



Fukushima Nuclear Accident Update Log

Updates of 20 April 2011

Staff Report

→ Chronology of Daily Updates:

20 April | 19 April (<http://domain.com/newscenter/news/2011/fukushima190411.html>) | 18 April (<http://domain.com/newscenter/news/2011/fukushima180411.html>) | 15 April (<http://domain.com/newscenter/news/2011/fukushima150411.html>) | 14 April (<http://domain.com/newscenter/news/2011/fukushima140411.html>) | 13 April (<http://domain.com/newscenter/news/2011/fukushima130411.html>) | 12 April (<http://domain.com/newscenter/news/2011/fukushima120411.html>) | 11 April (<http://domain.com/newscenter/news/2011/fukushima110411.html>) | 10 April (<http://domain.com/newscenter/news/2011/fukushima100411.html>) | 9 April (<http://domain.com/newscenter/news/2011/fukushima090411.html>) | 8 April (<http://domain.com/newscenter/news/2011/fukushima080411.html>) | 7 April (<http://domain.com/newscenter/news/2011/fukushima070411.html>) | 6 April (<http://domain.com/newscenter/news/2011/fukushima060411.html>) | 5 April (<http://domain.com/newscenter/news/2011/fukushima050411.html>) | 4 April (<http://domain.com/newscenter/news/2011/fukushima040411.html>) | 3 April (<http://domain.com/newscenter/news/2011/fukushima030411.html>) | 2 April (<http://domain.com/newscenter/news/2011/fukushima020411.html>) | 1 April (<http://domain.com/newscenter/news/2011/fukushima010411.html>) | 31 March (<http://domain.com/newscenter/news/2011/fukushima310311.html>) | 30 March (<http://domain.com/newscenter/news/2011/fukushima300311.html>) | 29 March (<http://domain.com/newscenter/news/2011/fukushima290311.html>) | 28 March (<http://domain.com/newscenter/news/2011/fukushima280311.html>) | 27 March (<http://domain.com/newscenter/news/2011/fukushima270311.html>) | 26 March (<http://domain.com/newscenter/news/2011/fukushima260311.html>) | 25 March (<http://domain.com/newscenter/news/2011/fukushima250311.html>) | 24 March (<http://domain.com/newscenter/news/2011/fukushima240311.html>) | 23 March (<http://domain.com/newscenter/news/2011/fukushima230311.html>) | 22 March (<http://domain.com/newscenter/news/2011/fukushima220311.html>) | 21 March (<http://domain.com/newscenter/news/2011/fukushima210311.html>) | 20 March (<http://domain.com/newscenter/news/2011/fukushima200311.html>) | 19 March (<http://domain.com/newscenter/news/2011/fukushima190311.html>) | 18 March (<http://domain.com/newscenter/news/2011/fukushima180311.html>) | 17 March (<http://domain.com/newscenter/news/2011/fukushima170311.html>) | 16 March (<http://domain.com/newscenter/news/2011/fukushima160311.html>) | 15 March (<http://domain.com/newscenter/news/2011/fukushima150311.html>) | 14 March (<http://domain.com/newscenter/news/2011/fukushima140311.html>) | 13 March (<http://domain.com/newscenter/news/2011/fukushima130311.html>) | 12 March (<http://domain.com/newscenter/news/2011/fukushima120311.html>) | 11 March (<http://domain.com/newscenter/news/2011/fukushima110311.html>) | Full Update (<http://domain.com/newscenter/news/2011/fukushimafull.html>)



IAEA Briefing on Fukushima Nuclear Accident (20 April 2011, 16:00 UTC)

Presentation:

→ [Summary of Reactor Status \(http://www.slideshare.net/iaea/summary-of-reactor-unit-status-20-april-2011-0700-utc\)](http://www.slideshare.net/iaea/summary-of-reactor-unit-status-20-april-2011-0700-utc)

On Wednesday, 20 April 2011, the IAEA provided the following information on the current status of nuclear safety in Japan:

1. Current Situation

Overall, the situation at the Fukushima Daiichi nuclear power plant remains very serious, but there are early signs of recovery in some functions, such as electrical power and instrumentation.

Changes to Fukushima Daiichi Nuclear Power Plant Status

The IAEA receives information from a variety of official Japanese sources through the Japanese national competent authority, the Nuclear and Industrial Safety Agency (NISA). Additional detail is provided in the IEC status summary with information received by 07:00 UTC on 20 April 2011.

Management of On-Site Contaminated Water

TEPCO has provided a plan to NISA for the transfer of highly contaminated water from the basement of the turbine building of **Unit 2** to the main building of the radioactive waste treatment facilities, to reduce the risk of this stagnant waste water being discharged to the environment. Measures to ensure that the radioactive waste treatment facility is watertight were completed on 18 April and the transfer of water from **Unit 2** was commenced on 19 April.

Plant Status

Work to strengthen the electrical power system between Units 1 - 2 and Units 3 - 4 was completed on 19 April. White "smoke" continues to be emitted from **Units 2, 3 and 4**.

In **Unit 1** fresh water is being continuously injected into the reactor pressure vessel through the feedwater line at an indicated flow rate of 6 m³/h using a temporary electric pump with off-site power. In **Units 2 and 3** fresh water is being continuously injected into the reactor pressure vessel through the fire extinguisher line at an indicated rate of 7 m³/h using a temporary electric pump with off-site power. In **Unit 4** fresh water continues to be sprayed onto the spent fuel pool using a concrete pump truck.

Nitrogen gas is being injected into the containment vessel in **Unit 1** to reduce the possibility of hydrogen combustion within the containment vessel. The pressure in the containment vessel has stabilized. The pressure in the reactor pressure vessel is increasing.

The reactor pressure vessel temperatures in **Unit 1** remain above cold shutdown conditions. The indicated temperature at the feedwater nozzle of the reactor pressure vessel is 164 °C and that at the bottom of reactor pressure vessel is 114 °C.

The reactor pressure vessel temperatures in **Unit 2** remain above cold shutdown conditions. The indicated temperature at the feed water nozzle of the reactor pressure vessel is 133 °C. The reactor pressure vessel and the dry well remain at atmospheric pressure.

The temperature at the bottom of the reactor pressure vessel in **Unit 3** remains above cold shutdown conditions. The indicated temperature at the feed water nozzle of the reactor pressure vessel is 99 °C and that at the bottom of reactor pressure vessel is 110 °C. The reactor pressure vessel and the dry well remain at atmospheric pressure.

There has been no change in the status in **Units 5 and 6** or in the common spent fuel storage facility.

2. Radiation Monitoring

On 19 April, deposition of I-131 was detected in 13 prefectures, ranging from 1.8 to 368 Bq/m². Deposition of Cs-137 was detected in seven prefectures, the values reported

ranging from 2.4 to 160 Bq/m².

Gamma dose rates are measured daily in all 47 prefectures. For Fukushima on 20 April a gamma dose rate of 1.9 µSv/h was reported, and for Ibaraki prefecture a gamma dose rate of 0.13 µSv/h was reported. In all other prefectures, reported gamma dose rates were below 0.1 µSv/h.

In cooperation with local universities, the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) has set up an additional monitoring programme. For 19 April, measurements of the gamma dose rates were reported for 53 cities in 40 prefectures. In Fukushima City a value of 0.42 µSv/h was reported. For all other cities reported gamma dose rates were below 0.13 µSv/h.

In drinking water, I-131 or Cs-137 is detectable, but at levels below 1 Bq/L and in only a few prefectures. As of 17 April, one restriction on drinking water for infants relating to I-131 (100 Bq/L) is in place in a small scale water supply in a village of the Fukushima prefecture.

Food monitoring data reported by the Japanese Ministry of Health, Labour and Welfare on 19 April covered a total of 36 samples. These were taken on 4, 18 and 19 April from eight prefectures (Chiba, Fukushima, Gunma, Ibaraki, Kanagawa, Nagano, Niigata and Saitama). Analytical results for 35 of the samples of various vegetables, shiitake mushrooms, fruit (strawberries), edible shoots (Japanese Angelica tree), seafood, yoghurt and unprocessed raw milk indicated that I-131, Cs-134 and Cs-137 were either not detected or were below the regulation values set by the Japanese authorities. One sample of seafood (sand lance) taken on 18 April from the coastal region of Fukushima had levels above the regulation values set by the Japanese authorities for I-131 and also for radioactive caesium.

3. Marine Monitoring

TEPCO Monitoring Programme

TEPCO is conducting a programme for seawater monitoring (by surface sampling) at a number of near-shore and off-shore monitoring locations. Following a directive from NISA, on 16 April TEPCO announced that it will increase the number of sea sampling points from ten to 16. A further four points are to be added at 3 km from the coast and two points are to be added at 8 km from the coast. The new sampling sites are indicated on [Map 1: TEPCO Seawater Sampling Locations \(#map1\)](#), on which new points are indicated with green bullets.

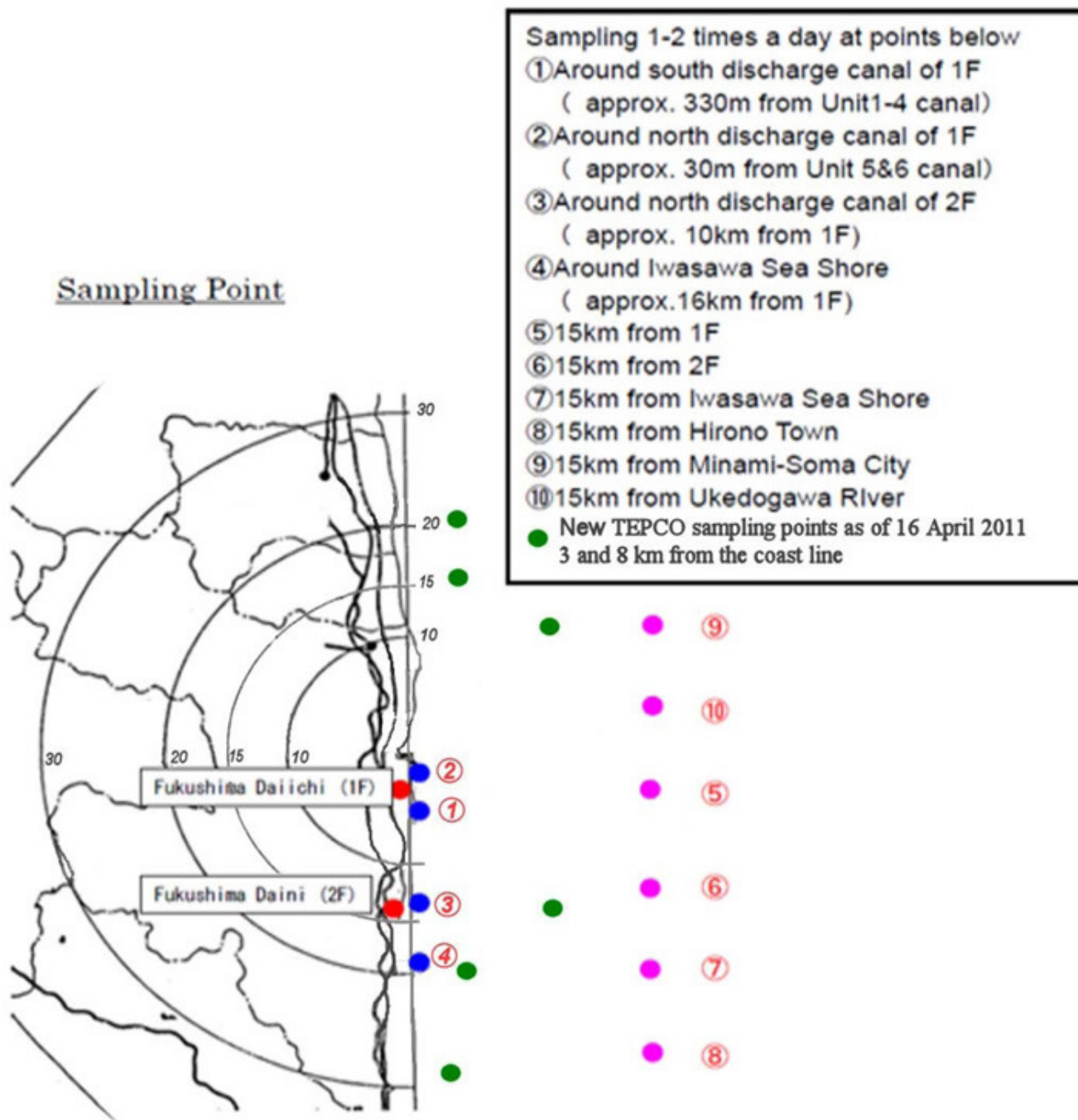
On some days, two samples were collected at the same sampling point, a few hours apart, and analysed separately.

Until 3 April a generally decreasing trend in radioactivity was observed at the sampling points TEPCO 1 to TEPCO 4. After the discharge of contaminated water from the plant on 4 April, a temporary increase in radioactivity in seawater was reported. Since 5 April a general downward trend in the concentration of radionuclides in seawater for all TEPCO sampling points has been observed.

On 20 April no new data for TEPCO 1 - 4 sampling points were reported. For TEPCO 5 - 10, data for TEPCO 8 only were reported on 20 April (for sampling on 17 April). Both

I-131 and Cs-137 were below 0.1 kBq/L.

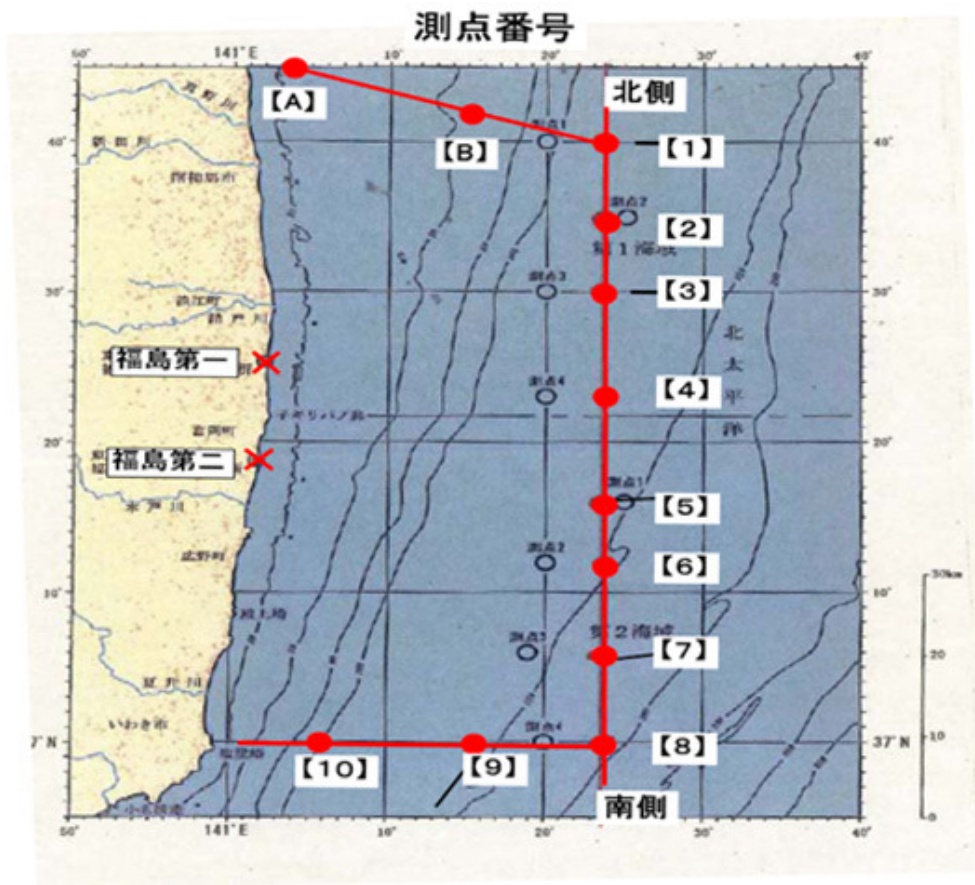
Map 1: TEPCO Seawater Sampling Locations:



MEXT Off-shore Monitoring Programme

On 20 April no new data were reported for the MEXT off-shore sampling locations shown on [Map 2: MEXT Seawater sampling Locations \(#map2\)](#) .

Map 2: MEXT Seawater Sampling Locations:



4. IAEA Activities

Sri Lanka has also provided monitoring data, in addition to the countries that have been mentioned in previous briefs.

On 18 April the IAEA monitoring team finished its radiological monitoring campaign and the team is to return to Vienna on 20 April.

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