

# Fukushima nuclear power plant: GET ALL THE DATA

By Global Research

Global Research, April 13, 2011

The Guardian 13 April 2011

Region: <u>Asia</u>

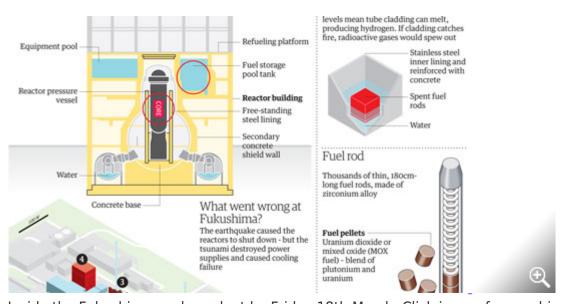
Theme: Environment

# This Report was published by The Guardian

[Global Research Editor's Note: what is provided here is data from official Japanese government sources, which have been contested both in Japan and Internationally]

Japan is racing to gain control of the crisis at the Fukushima nuclear power plant. Where does the most detailed data come from? Updated daily

#### · Get the data



Inside the Fukushima nuclear plant by Friday 18th March. Click image for graphic

The 9.0 magnitude earthquake and following tsunami on March 11 has seen a rush by officials to gain control of power plants in the north-east of the country.

The latest news is that the Fukushima Daiichi <u>nuclear power</u> plant has raised it's <u>severity</u> <u>level from five to seven</u> – the same level <u>as Chernobyl in 1986</u>. <u>Justin McCurry</u> writes:

"Nuclear safety officials had insisted they had no plans to raise the severity of the crisis from five – the same level as the Three Mile Island accident in 1979 – according to the international nuclear and radiological event scale.

But the government came under pressure to raise the level at the plant after <u>Japan</u>'s nuclear safety commission estimated the amount of radioactive material released from its stricken reactors reached 10,000 terabecquerels per hour for several hours following the earthquake and tsunami that devastated the country's northeast coast on 11 March. That level of radiation constitutes a major accident, according to the INES scale."

<u>Fukushima nuclear power plant has been closely scrutinised</u> as reports flow in on the progress of the situation – <u>Japan's nuclear board previoulsy raised the nuclear alert level from four to five in the weeks following the disaster and the JAIF warned of products such as dairy and spinach being restricted for shipping. Explosions and reports of nuclear fuel rods melting at the power plant have meant progress on the situation has been closely followed as has the environmental effects with <u>concerns for marine life</u> and spreading <u>radiation through seawater</u>.</u>

Industry body the <u>Japan Atomic Industrial Forum</u> are currently publishing daily updates of the status of power plants in Fukushima which give great detail into the condition of each reactor. Ranked from a level of low to severe, the update records the conditions of core and fuel integrity, water level and containment amongst other key information. These are some of the most in-depth and recent records and show how the crisis is being handled.

The <u>dangers facing those working at the plant continues to be a subject of concern</u> as does radiation seeping into drinking water, after <u>twice the safe level of radioactive iodine for young children</u>, was found in Tokyo tap water.

The table below shows the status of the reactors in the Fukushima Daiichi (the largest of the Fukushima power plants) and is colour coded to show the severity. Green for low, yellow represents high and red shows those of severe significance as judged by the <u>JAIF</u>. We have used <u>JAIF's update 87 as of 20:00</u> local time as this is the most up to the minute data we can get.

A table of major incidents and accidents at the plants can be found in our spreadsheet as can the data for Daini, Onagawa and Tokai Daini Nuclear power stations. What can you do with this data?

# Data summary

SOURCE: JAIF

Fukushima nuclear power plant update – 13th April 2011

Click heading to sort - <u>Download this data</u>

Unit

1

2

3

4

5

6

Radiation level: 0.56mSv/h at the south side of the office building,  $78\mu$ Sv/h at the Main gate,  $32\mu$ Sv/h at the West gate, as of 15:00, Apr. 13th

#### Evacuation:

- <1> Shall be evacuated for within 3km from NPS, Shall stay indoors for within 10km from NPS (issued at 21:23, Mar. 11th)
- <2> Shall be evacuated for within 10km from NPS (issued at 05:44, Mar. 12th)
- <3> Shall be evacuated for within 20km from NPS (issued at 18:25, Mar. 12th)
- <4> Shall stay indoors (issued at 11:00, Mar. 15th), Should consider leaving (issued at 11:30, Mar. 25th) for from 20km to 30km from NPS $\square$
- <5>The 20km evacuation zone around the Fukushima Daiichi NPS is to be expanded so as to include the area, where annual radiation exposure is expected to be above 20mSv. People in the expanded zone are ordered to evacuate within a month or so.

People living in the 20 to 30km and other than the expanded evacuation area mentioned above, are asked to get prepared for staying indoors or evacuation in an emergency (issued on Apr. 11th).

#### Remarks:

Plutonium was detected from the soil sampled at Fukushima Dai-ichi NPS site on Mar. 21st, 22nd, 25th and 28th. The amount is so small that the Pu is not harmful to human body. Radioactive materials were detected from underground water sampled near the turbine buildings on Mar. 30th.

Radiation dose higher than 1000 mSv was measured at the surface of water accumulated on the basement of Unit 2 turbine building and in the tunnel for laying piping outside the building, or trench, on Mar. 27th.

Radioactive materials exceeding the regulatory limit have been detected from seawater sample collected in the sea surrounding the Fukushima Dai-ichi NPS since Mar. 21st.

On Apr. 5th, 7.5 million times the legal limit of radioactive iodine, I-131, was detected from the seawater, which had been sampled near the water intake of Unit 2 on Apr. 2nd. It was found on Apr. 2nd that there was highly radioactive (more than 1000mSv/hr) water in the concrete pit housing electrical cables and this water was leaking into the sea through cracks on the concrete wall. It was confirmed on Apr. 6th that the leakage of water stopped after injecting a hardening agent into holes drilled around the pit. Release of some 10,000 tons of low level radioactive wastewater into the sea began on Apr. 4th, in order to make room for the highly radioactive water mentioned above.

Regarding the influence of the low level radioactive waste release, TEPCO evaluated that eating fish and seaweed caught near the plant every day for a year would add some 25% of the dose that the general pubic receive from the environment for a year.

TEPCO and MEXT have expanded the monitoring for the surrounding sea area since Apr. 4th.

#### Influence on people's life

Radioactive material was detected from milk and agricultural products from Fukushima and neighboring prefectures. The government issued order to limit shipment (21st-) and intake (23rd-) for some products.

Radioactive iodine, exceeding the provisional legal limit, was detected from tap water

sampled in some prefectures from Mar. 21st to 27th.

Electric / Thermal Power output (MW)

Small fish caught in waters off the coast of Ibaraki on Apr. 4 have been found to contain radioactive cesium above the legal limit on Apr. 5th. It was decided on Apr. 5th that as a legal limit of radioactive iodine, the same amount for vegetables should be applied to fishery products for the time being.

```
460 / 1380
784 / 2381
784 / 2381
784 / 2381
784 / 2381
1100 / 3293
Type of Reactor
BWR-3
BWR-4
BWR-4
BWR-4
BWR-4
BWR-5
Operation Status at the earthquake occurred
In Service -> Shut - down
In Service -> Shut - down
In Service -> Shut - down
Out - age
Out - age
Out - age
Core and Fuel Integrity
Dama - ged (400) 70%
Dama - ged (548) 30%
Dama - ged (548) 25%
No fuel rods
Not Dama - ged (548)
Not Dama - ged (764)
Reactor Pressure Vessel Integrity
Un- known
Un- known
Un- known
Not Dama - ged
Not Dama - ged
Not Dama - ged
Containment Vessel Integrity
Not Dama - ged (estim - ation)
Damage and leak Susp - ected
```

Not Dama - ged (estim - ation)

```
Not Dama – ged
Not Dama – ged
```

Not Dama - ged

Core cooling requiring AC power 1

Not Funct - ional

Not Funct - ional

Not Funct - ional

N/A

Funct - ional

Funct - ional

Core cooling requiring AC power 2

Not Funct - ional

Not Funct - ional

Not Funct - ional

N/A

Funct - ioning (in cold shut down)

Funct - ioning (in cold shut down)

**Building Integrity** 

Severely Dama - ged

Slightly Dama - ged

Severely Dama - ged

Severely Dama - ged

Open a vent - hole - to avoid hydro - gen explo - sion

Open a vent - hole - to avoid hydro - gen explo - sion

Water Level of the Rector Pressure Vessel

Fuel exposed

Fuel exposed

Fuel exposed

Safe

Safe

Safe

Pressure of the Reactor Pressure Vessel

Gradu - ally incre - asing

Un- known / Stable

Un- known

Safe

Safe

Safe

Containment Vessel Pressure

Decre - ased a little after incre - ase

Stable

Stable

Safe

Safe

Safe

```
Water injection to core
Cont. (Fresh - water)
Cont. (Fresh - water)
Cont. (Fresh - water)
N/A
N/A
N/A
Water injection to Containment Vessel (AM)
TBC
TBC (Sea water)
TBC
N/A
N/A
N/A
Containment venting (AM)
Temp stopped
Temp stopped
Temp stopped
N/A
N/A
N/A
Fuel Integrity in the spent fuel pool
Un- known (292)
Un- known (587)
Damage susp - ected (514)
Possibly Dama - ged (1331)
Not Dama - ged (946)
Not Dama - ged (876)
Cooling of the spent fuel pool
Water spray star -ted (fresh -water)
Cont. (Switch to Fresh – water)
Cont. water spray and injec - tion (Fresh - water)
Water spray continue. Hydrogen from the pool exploded
Pool cooling capa - bility was recov - ered
Pool cooling capa - bility was recov - ered
Main Control Room Habitability & Operability
Poor due to loss of AC power (Lighting work - ing in unit 1 & 2)
Poor due to loss of AC power (Lighting work - ing in unit 1 & 2)
Poor due to loss of AC power (Lighting work - ing in unit 3 & 4)
Poor due to loss of AC power (Lighting work - ing in unit 3 & 4)
Not dam -aged (estimate)
Not dam -aged (estimate)
INES LEVEL (est by NISA)
7
7
```

7

3

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# Download the data

DATA: download the full spreadsheet

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