

22 MARCH 2011 17:00 UTC



IAEA

International Atomic Energy Agency

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 17:00 UTC on March 22, 2011 the following updated information related to the reactor units at the Fukushima Daiichi Nuclear Power Plant is provided:

Status of the Fukushima Daiichi Nuclear Power Plant

AC Power—Units 1 to 4

The restoration work of off-site power from the grid operated by TOHOKU EPC is currently in progress and at different stages for all Units, with Unit 2 being the most advanced. A distribution panel (Power Center) of Unit 2 has been connected to off-site electricity supply. Individual components are being checked prior to being energized. Due to the extent of damage inflicted by the earthquake and tsunami, it is not possible to estimate when equipment may be returned to service.

AC Power—Units 5 and 6

Power has been restored to a transformer of Unit 5. The emergency diesel previously providing power to Unit 5 has been secured. The second Unit 6 diesel remains in service, supplying power to equipment there.

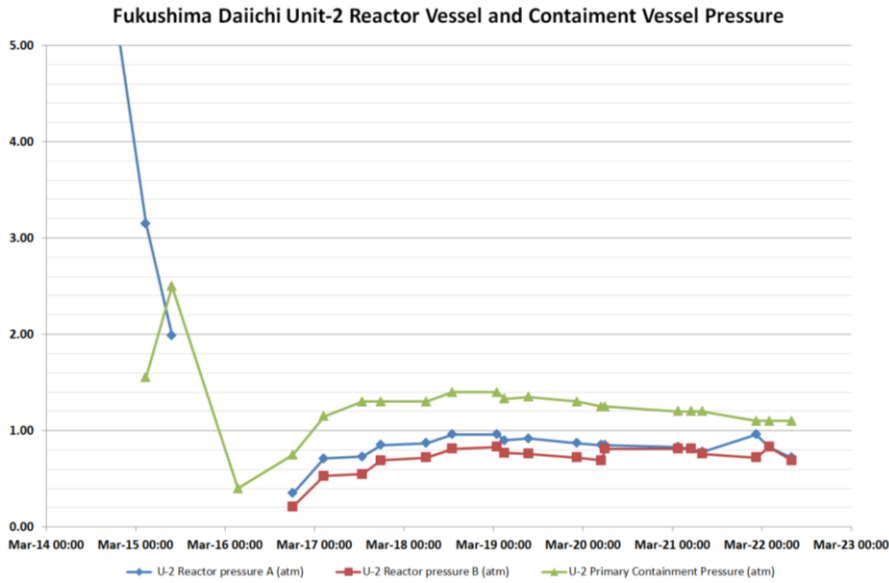
Unit 1

Seawater continues to be injected into the reactor pressure vessel as needed.

Unit 2

Seawater continues to be injected into the reactor pressure vessel as needed. Indicated spent fuel temperature remains relatively stable between 50 and 53°C.

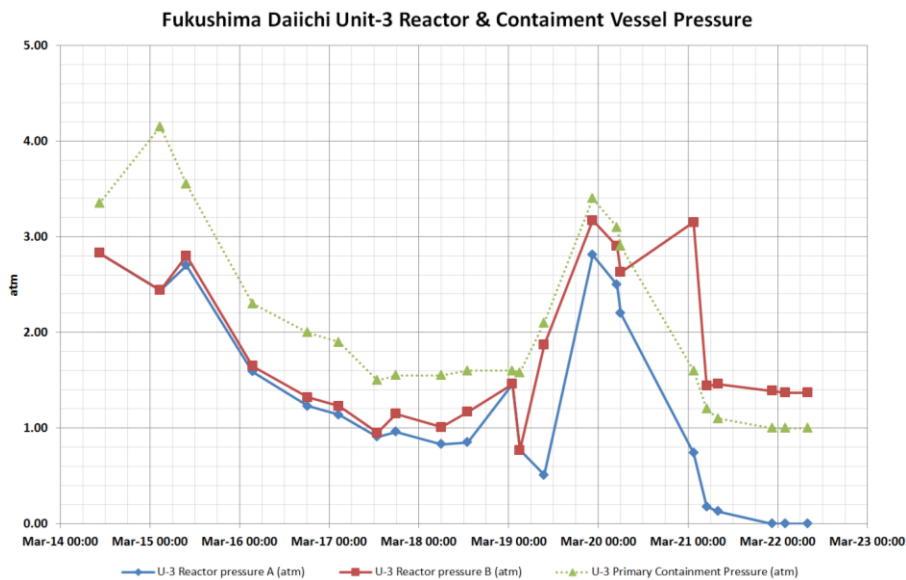
White smoke / vapor observed from 09:22 UTC on March 21 diminished to nearly invisible by 22:11 UTC that same day. During the time of smoke emission, an increase was reported in on-site does rate at 09:30 UTC on 21 March. TEPCO ordered an evacuation of plant personnel. Workers were back to the units as of 00:00 UTC 22 March. A small perturbation can be observed in indicated reactor pressure over this time period (see graph below).



Unit 3

Seawater continues to be injected into the reactor pressure vessel and sprayed over the spent fuel pool as needed. The indicated containment pressure has stabilized for the past 24 hours (see graph below).

Grey smoke was observed at on March 21 in the Southeast corner of the Unit 3 reactor building from 06:55 UTC on March 21. After two hours this smoke turned whiteish and gradually diminished. By 22:11 UTC on 21 March, the smoke was observed to be 'ceasing'. During the time of smoke emission, an increase was reported in on-site does rate at 09:30 UTC on 21 March. TEPCO ordered an evacuation of plant personnel. Workers were back to the units as of 00:00 UTC 22 March.



Unit 4

As of 08:17 UTC on 22 March, a concrete pump was pumping water into the spent fuel pool at a rate of 50T/h. The reported plan was to pump water at this rate for 3 hours.

Unit 5

The reactor remains in cold shutdown.

Unit 6

The reactor remains in cold shutdown.

Radiation Monitoring Data

The following environmental monitoring data has been received from the Ministry of Education, Culture, Sport, Science and Technology for areas throughout Japan. This data is regularly updated and published by MEXT on: <http://www.mext.go.jp/english/>.

Off-Site Environmental Radiation Measurements

Gamma dose rate data is being collected from three locations within the Ibaraki prefecture. The gamma dose rates measured at these locations were around 1 microSv/h at 18:00 UTC and increased to approximately 3 microSv/h by 19:30 UTC on 20 March 2011. Since that time the dose rates measured in the Ibaraki prefecture have gradually decreased.

The gamma dose rates in the Fukushima prefecture are unchanged or have slightly decreased within same period of time.

The gamma dose rates in 47 other monitoring points throughout Japan are close to natural background levels.

Radioactivity in food, milk and drinking water

MEXT has provided updated drinking water analysis results for I-131 and Cs-137 as provided by 47 prefectures throughout Japan. Seven prefectures, Ibaraki, Tochigi(Utsunomiya City), Gunma (Saitama City), Chiba (Ichihara City), Tokyo (Shinjuku Ward) and Niigata (Niigata City) report detectable levels of I-131 and/or Cs-137 but all are under the Japanese reference value. The other prefectures have reported not detectable values except for Miyagi, Kanagawa and Nara which are currently not able or are preparing to measure values.

No new data has been provided for food or milk since the previous report.

Deposition Data for Prefectures

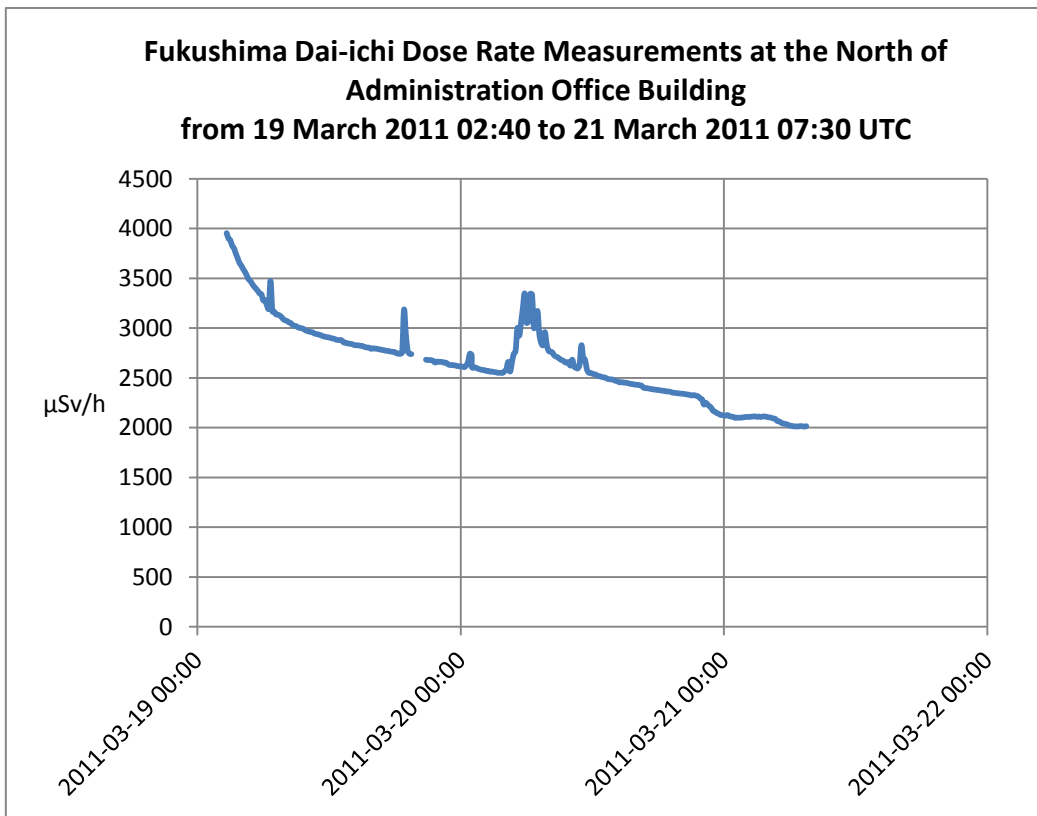
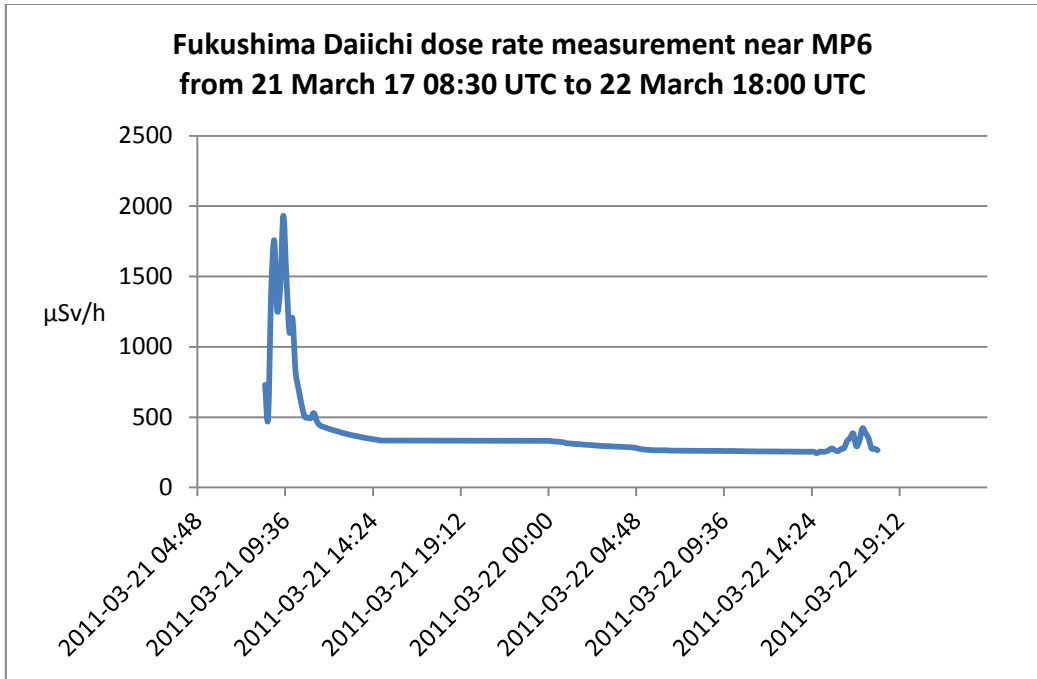
Following the previous report, MEXT has published deposition data for all prefectures (excluding Fukushima) for I-131 and Cs-137. Most prefectures report no detection of either Cs-137 or I-131 deposition. But nine prefectures now report significant increase in I-131 or Cs-137 as compared to previous days as indicated in Table below. Depositions range from a few tens to a few tens of thousands of Bq/m².

Location	18-19 March		19-20 March		20-21 March		20-21 March	
	I-131 (Bq/m ²)	Cs-137 (Bq/m ²)	I-131 (Bq/m ²)	Cs-137 (Bq/m ²)	I-131 (Bq/m ²)	Cs-137 (Bq/m ²)	I-131 (Bq/m ²)	Cs-137 (Bq/m ²)
Iwate (Morioka)	ND	ND	ND	0.24	4800	690	ND	ND
Yamagata (Yamagata)	ND	ND	22	20	58000	4300	590	140
Ibaraki	-	-	490	48	93000	13000	85000	12000
Tochigi (Utsunomiya)	1300	62	540	45	5300	250	25000	440
Gunma (Maebashi)	230	84	190	63	990	87	1500	72
Saitama (Saitama)	64	ND	66	ND	7200	790	22000	1600
Chiba (Ichihara)	21	ND	44	3.8	160	16	710	150
Tokyo (Shinjyuku)	51	ND	40	ND	2900	560	32000	5300
Kanagawa (Chigasaki)	40	ND	38	ND	-	-	340	110

On-Site Environmental Radiation Measurements

Radiation dose rates measured in different locations onsite in Fukushima Daiichi nuclear power station show, in general, a decreasing tendency since the evening of 20 March (UTC).

A peak was noted on 21st March which coincided with the smoke observed coming from Unit 3 and Unit 2 which started at 06:55 UTC and 09:22 UTC respectively. Radiation levels have since returned to the levels at which they were prior to the increase.



ERM
 Emergency Response Manager
 22-March-2011 17:00 UTC

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

Parameter / Indications	Unit	Fukushima Daiichi					
		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Reactor Pressure Vessel Pressure	MPa	<u>0.317 (A)</u> <u>0.270 (B)</u>	<u>0.072 (A)</u> <u>0.069 (B)</u>	<u>0.000 (A)</u> <u>0.137 (B)</u>	-	<u>0.108</u>	<u>0.109</u>
	atm	<u>3.17 (A)</u> <u>2.70 (B)</u>	<u>0.72 (A)</u> <u>0.69 (B)</u>	<u>0.00 (A)</u> <u>1.37 (B)</u>	-	<u>1.08</u>	<u>1.09</u>
Containment Vessel (Drywell) Pressure	kPa	180	110	100	-	-	-
	atm	1.8	1.10	1.00	-	-	-
Reactor Pressure Vessel Level	mm (above the top of active fuel)	-1800 (A) -1750 (B)	-1300 (A) (B) not available	-1575 (A) -2350 (B)	-	<u>2059</u>	<u>1926</u>
Suppression Pool Temperature	°C	No Data	No Data	No Data	No Data	No Data	No Data
Suppression Pool Pressure	kPa	<u>160</u>	Below the scale	Below the scale	-	-	-
	atm	<u>1.60</u>					
Adding water to Reactor Pressure Vessel	<ul style="list-style-type: none"> • Adding • Not adding • Unknown 	Seawater continues to be injected into the reactor pressure vessels as needed.			-	Injection to RPV and the Spent Fuel Pool using make up water	Injection to RPV and the Spent Fuel Pool using make up water
Date/Time of Data Acquisition		<u>March 22</u> <u>06:30 UTC</u>	<u>March 22</u> <u>06:30 UTC</u>	<u>March 22</u> <u>01:35 UTC</u>	-	<u>March 22</u> <u>8:00 UTC</u>	<u>March 22</u> <u>8:00 UTC</u>

* All pressures are absolute pressure (pressure including normal atmospheric pressure)

** (A) and (B) refer to two measurement channels