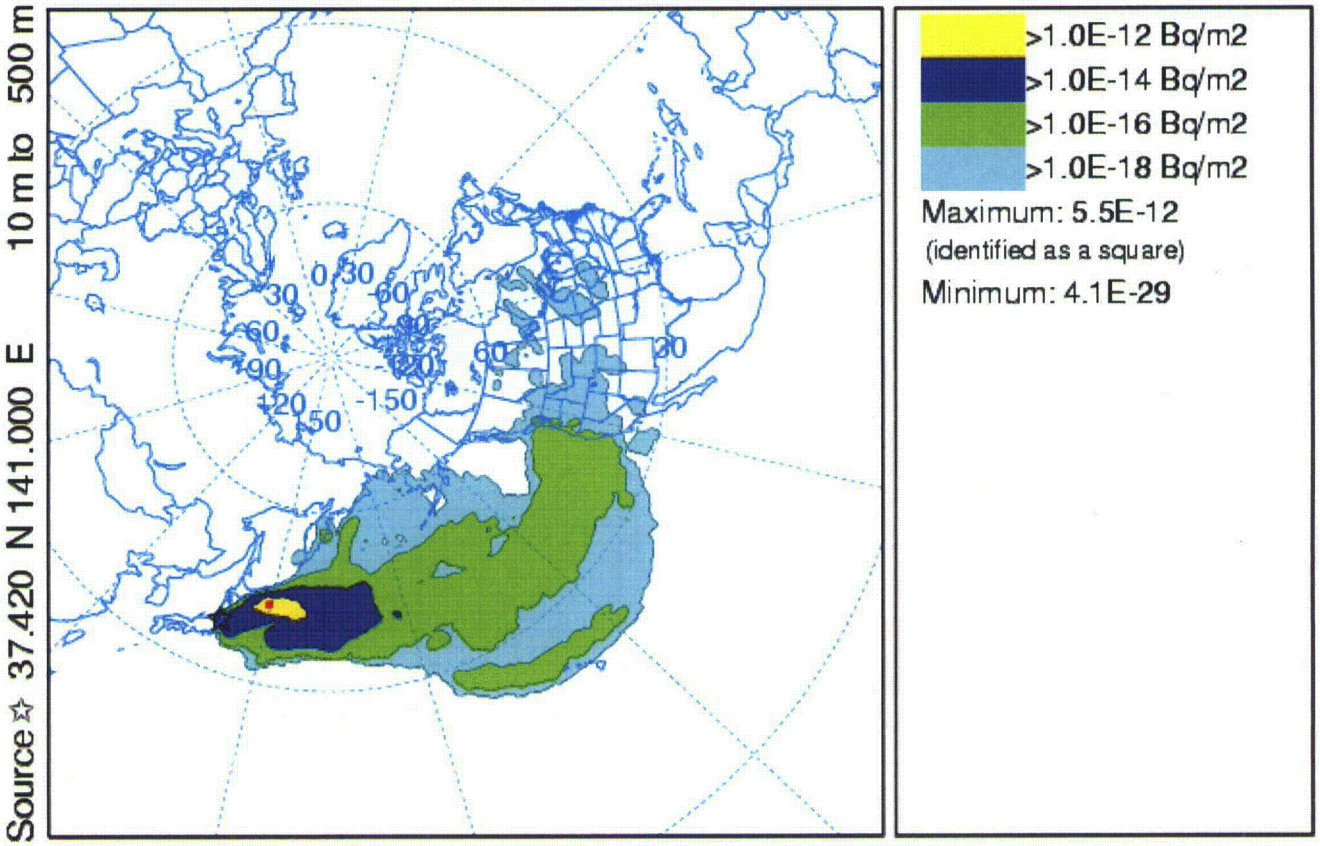


1800 11 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0246UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.00 hgt:10 to 500 m
Release ID:C137 Rate: .1666 Bq/hr Duration: 6.0 hr Particles: 50000
Distribution: Uniform between 10 and 500 m AGL
Dry Deposition Rate: .001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1800 UTC 11 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: EXERCISE EXERCISE EXERCISE

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from **0000** 12 Mar to **0000** 18 Mar 11 (UTC)
C137 Release started at **0000** 12 Mar 11 (UTC)

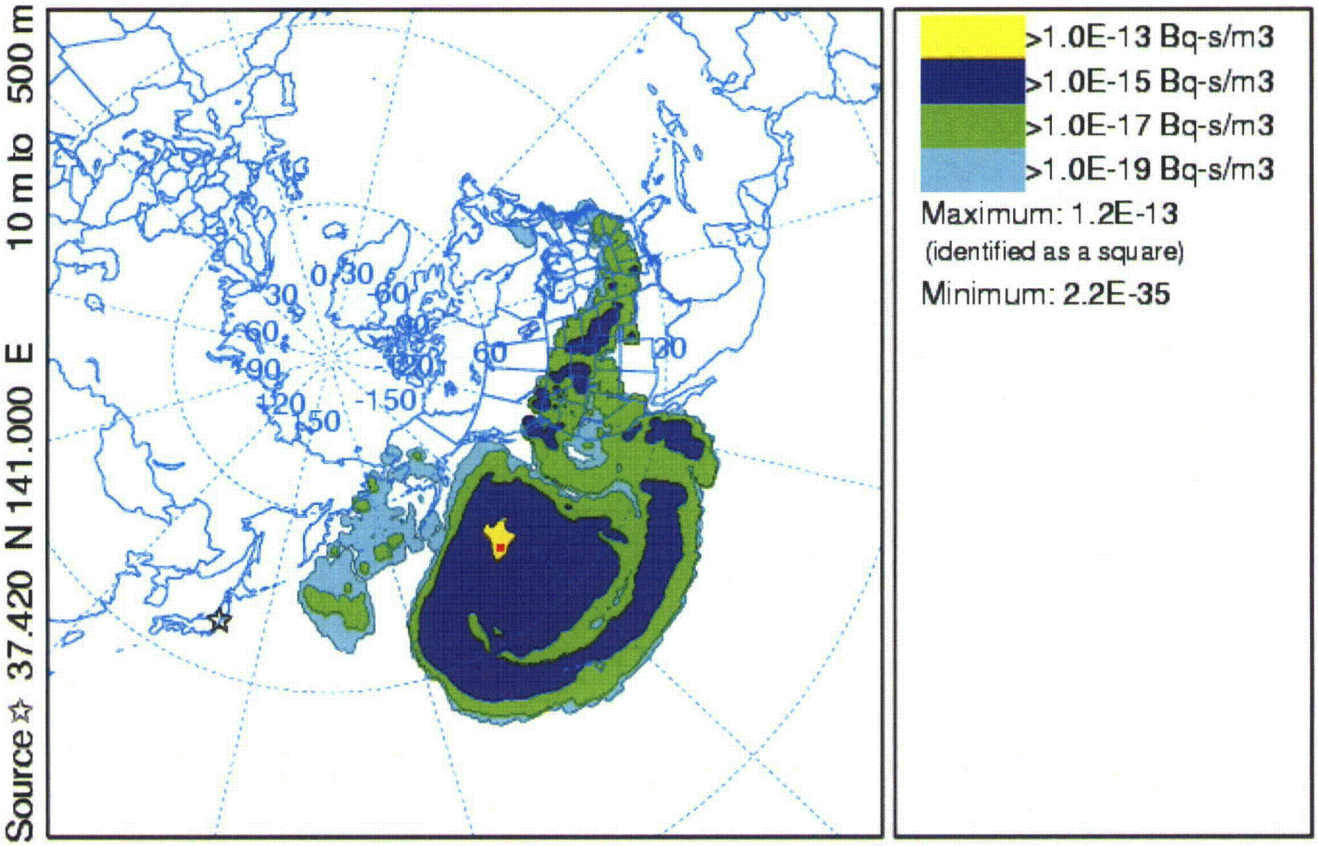


1800 11 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0246UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.00 hgt:10 to 500 m
Release ID:C137 Rate: .1666 Bq/hr Duration: 6.0 hr Particles: 50000
Distribution: Uniform between 10 and 500 m AGL
Dry Deposition Rate: .001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1800 UTC 11 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: EXERCISE EXERCISE EXERCISE

NOAA HYSPLIT MODEL

Exposure (Bq-s/m3) averaged between 0 m and 500 m
Integrated from 0000 18 Mar to 0000 19 Mar 11 (UTC)
C137 Release started at 0000 12 Mar 11 (UTC)



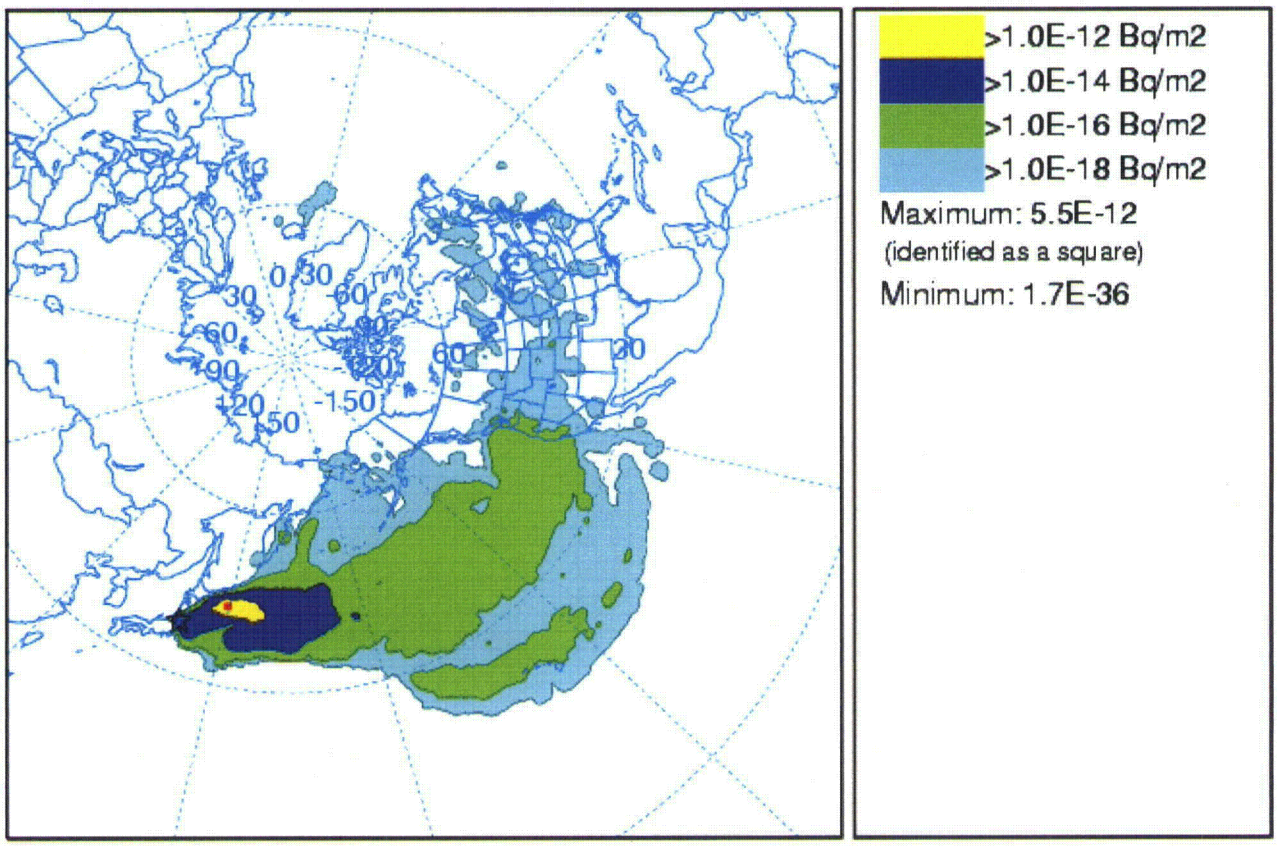
1800 11 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0246UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.00 hgt:10 to 500 m
Release ID:C137 Rate: .1666 Bq/hr Duration: 6.0 hr Particles: 50000
Distribution: Uniform between 10 and 500 m AGL
Dry Deposition Rate: .001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1800 UTC 11 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: EXERCISE EXERCISE EXERCISE

NOAA HYSPLIT MODEL

Deposition (Bq/m2) at ground-level
Integrated from **0000** 12 Mar to **0000** 19 Mar 11 (UTC)
C137 Release started at **0000** 12 Mar 11 (UTC)

Source ☆ 37.420 N 141.000 E 10 m to 500 m



1800 11 Mar 11 GFSG FORECAST INITIALIZATION

Created: 0246UTC 12/03/2011 (day/month/year) RSMC Washington - NOAA ARL / NCEP
Source:FUKUSHIMA-DAIICHI-1 lat:37.42 lon:141.00 hgt:10 to 500 m
Release ID:C137 Rate:.1666 Bq/hr Duration: 6.0 hr Particles: 50000
Distribution: Uniform between 10 and 500 m AGL
Dry Deposition Rate:.001 m/s Wet Removal (below/in-cloud):5.0E-5/3.2E+5
Meteorology: 1800 UTC 11 Mar 2011 GFS
Note: Contour values may change from chart to chart
Note: RESULTS BASED ON DEFAULT INITIAL VALUES
Response: EXERCISE EXERCISE EXERCISE

From: Pobanz, Brenda M.
To: HOO Hoc
Subject: Wind Data for RASCAL run
Date: Friday, March 11, 2011 8:14:47 PM
Attachments: ForecastWindData.docx

Attn Greg C.

Attached are surface winds extracted from the WRF forecast data. Please let us know if you have any questions.

Brenda/John

Brenda Pobanz
NARAC/IMAAC Operations
Lawrence Livermore National Laboratory
925-422-1823

EE/3

Date	Time	Wind Direction (from)	Wind Speed (m/s)	Stability
3/11/2011	2100 UTC	231	1.6	D
3/11/2011	2200 UTC	249	1.6	D
3/11/2011	2300 UTC	277	1.5	D
3/12/2011	0000 UTC	299	1.3	C
3/12/2011	0100 UTC	311	1.4	C
3/12/2011	0200 UTC	318	1.5	C
3/12/2011	0300 UTC	313	1.2	C

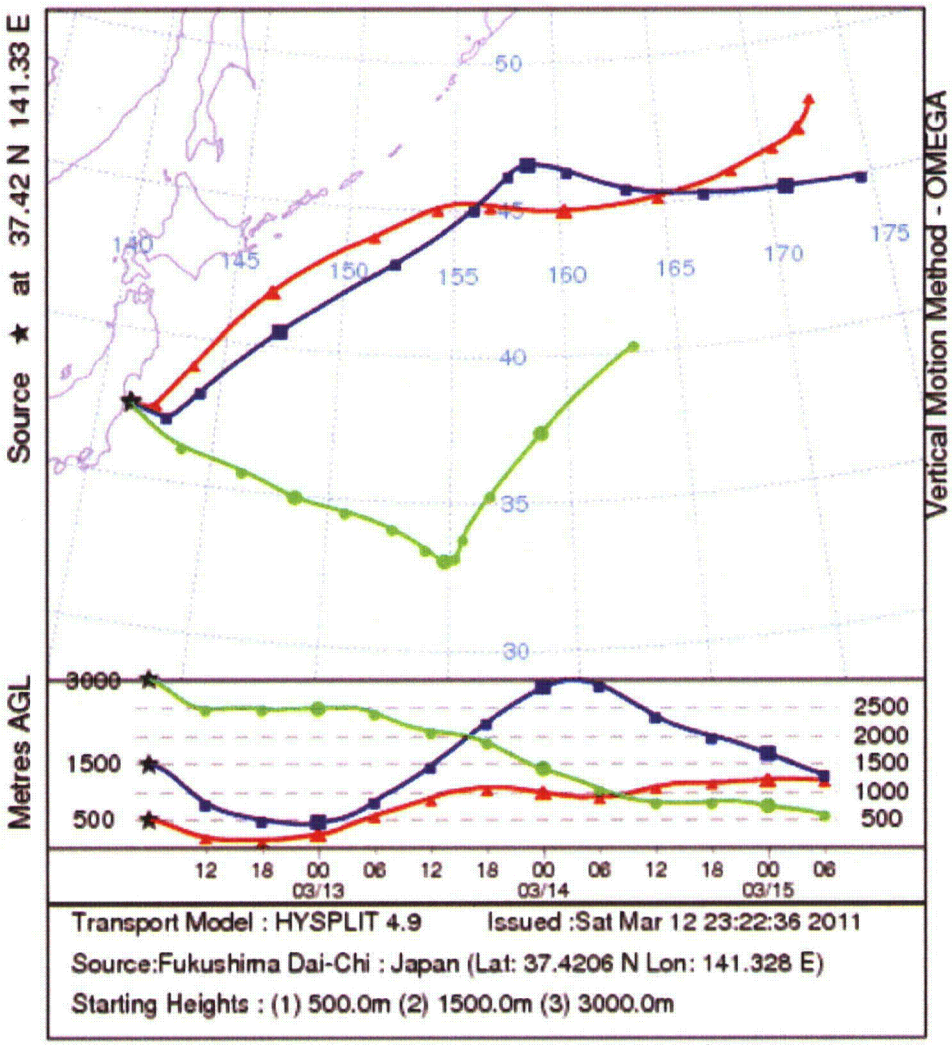
Wind information from 15 km WRF forecast.

RSMC Melbourne : Environmental Emergency Response Centre

Forward trajectories starting at 0630 UTC 12 Mar 2011

Meteorological Data : ACCESS-G : base time 0000 UTC 12 Mar

OPERATIONAL EVENT OPERATIONAL EVENT



EE/4

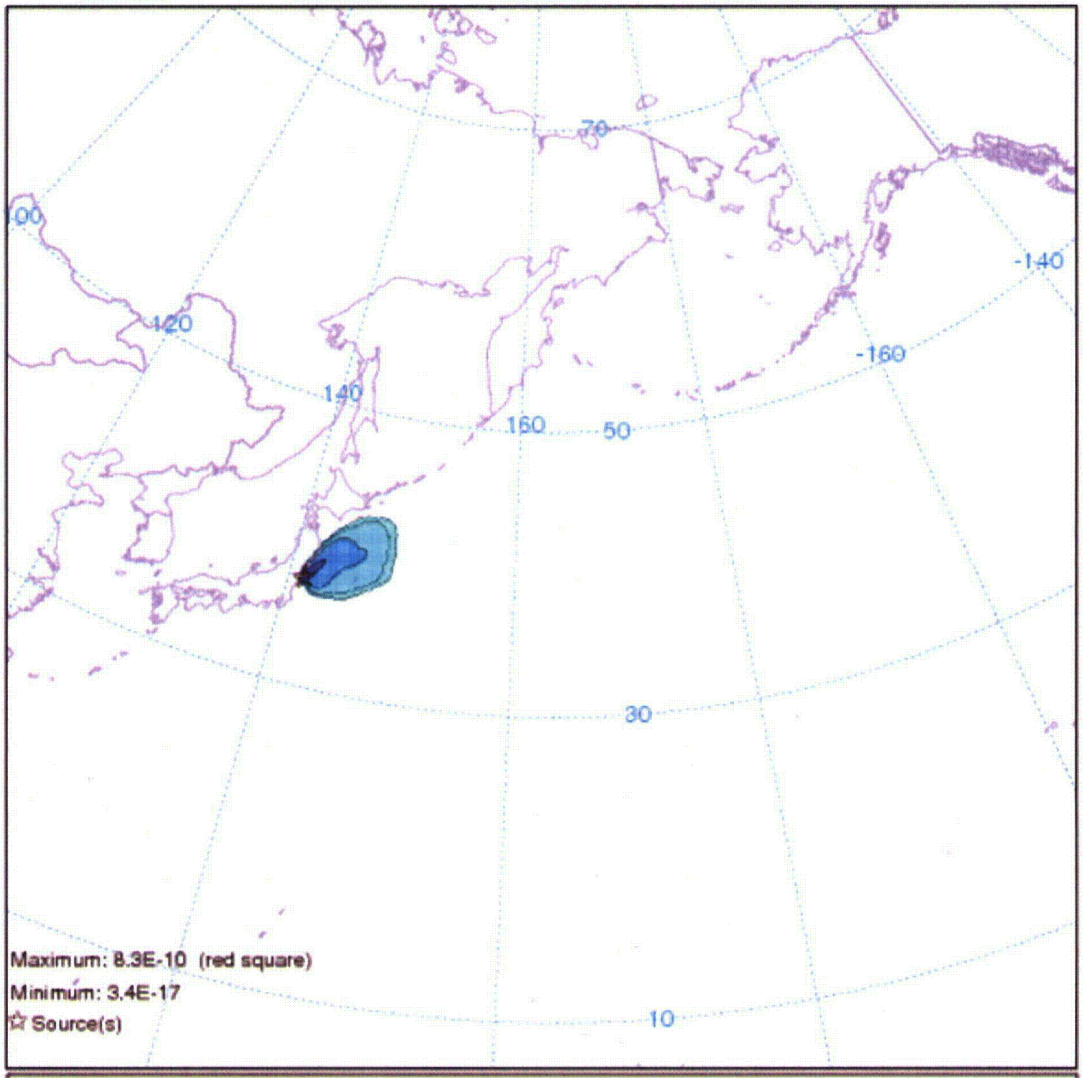
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 12 Mar to 0000 13 Mar 11 (UTC)

Exposure (Bq-s/m3) averaged between 0 m and 500 m

>1.0E-10 >1.0E-11 >1.0E-12 >1.0E-13



NRAD RELEASE STARTED AT 0600 UTC12 MAR 2011

Source:Fukushima Dai-Chi : Japan (Lat: 37.4206 N Lon: 141.328 E)

Isotope : Cs137 (Halflife: 1.09259E+04 days) Rate:1.39E-02 Bq/hr

Duration:72 hrs Particles: 500

DryDep Rate 0.001 WetRem (in/below-cloud) 3.20E+05 5.0E-05

Distribution: UNIFORM between 20.0m and 100.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 12 Mar

Note: "Contours may change from Chart to Chart" Issued :Sat Mar 12 23:22:36 2011

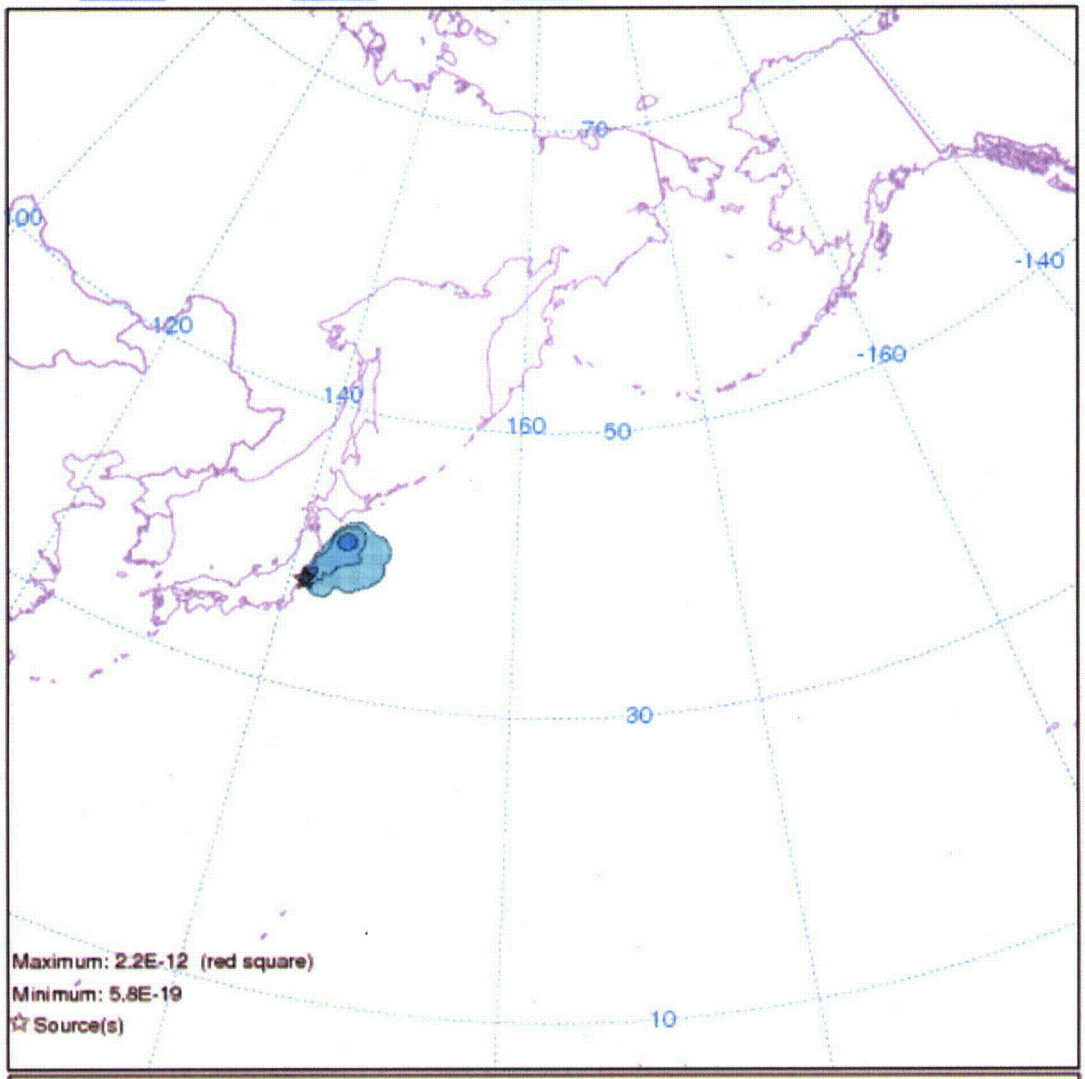
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 12 Mar to 0000 13 Mar 11 (UTC)

Deposition (Bq/m2) at ground-level

>1.0E-12 >1.0E-13 >1.0E-14 >1.0E-15



NRAD RELEASE STARTED AT 0600 UTC12 MAR 2011

Source:Fukushima Dai-Chi : Japan (Lat: 37.4206 N Lon: 141.328 E)

Isotope : Cs137 (Halflife: 1.09259E+04 days) Rate:1.39E-02 Bq/hr

Duration:72 hrs Particles: 500

DryDep Rate 0.001 WetRem (in/below-cloud) 3.20E+05 5.0E-05

Distribution: UNIFORM between 20.0m and 100.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 12 Mar

Note: "Contours may change from Chart to Chart" Issued :Sat Mar 12 23:22:36 2011

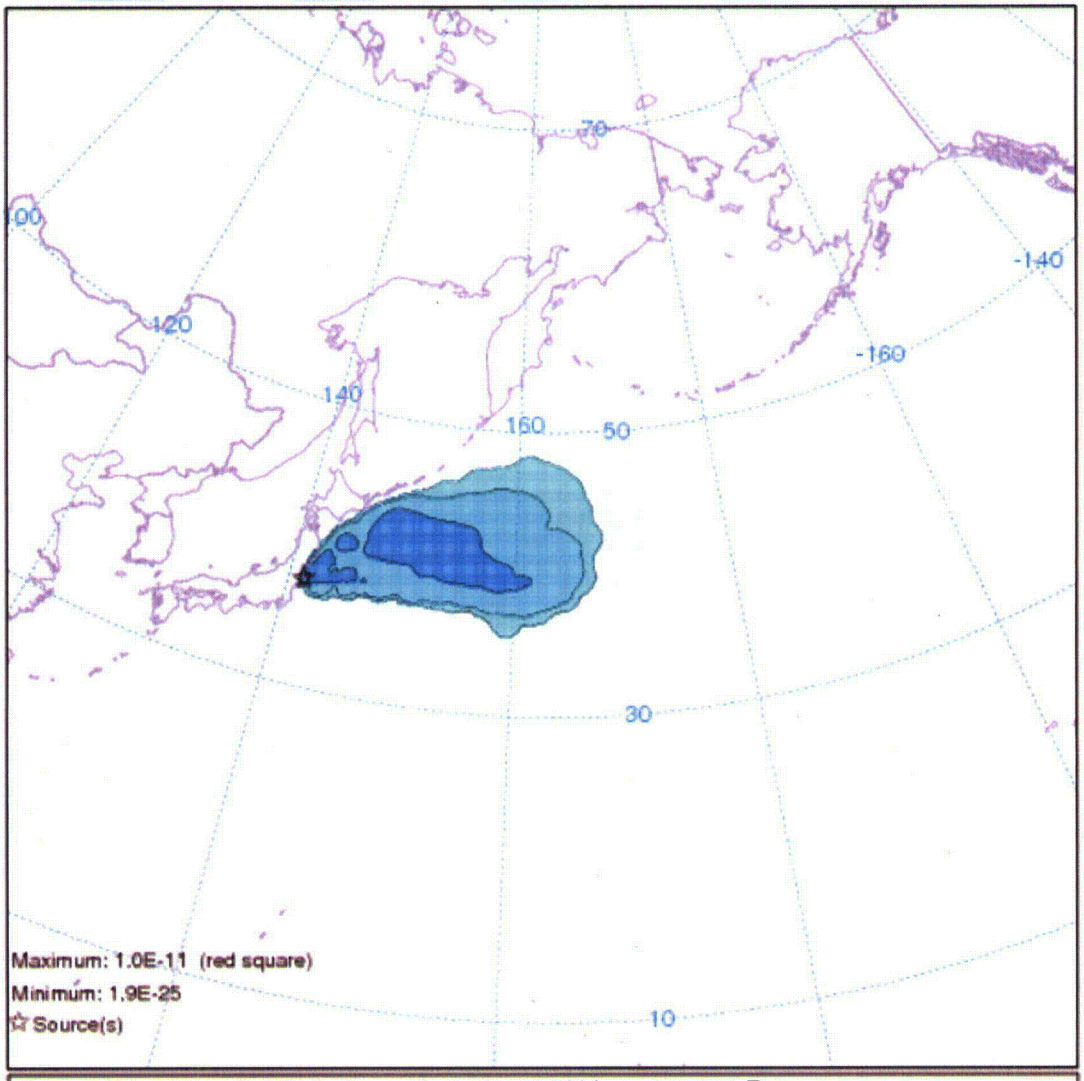
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 12 Mar to 0000 14 Mar 11 (UTC)

Deposition (Bq/m2) at ground-level

>1.0E-11 >1.0E-13 >1.0E-15 >1.0E-17



NRAD RELEASE STARTED AT 0600 UTC12 MAR 2011

Source:Fukushima Dai-Chi : Japan (Lat: 37.4206 N Lon: 141.328 E)

Isotope : Cs137 (Halflife: 1.09259E+04 days) Rate:1.39E-02 Bq/hr

Duration:72 hrs Particles: 500

DryDep Rate 0.001 WetRem (in/below-cloud) 3.20E+05 5.0E-05

Distribution: UNIFORM between 20.0m and 100.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 12 Mar

Note: "Contours may change from Chart to Chart" Issued :Sat Mar 12 23:22:36 2011

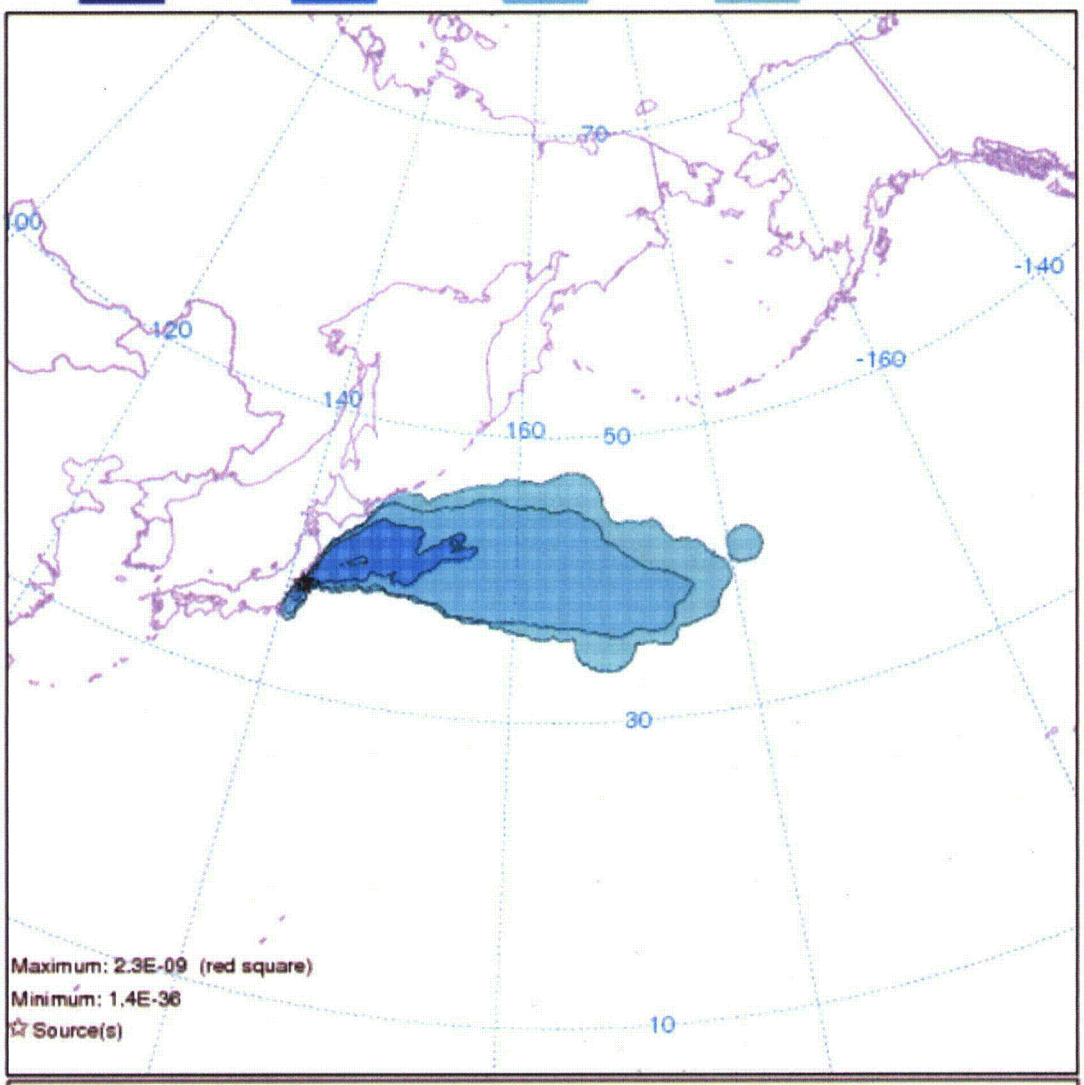
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 14 Mar to 0000 15 Mar 11 (UTC)

Exposure (Bq-s/m3) averaged between 0 m and 500 m

>1.0E-09 >1.0E-11 >1.0E-13 >1.0E-15



NRAD RELEASE STARTED AT 0600 UTC12 MAR 2011

Source:Fukushima Dai-Chi : Japan (Lat: 37.4206 N Lon: 141.328 E)

Isotope : Cs137 (Halflife: 1.09259E+04 days) Rate:1.39E-02 Bq/hr

Duration:72 hrs Particles: 500

DryDep Rate 0.001 WetRem (in/below-cloud) 3.20E+05 5.0E-05

Distribution: UNIFORM between 20.0m and 100.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 12 Mar

Note: "Contours may change from Chart to Chart" Issued :Sat Mar 12 23:22:36 2011

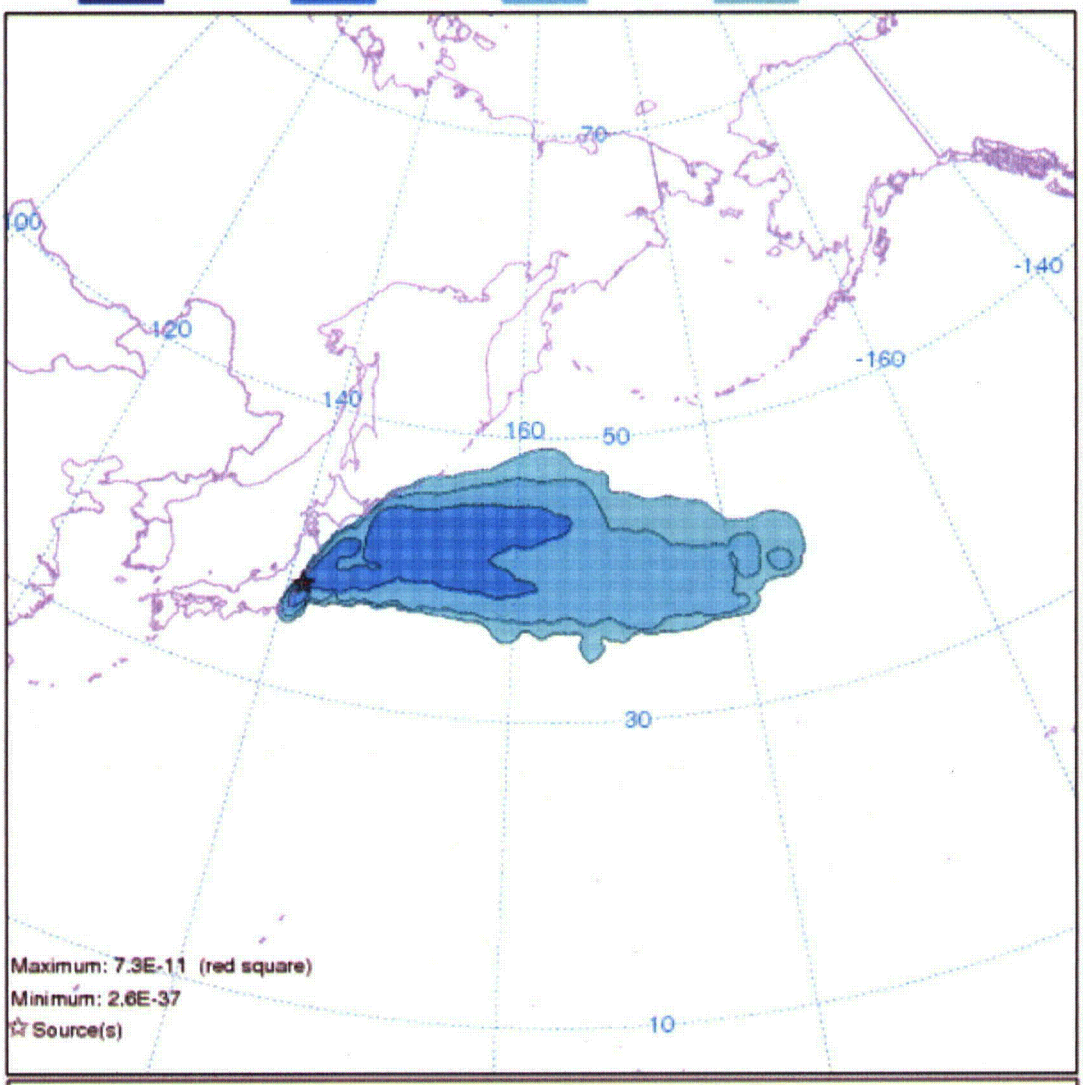
RSMC Melbourne : Environmental Emergency Response Centre

OPERATIONAL EVENT

Integrated from 0000 12 Mar to 0000 15 Mar 11 (UTC)

Deposition (Bq/m2) at ground-level

>1.0E-11 >1.0E-13 >1.0E-15 >1.0E-17



NRAD RELEASE STARTED AT 0600 UTC12 MAR 2011

Source:Fukushima Dai-Chi : Japan (Lat: 37.4206 N Lon: 141.328 E)

Isotope : Cs137 (Halflife: 1.09259E+04 days) Rate:1.39E-02 Bq/hr

Duration:72 hrs Particles: 500

DryDep Rate 0.001 WetRem (in/below-cloud) 3.20E+05 5.0E-05

Distribution: UNIFORM between 20.0m and 100.0m

Meteorological Data : ACCESS-G : base time 0000 UTC 12 Mar

Note: "Contours may change from Chart to Chart" Issued :Sat Mar 12 23:22:36 2011