

Conditions of Fukushima Dai-ichi Nuclear Power Station **Unit 1**

(As of 14:00 March 26th, 2011)

Spent Fuel Pool Water Temperature — °C
Condition: No data available

✘ Spent Fuel Pool Cooling System

Reactor Pressure A 0.452MPa*
Reactor Pressure B 0.481MPa*
Condition : No large fluctuation
*converted to absolute pressure
Reactor Water Level A —1,650mm
Reactor Water Level B —1,600mm
Condition: No flooding of top of active fuel to the above level

Reactor Water Temperature — °C
Condition: No data available

Reactor Pressure Vessel (RPV)
Temperature:
Feedwater Nozzle Temperature :212.3 °C
Temperature at the bottom head of RPV :146.9°C

PCV*3 Pressure 0.275MPa
Condition: No large fluctuation

S/P*4 Water Temperature — °C
Condition : No data available
S/P*4 Pressure 0.275MPa
Condition : No large fluctuation

External Power
✘

EDG*2
✘

RHRS*1
✘

Major Events after the earthquake

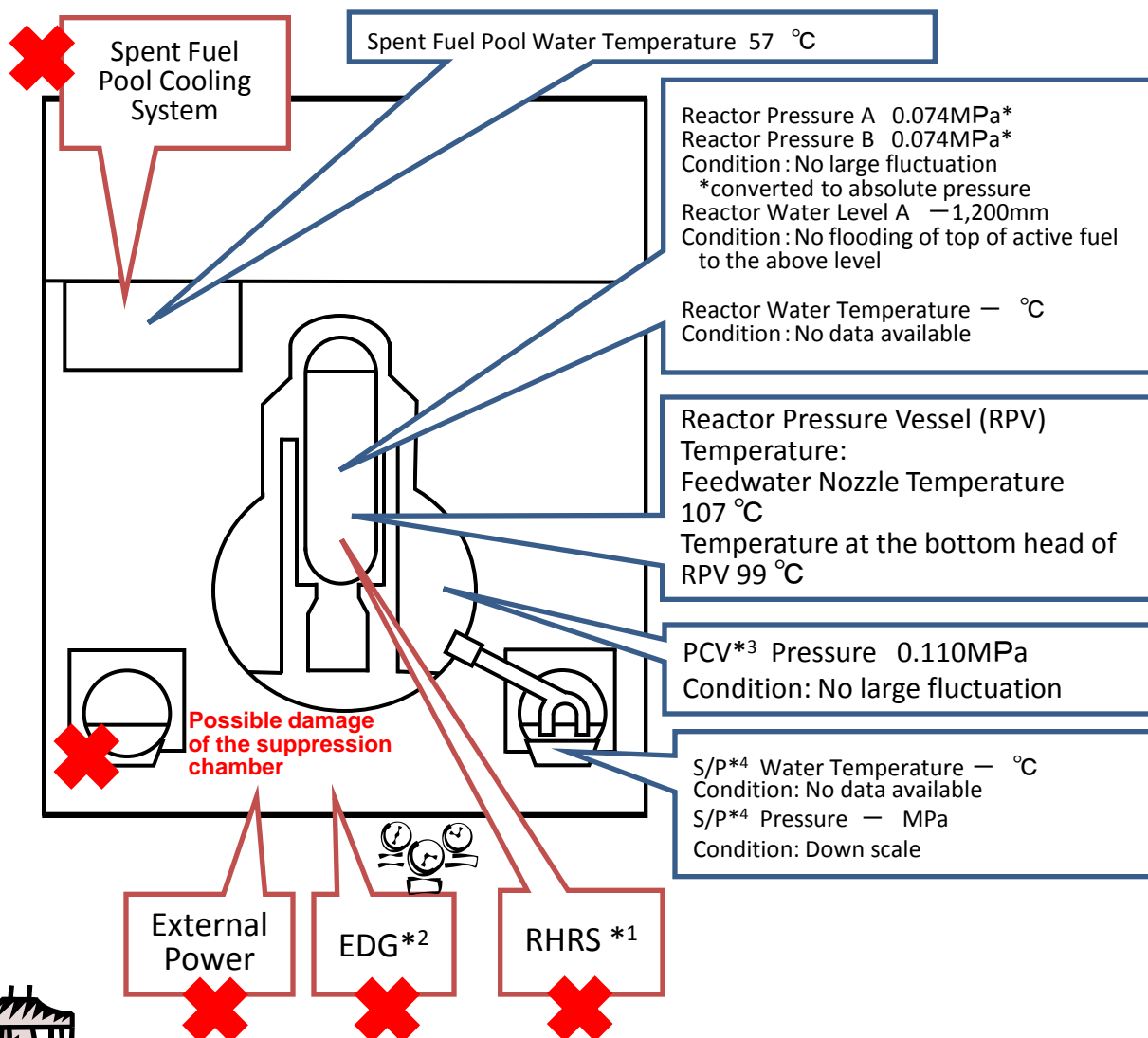
- 11th 14:46 : Under operation, Automatic shutdown by the earthquake
- 11th 15:42 : Report based on the Article 10 (Total loss of A/C power)
- 11th 16:36: Occurrence of the Article 15 event (Inability of water injection of the Emergency Core Cooling System)
- 12th 01:20 Occurrence of the Article 15 event (Unusual rise of the pressure in PCV)
- 12th 10:17 Started to vent
- 12th 15:36 Sound of explosion
- 12th 20:20 Started to inject seawater and borated water to core
- 23rd 02:33 The amount of injected water to the Reactor Core was increased utilizing the Feed Water line in addition to the Fire Extinguish line. (2m³/h →18m³/h)
09:00 Switched to the Feed Water line only.(18m³/h →11m³/h)
- 24th 11:30 Lighting in the Central Control Room was recovered.
- 25th 15:37 Started fresh water injection

- *1 Residual Heat Removal System
- *2 Emergency Diesel Generator
- *3 Primary Containment Vessel
- *4 Suppression Pool

Current Conditions : Fresh water is being injected to the core

Conditions of Fukushima Dai-ichi Nuclear Power Station Unit 2

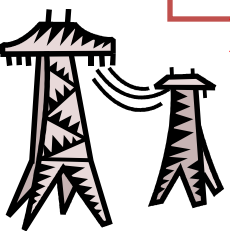
(As of 14:00 March 26th, 2011)



Major Events after the earthquake

- 11th 14:46 Under operation, Automatic shutdown by the earthquake
- 11th 15:42 Report based on the Article 10 (Total loss of A/C power)
- 11th 16:36 Occurrence of the Article 15 event (Inability of water injection of the Emergency Core Cooling System)
- 13th 11:00 Started to vent
- 14th 13:25 Occurrence of the Article 15 event (Loss of reactor cooling functions)
- 14th 16:34 Started to inject water to the Reactor Core
- 14th 22:50 Occurrence of the Article 15 event (Unusual rise of the pressure in PCV)
- 15th 00:02 Started to vent
- 15th 06:10 Sound of explosion
- 15th around 06:20 Possible damage of the suppression pool (suppression chamber)
- 20th 15:05~17:20 Approximately 40 ton seawater injection to the Spent Fuel Pool (SFP) via the Fuel Pool Cooling line (FPC)
- 20th 15:46 Power Center received electricity.
- 21st 18:22 White smoke generated. The smoke died down and almost invisible at 07:11 March 22nd.
- 22nd 16:07 Injection of around 18 tons of seawater to the Spent Fuel Pool
- 25th 10:30~12:19 Sea water injection to SFP via FPC
- 26th 10:10 Started to inject freshwater to the Reactor Core
- 26th 16:46 Lighting in the Central Control Room was recovered.

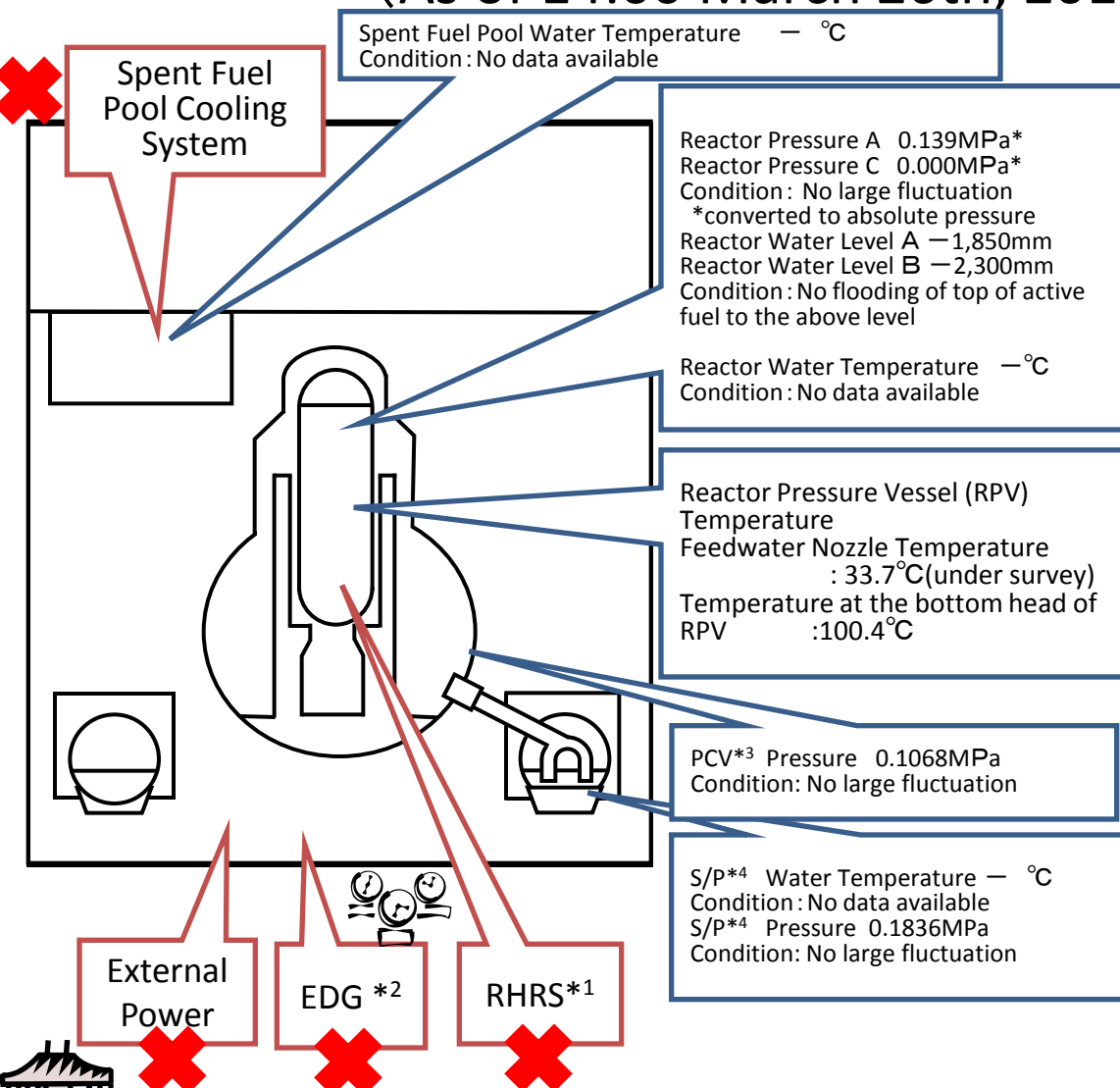
Current Conditions: Sea water is being injected to Spent Fuel Pool and fresh water is being injected to the core



*1 Residual Heat Removal System
 *2 Emergency Diesel Generator
 *3 Primary Containment Vessel
 *4 Suppression Pool

Conditions of Fukushima Dai-ichi Nuclear Power Station **Unit 3**

(As of 14:00 March 26th, 2011)



Major Events after the earthquake

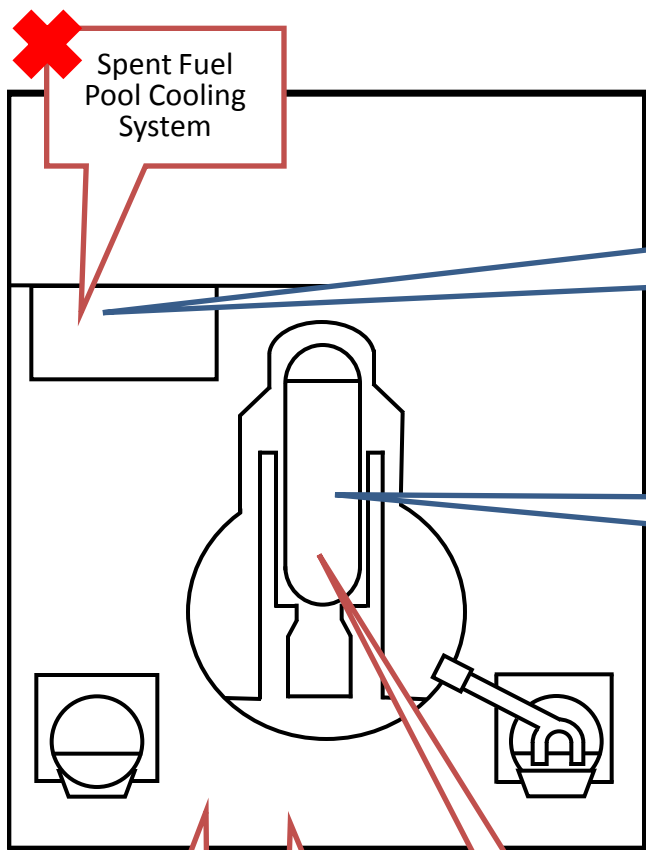
- 11th 14:46 Under operation, Automatic shutdown by the earthquake
- 11th 15:42 Report based on the Article 10 (Total loss of A/C power)
- 12th 20:41 Started to vent
- 13th 05:10 Occurrence of the Article 15 event (Inability of water injection of the Emergency Core Cooling System)
- 13th 09:20 Started to vent
- 13th 13:12 Started to inject seawater and borated water to core
- 14th 05:20 Started to vent
- 14th 07:44 Occurrence of the Article 15 event (Unusual rise of the pressure in PCV)
- 14th 11:01 Sound of explosion
- 16th around 08:30 White smoke generated.
- 17th 09:48~10:01 Water discharge by the helicopters of Self-Defense Force
- 19:05~20:07 Water spray from the ground by High pressure water-cannon trucks
- 18th before 14:00~14:38 Water spray from the ground by 6 fire engines of Self-Defense Force
- ~14:45 Water spray from the ground by a fire engine of the US Military
- 19th 00:30 ~01:10 Water spray by Hyper Rescue Unit of Tokyo Fire Department
- 19th 14:10 ~ 20th 03:40 Water spray by Hyper Rescue Unit of Tokyo Fire Department
- 20th 11:00 Pressure of PCV rose(320kPa).Afterward fell.
- 20th 21:36 ~ 21st 03:58 Water spray by Hyper Rescue Unit of Tokyo Fire Department
- 21st about 15:55 Grayish smoke generated and was confirmed to be died down at 17:55.
- 22nd 15:10 ~16:00 Water spray by Hyper Rescue Unit of Tokyo Fire Department and Osaka City Fire Bureau.
- 22nd 22:43 Lighting in the Central Control Room was recovered.
- 23rd 11:03 ~13:20 Injection of about 35ton of sea water to the Spent Fuel Pool (SFP) via the Fuel Pool Cooling line (FPC)
- 23rd around 16:20 Black smoke generated and was confirmed to be died down at around 23:30 and 24th 04:50.
- 24th 05:35~16:05 Approximately 120 ton sea water injection to SFP via FPC
- 25th 13:28~16:00 Water spray by Kawasaki City Fire Bureau supported by Tokyo Fire Department
- 25th 18:02 Started fresh water injection

*1 Residual Heat Removal System
 *2 Emergency Diesel Generator
 *3 Primary Containment Vessel
 *4 Suppression Pool

Current Conditions : Sea water is being injected to Spent Fuel Pool and fresh water is being injected to the core

Conditions of Fukushima Dai-ichi Nuclear Power Station Unit 4

(As of 14:00 March 26th, 2011)



In periodic inspection outage

Spent Fuel Pool Water Temperature - °C
Condition: Indication failure

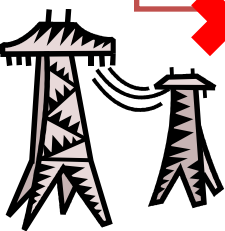
No fuel is inside the reactor core

Major events after the earthquake

- In periodic inspection outage when the earthquake occurred.
- 11th 15:42 Report based on the Article 10 (Total loss of A/C power)
- 14th 04:08 Water temperature in the Spent Fuel Pool, 84°C
- 15th 06:14 Partial damage of wall in the 4th floor confirmed
- 15th 09:38 Fire occurred in the 3rd floor. (12:25 extinguished)
- 16th 05:45 Fire occurred. TEPCO couldn't confirm any fire on the ground. (06:15)
- 20th 08:21 ~ 09:40 Water spray over the Spent Fuel Pool (SFP) by Self-Defense Force
- 20th around 18:30 ~ 19:46 Water spray over the Spent Fuel Pool by Self-Defense Force
- 21st 06:37 ~ 08:41 Water spray over the Spent Fuel Pool by Self-Defense Force
- 21st about 15:00 Work for laying cable to Power Center was completed.
- 22nd 10:35 Power Center received electricity
- 22nd 17:17 ~ 20:32 Water spray by Concrete Pump Truck
- 23rd 10:00 ~ 13:02 Water spray by Concrete Pump Truck
- 24th 14:36 ~ 17:30 Water spray by Concrete Pump Truck
- 25th 06:05 ~ 10:20 Sea water injection to SFP via the Fuel Pool Cooling line (FPC)
- 25th 19:05 ~ 22:07 Water spray by Concrete Pump Truck

Current Conditions: No fuel is in RPV*3.
Sea water is being injected to Spent Fuel Pool.

(Editorial committee for Nuclear Energy Handbook, Nuclear Energy Handbook)



- *1 Residual Heat Removal System
- *2 Emergency Diesel Generator
- *3 Reactor Pressure Vessel

Conditions of Fukushima Dai-ichi Nuclear Power Station Unit 5 (As of 14:00 March 26th, 2011)

In periodic inspection outage

Water Temperature in the Pool: 42.8°C
Condition: Recovery of heat removal function

Reactor Pressure: 0.108MPa*
Reactor Water Level: 2,123mm
Reactor Water Temperature: 43.8°C
Condition: Pressure is under control.
*converted to absolute pressure

Reactor Pressure Vessel Temperature:
Monitoring by Reactor Water Temperature

※Heat removal was carried out alternately with the water in the Reactor Core and in the Spent Fuel Pool.

Current Conditions:

20th 14:30 Cold shutdown

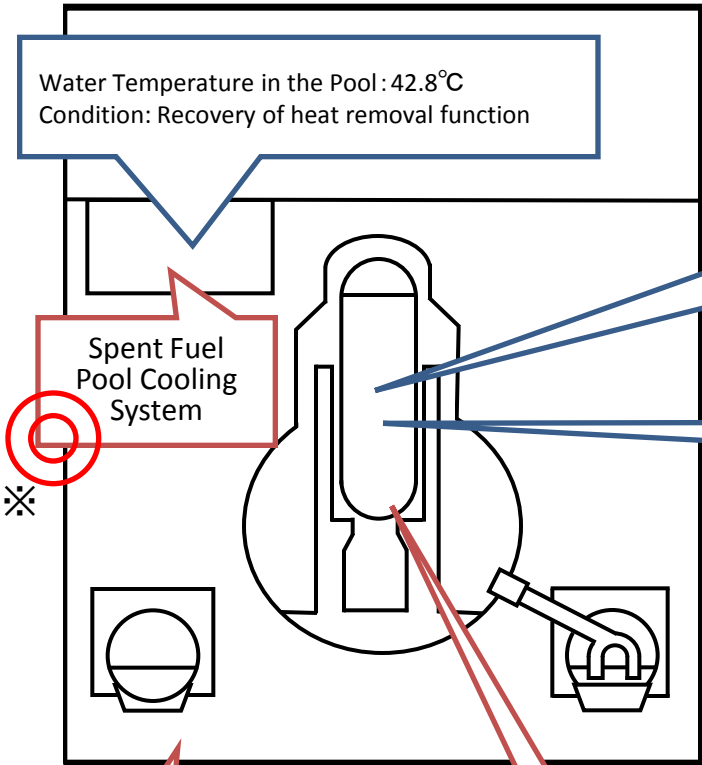
21st 11:36 Receiving electricity from external power supply

23rd 17:24 Pump for Residual Heat Removal Seawater System (RHRS) was automatically stopped when the power supply was switched from the temporary to the permanent.

24th 16:14 Repair of the RHRS pump was completed.

24th 16:35 Cooling started.

(Editorial committee for Nuclear Energy Handbook, Nuclear Energy Handbook)



Spent Fuel Pool Cooling System

External Power

RHRS *1

*1 Residual Heat Removal System



Conditions of Fukushima Dai-ichi Nuclear Power Station Unit 6 (As of 14:00 March 26th, 2011)

In periodic inspection outage

Water Temperature in the Pool: 30.0°C
Condition: Recovery of heat removal function.

Current Conditions:
20th 19:27 Cold shutdown.
22nd 19:17 Receiving electricity from external power supply.

Spent Fuel Pool Cooling System ※

Reactor Pressure: 0.104MPa*
Reactor Water Level: 2,094mm
Reactor Water Temperature: 21.3°C
Condition: Pressure is under control.
*converted to absolute pressure

Reactor Pressure Vessel Temperature:
Monitoring by Reactor Water Temperature

External Power

RHRS*1

※Heat removal was carried out alternately with the water in the Reactor Core and in the Spent Fuel Pool.

*1 Residual Heat Removal System

(Editorial committee for Nuclear Energy Handbook, Nuclear Energy Handbook)

