

March 14, 2011  
Nuclear and Industrial Safety Agency

Seismic Damage Information(the 22<sup>th</sup> Release)  
(As of 07:30 March 14, 2011)

Nuclear and Industrial Safety Agency (NISA) confirmed the current situation of Onagawa NPS, Tohoku Electric Power Co., Inc; Fukushima Dai-ichi and Fukushima Dai-ni NPSs, Tokyo Electric Power Co., Inc. as follows:

1. The status of operation at Power Stations (Number of automatic shutdown units: 10)

○Fukushima Dai-ichi Nuclear Power Station, Tokyo Electric Power Co., Inc. (TEPCO)  
(Okuma-machi and Futaba-machi, Futaba-gun, Fukushima Prefecture )

(1) The status of operation

- Unit 1 (460MWe): automatic shutdown
- Unit 2 (784MWe): automatic shutdown
- Unit 3 (784MWe): automatic shutdown
- Unit 4 (784MWe): in periodic inspection outage
- Unit 5 (784MWe): in periodic inspection outage
- Unit 6 (1,100MWe): in periodic inspection outage

(2) Readings at monitoring posts

The measurement of radioactive materials in the environmental monitoring area near the site boundary by a monitoring car confirmed the increase in the radioactivity compared to the radioactivity at 19:00, March 13.

MP1 (Monitoring at North End of Site Boundary) :  
26 microSv/h(18:30 March 13)  
→ (Move to MP2)

MP2 (Monitoring at north- northwest of Unit1 and northwest of the End of Site Boundary for Unit 1 ) :

450 microSv/h(20:10 March 13)

→680 microSv/h(3:50 March 14)

MP4 (Monitoring Car at North West Site Boundary for Unit 1)

44.0 microSv/h(19:33 March 13)

→56.4 microSv/h(04:08 March 14)

(Surveyed by MP2 as MP1 is in the top of the cliff)

MP6 (Monitoring at the Main Gate)

5.2microSv/h(19:00 March 13)

→66.3 microSv/h(02:50 March 14)

(3) Wind direction/wind speed (as of 00:01, March 14)

Wind direction: North North West

Wind Speed: 0.3 m/s

(4) Report concerning other malfunction

- No fire report notified to NISA
- TEPCO reported to NISA in accordance with Article 10 of the Act on Special Measures Concerning Nuclear Emergency Preparedness regarding Fukushima Dai-ichi, Units 1,2 and 3. (15:42 March 11)
- TEPCO report to NISA the event in accordance with Article 15 of the Act for Special Measures Concerning Nuclear Emergency Preparedness regarding Fukushima Dai-ichi, Units 1 and 2.(notified to NISA at 16:36 March 11)
- For Unit 1: Sea water is being injected to the Primary Containment Vessel (PCV) via the Fire Extinguishing System Line (Start up 11:55 March 13)  
→Interruption of injection (01:10 March 14)
- For Unit 2: Water Injection Function has been sustained. (14:00 March 13)
- For Unit 3: Fresh water is being injected to the PCV via Fire Extinguishing System Line (FESL) (11:55 March 13)
- For Unit 3: Sea water is being injected to the PCV via FESL(13:12 March 13)
- For Unit 1 and Unit 3: Injection of Sea water injection into PCV is

interrupted because of the lack of sea water in pit. (01:10 March 14)

- For Unit 3: Injection of Sea water into PCV is restarted(03:20 March 14)

○ Fukushima Dai-ni Nuclear Power Station (TEPCO)

(Naraha-machi/Tomioka-machi, Futaba-gun, Fukushima pref.)

(1) The status of operation

Unit1 (1,100MWe): automatic shutdown

Unit2 (1,100MWe): automatic shutdown

Unit3 (1,100MWe): automatic shutdown, cold shut down at 12:15, March 12

Unit4 (1,100MWe): automatic shutdown

(2) Readings at monitoring post etc.

MP1 (Monitoring at the North End of Site Boundary)

0.036 microSv/h(19:00 March 13)

→0.038 microSv/h(05:00 March 14)

MP3 (Monitoring at the North/West End of site boundary)

0.038microSv/h(19:00 March 13)

→0.037 microSv/h(05:00 March 14)

MP4 (Monitoring at the North/West End of Site Boundary)

0.036microSv/h(19:00 March 13)

→0.038 microSv/h(05:00 March 14)

MP5 (Monitoring at the West End of Site Boundary)

0.04 microSv/h(19:00 March 13)

→0.042 microSv/h(05:00 March 14)

(3) Direction and velocity of wind (As of 05:00, 14 March)

Direction: South-southwest

Velocity: 0.9 m /s

(4) Report concerning other malfunction

- None of fire report notified to NISA
- TEPCO reported to NISA in accordance with Article 10 of the Act on Special Measures Concerning Nuclear Emergency Preparedness regarding Fukushima Dai-ni, Units 1. (18:08 March 11)
- As same as above, TEPCO reported to NISA Fukushima Dai-ni Units 2 and 4.(18:33 March 11)

- For Unit 1: Due to Recovery of Residual Heat Removal System(RHR), water in suppression pool is started to cool for cold shut down.(01:24 March 14)

c. Onagawa Nuclear Power Station (Onagawa-cho, Oga-gun and Ishinomaki-shi, Miyagi Prefecture)

(1) The status of operation

Unit 1 (524MWe): automatic shutdown, cold shut down at 0:58, March 12

Unit 2 (825MWe): automatic shutdown

Unit 3 (825MWe): automatic shutdown, cold shut down at 1:17, March 12

(2) Readings of monitoring post

Reading of monitoring post : Changed

MP2 (Monitoring at the North End of Site Boundary)

Approx. 10,000 nGy/h (as of 13:09 March13)

→7,200 nGy/h (07:20 March 14)

(3) Report concerning other malfunction

- Fire Smoke on the first basement of the Turbine Building was confirmed extinguished at 22:55 on March 11th.
- Article 10\* of Act on Special Measures Concerning Nuclear Emergency Preparedness (Unit No. not identified) (13:09 March 13)

2. Action taken by NISA

(March 11)

14:46 Set up of the NISA Emergency Preparedness Headquarters (Tokyo) immediately after the earthquake

15:42: TEPCO reported to NISA in accordance with Article 10 of the Act on Special Measures Concerning Nuclear Emergency Preparedness regarding Fukushima Dai-ichi.

16:36: TEPCO judged the event in accordance with Article 15 of the Act for Special Measures Concerning Nuclear Emergency Preparedness regarding Fukushima Dai-ichi, Units 1 and 2.(notified to NISA at 16:45)

18:08: Unit 1 of Fukushima Dai-ni notified NISA of the situation of the

Article 10 of Act on Special Measures Concerning Nuclear Emergency Preparedness.

18:33: Units 1,2 and 4 of Fukushima Dai-ni notified NISA of the situation of the Article 10 of Act on Special Measures Concerning Nuclear Emergency Preparedness.

19:03 : Government declared the state of nuclear emergency (Establishment of Government Nuclear Emergency Response Headquarters and Local Emergency Response Headquarters)

20:50: Fukushima Prefecture's Emergency Response Headquarters issued a direction regarding the accident occurred at Fukushima-Dai-ichi Nuclear Power Station, TEPCO, that the residents living in the area of 2km radius from Unit 1 of the Nuclear Power Station must evacuate.(The population of this area is 1,864)

21:23: Directives from Prime Minister to the Governor of Fukushima, Mayor of Ookuma and Mayor of Futaba were issued regarding the accident occurred at Fukushima-Dai-ichi Nuclear Power Station, TEPCO, pursuant to Paragraph 3, Article 15 of the Act on Special Measures Concerning Nuclear Emergency Preparedness as follows:

- Residents living in the area of 3km radius from Unit 1 of the Nuclear Power Station must evacuate.

- Residents living in the area of 10km radius from the Unit 1 must take sheltering.

24:00: Mr. Ikeda, Vice Minister of METI, arrived at the Local Emergency Response Headquarters

(March12)

05:22 Unit 1 of Fukushima Dai-ni notified NISA of the situation of the Article 15 of Act on Special Measures Concerning Nuclear Emergency Preparedness.

05:32 Unit 2 of Fukushima Dai-ni notified NISA of the situation of the Article 15 of Act on Special Measures Concerning Nuclear Emergency Preparedness.

05:44 Residents living in the area of 10km radius from unit 1 of the Nuclear Power Station must evacuate by the Prime Minister Direction.

06:07 Regarding of Fukushima Dai-ni NPS, TEPCO reported NISA in accordance with Article 15 of Act for Special Measures Concerning

## Nuclear Emergency Preparedness.

- 06:50 According to the article 64, 3 of the Nuclear Regulation Act, government order to control the internal pressure in Fukushima-dai-ichi Units 1 and 2
- 07:45 Directives from Prime Minister to Governor of Fukushima, Mayors of Hirono, Naraha, Tomioka, Ookuma and Futaba were issued regarding the accident occurred at Fukushima-Dai-ni Nuclear Power Station, TEPCO, pursuant to Paragraph 3, Article 15 of the Act for Special Measures Concerning Nuclear Emergency Preparedness as follows:
- Residents living in the area of 3km radius from Fukushima Dai-ni Nuclear Power Station (NPS) must evacuate.
  - Residents living in the area of 10km radius from Fukushima Dai-ni NPS must take sheltering
- 17:00 Notification pursuant to Article 15 of the Act for Special Measure Concerning Nuclear Emergency Preparedness since the radiation level exceeded the acceptable level of Fukushima Dai-ichi NPS.
- 17:39 Prime Minister directed evacuation of the residents living within the 10 km radius from the Fukushima-Dai-ni NPS
- 18:25 Prime Minister directed evacuation of the residents living within the 20km radius from the Fukushima Dai-ichi NPS
- 19:55 Directives from Prime Minister was issued regarding sea water injection to Unit No.1 of Fukushima Dai-ichi NPS.
- 20:05 Based on the directives form Prime Minister and pursuant to Paragraph 3, Article 64 of the Nuclear Regulation Act, the Government issued an order to inject sea water Unit 1 of Fukushima Dai-ichi NPS.
- 20:20 Fukushima Dai-chi NPS, Unit1 started sea water injection.

(March 13)

- 05:38 TEPCO notified NISA of the situation pursuant to the Article 15 of Act on Special Measures Concerning Nuclear Emergency Preparedness that Unit 3 of Fukushima Dai-ichi NPS is in a loss of all coolant injection function. Recovering efforts of the power source and coolant injection function and work on venting are underway.
- 09:08 Pressure suppression in the Containment Vessel and fresh water injection started at Unit 3 of Fukushima Dai-ichi NPS.

- 09:20 Opening of Pressure vent valve of Unit 3 of Fukushima Dai-ichi NPS.
- 09:30 NISA directed the Governor of Fukushima Prefecture, the Mayors of Ookuma-machi, Futaba-machi, Tomioka-machi and Namie-machi based on the Act for Special Measures Concerning Nuclear Emergency Preparedness on radioactivity decontamination screening.
- 09:38 TEPCO notified NISA that Unit 1 of Fukushima Dai-ichi NPS reached a situation specified in Article 15 of the Act for Special Measures Concerning Nuclear Emergency Preparedness.
- 13:09 Tohoku Electric notified NISA that Onagawa NPS reached a situation specified in Article 10 of the Act for Special Measures Concerning Nuclear Emergency Preparedness.
- 13:12 Fresh water injection was switched to sea water injection at Unit 3 of Fukushima Dai-ichi NPS.
- 14:25 TEPCO notified NISA that Fukushima Dai-ichi NPS reached a situation specified in Article 15 of the Act for Special Measures Concerning Nuclear Emergency Preparedness.

(March 14)

- 01:10 Sea water injection at unit 1 and unit 3 of Fukushima Dai-ichi NPS were temporary stopped due to decreasing sea water in pool
- 03:20 Sea water injection at unit 3 of Fukushima Dai-ichi NPS was restarted.
- 04:24 TEPCO notified NISA that Fukushima Dai-ichi NPS reached a situation specified in Article 15 of the Act for Special Measures Concerning Nuclear Emergency Preparedness.

<Possible Exposure to Residents>

(1) Case for Travel from Futaba Public Welfare Hospital to Nihonmatsu Man and Woman Symbiosis Center, Fukushima Prefecture

- i) No. of persons to be measured: About 60 persons
- ii) Measured Result: Not yet
- iii) Passage: Exposure could have happened while waiting to be picked up by helicopter at the Futaba high school ground
- iv) Other

Prefectural Response Headquarters judged that there were no exposure to 35 persons who traveled from Futaba Public Welfare Hospital to Kawamata Saiseikai Hospital, Kawamata-machi by the private bus provided by Fukushima Prefecture.

(2) Case for Futaba-machi Residents Evacuated by Buses

- i) No. of Persons: About 100 persons
- ii) Measured Result: 9 persons out of 100 persons

No. of Counts	No. of Persons
18,000cpm	1
30,000-36000cpm	1
40,000cpm	1
little less than 40,000cpm*	1
very small counts	5

\*(This results was measured without shoes, though the first measurement exceeded 100,000cpm)

- iii) Passage: Under investigation
- iv) Other

Though persons evacuated in different location outside of the Prefecture (Miyagi Prefecture), all destinations are under confirmation.

<Status of Evacuation (As of 04:30 March 14)>

Ookuma-machi: Evacuation of subject evacuees (about 11,000 persons) completed. (Area of Refuge: Tamura Comprehensive Gymnasium, etc.)



(Contact Person)

Mr. Toshihiro Bannai

Director, International Affairs Office,  
NISA/METI

Phone: +81-(0)3-3501-1087