

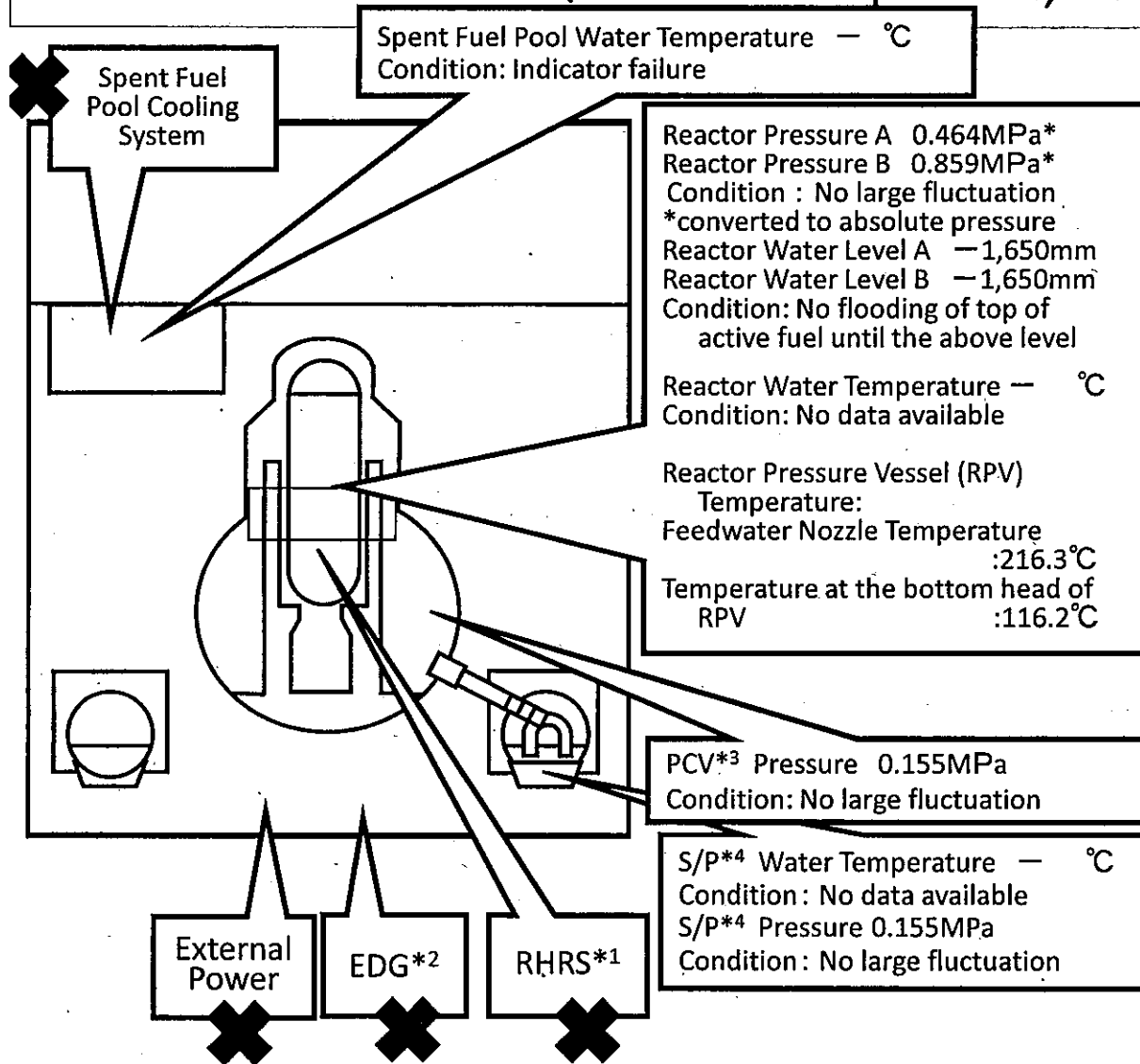
Schematic Diagram

Regarding Injection of Nitrogen Gas into the PCV

Conditions of Fukushima Dai-ichi Nuclear Power Station Unit 1

(As of 6:00 April 7th, 2011)

Major Events after the earthquake



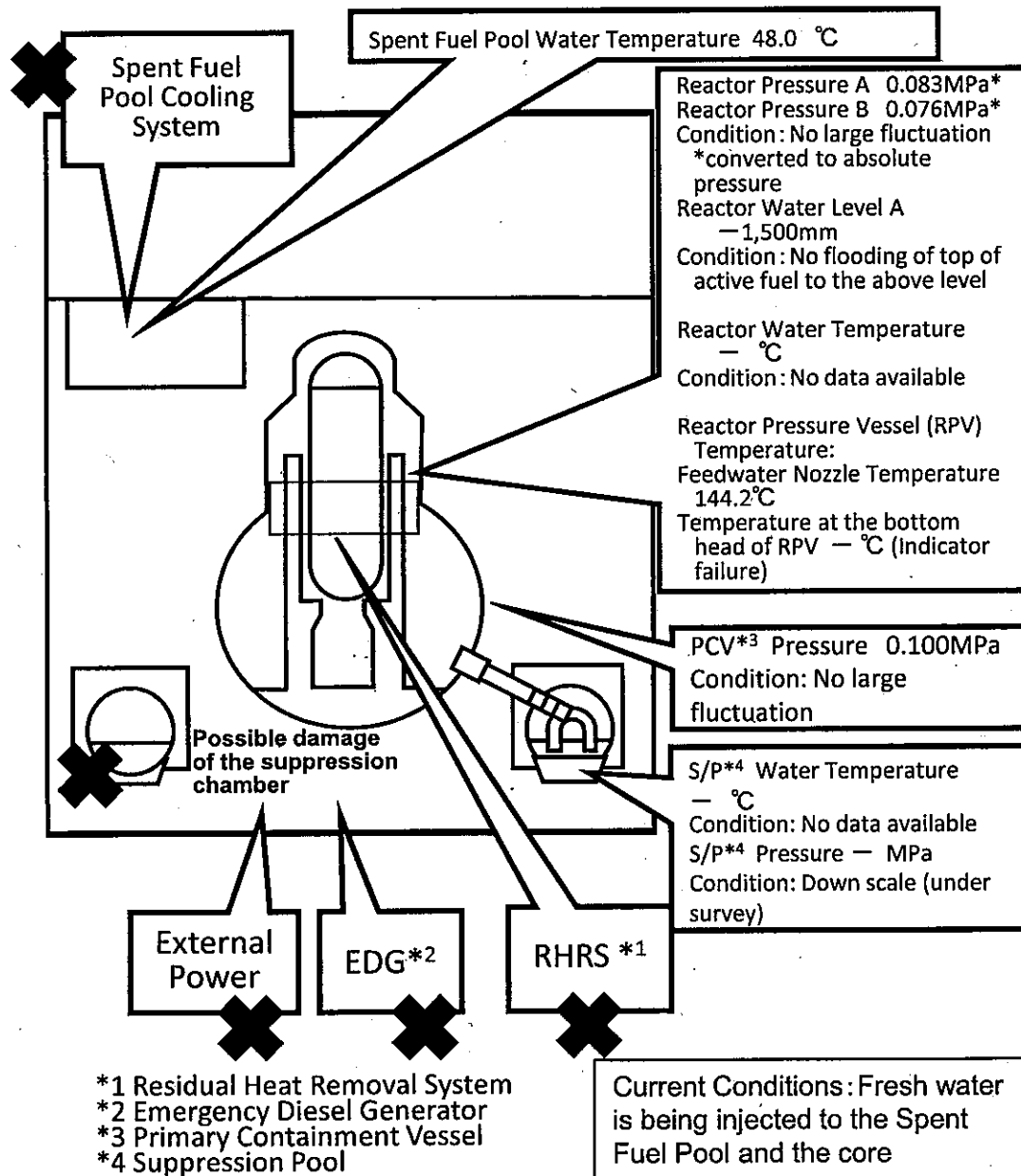
- 11th 14:46 Under operation, Automatic shutdown by the earthquake
- 11th 15:42 Report based on the Article 10 (Total loss of A/C power)
- 11th 16:36 Occurrence of the Article 15 event (Inability of water injection of the Emergency Core Cooling System)
- 12th 01:20 Occurrence of the Article 15 event (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 Feedwater Line in addition to the Fire Extinguish Line. (2m³/h →18m³/h)
- 09:00 Switched to the Feedwater Line only.(18m³/h →11m³/h)
- 24th 11:30 Lighting in the Central Control Room was recovered.
- 25th 15:37 Started fresh water injection.
- 29th 08:32 Switched to the water injection to the core using the temporary motor-driven pump.
- 31st 12:00 ~2nd 15:26 Started to transfer the stagnant water from the Condensate Storage Tank (CST) to the Surge Tank of Suppression Pool Water (SPT)
- 31st 13:03~16:04 Water spray by Concrete Pump Truck (Fresh water)
- 3rd 12:02 The power supply to the temporary motor-driven pump was switched from the temporary power supply to the external power supply.
- 3rd 13:55 Started to transfer the water from the condenser to CST.
- 6th 22:30 Started the operation for the injection of nitrogen to PCV.
- 7th 01:31 Confirmed starting the injection of nitrogen to PCV.

*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 Spent Fuel Pool and the core

Conditions of Fukushima Dai-ichi Nuclear Power Station Unit 2

(As of 6:00 April 7th, 2011)

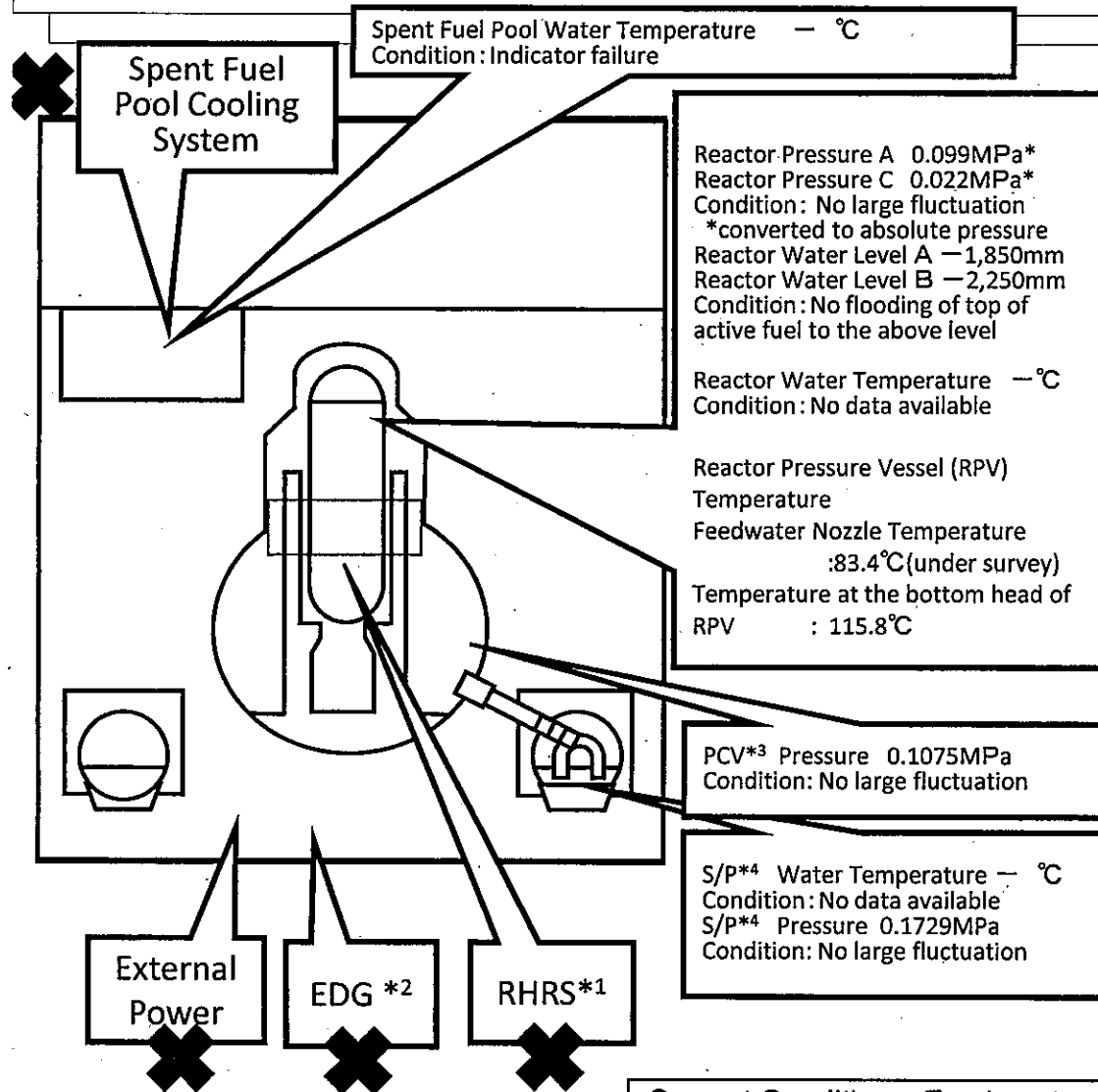


Major Events after the earthquake

- 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 seawater 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 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 SFP
- 25th 10:30~12:19 Sea water injection to SFP via FPC
- 26th 10:10 Started to inject fresh water to the Reactor Core.
- 26th 16:46 Lighting in the Central Control Room was recovered.
- 27th 18:31 Switched to the water injection to the core using the temporary motor-driven pump.
- 29th 16:30~18:25 Switched to the temporary motor-driven pump injecting fresh water to SFP.
- 29th 16:45~1st 11:50 Transferred the water from the Condensate Storage Tank (CST) to the Surge Tank of Suppression Pool Water (SPT)
- 30th 9:25~23:50 Confirmed malfunction of the temporary motor-driven pump injecting fresh water to SFP(9:45). Switched to the injection using the fire pump Truck, but suspended as cracks were confirmed in the hose. (12:47, 13:10) Resumed injection of fresh water(19:05)
- 1st 14:56~17:05 Injection of fresh water from FPC to SFP using the temporary motor-driven pump.
- 2nd around 9:30 The water, of which the dose rate was at the level of more than 1,000mSv/h, was confirmed to be collected in the pit located near the Intake Channel of Unit 2. The outflow from the lateral surface of the pit into the sea was also confirmed.
- 2nd 17:10 Started to transfer the water from the condenser to the Condensate Storage Tank (CST).
- 3rd 12:12 The power supply to the temporary motor-driven pump was switched from the temporary power supply to the external power supply.
- 3rd 13:47~14:30 20 bags of sawdust, 80 bags of high polymer absorbent and 3 bags of cutting-processed newspaper were put into the Pit for the Conduit.
- 4th 7:08~7:11 Approximately 13kg of tracer (bath agent) was put in from the Pit for the Duct for Seawater Pipe.
- 4th 11:05~13:37 Injection of fresh water from FPC to SFP using the temporary motor-driven pump.
- 5th 14:15 Tracer is confirmed to outflow through the permeable layer around the pit into the sea.
15:07 Started to inject coagulant.
- 6th around 5:38 The water outflow from the lateral surface of the pit was confirmed to stopped.

Conditions of Fukushima Dai-ichi Nuclear Power Station Unit 3

(As of 6:00 April 7th, 2011)



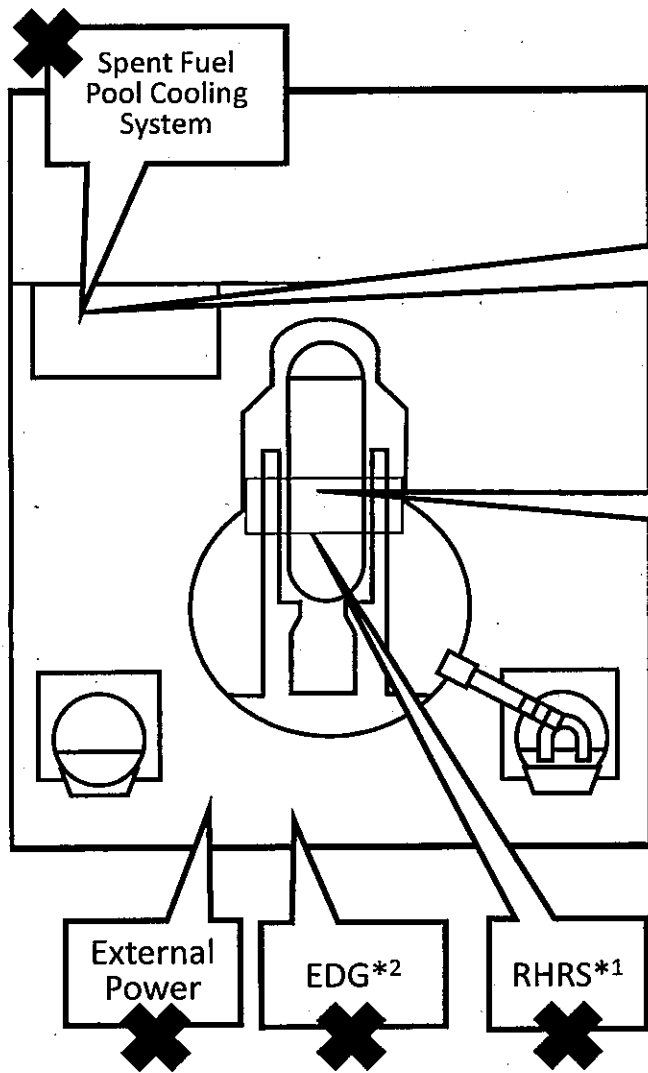
- *1 Residual Heat Removal System
- *2 Emergency Diesel Generator
- *3 Primary Containment Vessel
- *4 Suppression Pool

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

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)
- 13th 05:10 Occurrence of the Article 15 event (Inability of water injection of the Emergency Core Cooling System)
- 13th 08:41 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
- 17th 19:05~19:15 Water spray from the ground by High pressure water-cannon trucks of Police
- 17th 19:35~20:09 Water spray from the ground by fire engines of Self-Defense Force
- 18th before 14:00~14:38 Water spray from the ground by 6 fire engines of Self-Defense Force
- 18th ~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 around 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 22:46 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 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 to the core.
- 27th 12:34~14:36 Water spray by Concrete Pump Truck
- 28th 17:40~31st around 8:40 Transferring the water from the Condensate Storage Tank (CST) to the Surge Tank of Suppression Pool Water (SPT)
- 28th 20:30 Switched to the water injection to the core using a temporary motor-driven pump.
- 29th 14:17~18:18, 31st 16:30~19:33, 2nd 09:52~12:54, 4th 17:03~19:19 Water spray by Concrete Pump Truck (Fresh water)
- 3rd 12:18 The power supply to the temporary motor-driven pump was switched from the temporary power supply to the external power supply.
- 7th 06:53 Started water spray by Concrete Pump Truck (Fresh water)

Conditions of Fukushima Dai-ichi Nuclear Power Station Unit 4 (As of 6:00 April 7th, 2011)



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

Major events after the earthquake

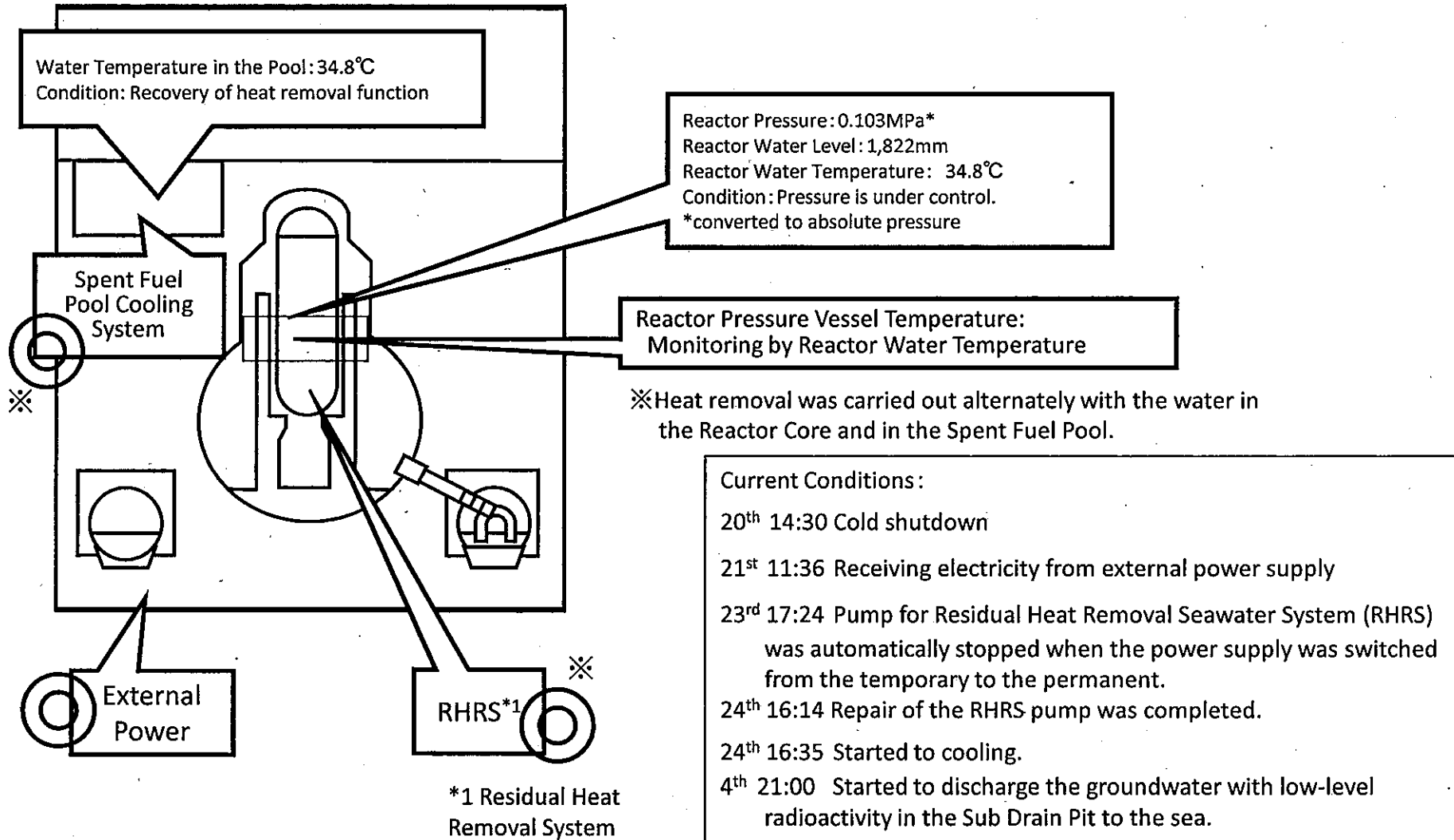
In periodic inspection outage when the earthquake occurred
 14th 04:08 Water temperature in the Spent Fuel Pool (SFP), 84°C
 15th 06:14 Confirmed the partial damage of wall in the 4th floor.
 15th 09:38 Fire occurred in the 3rd floor. (12:25 extinguished)
 16th 05:45 Fire occurred. TEPCO couldn't confirm any fire on the ground. (06:15)
 20th 08:21~09:40 Water spray over SFP by Self-Defense Force
 20th around 18:30~19:46 Water spray over SFP by Self-Defense Force
 21st 06:37~08:41 Water spray over SFP by Self-Defense Force
 21st around 15:00 Work for laying cable to Power Center was completed.
 22nd 10:35 Power Center received electricity.
 22nd 17:17~20:32, 23rd 10:00~13:02, 24th 14:36~17:30, 25th 19:05~22:07, 27th 16:55~19:25 Water spray by Concrete Pump Truck
 25th 06:05~10:20 Sea water injection to SFP via the Fuel Pool Cooling Line (FPC)
 29th 11:50 Lighting in the Central Control Room was recovered.
 30th 14:04~18:33, 1st 8:28~14:14, 3rd 17:14~22:16, 5th 17:35~18:22 Water spray by Concrete Pump Truck (Fresh water)

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

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

Conditions of Fukushima Dai-ichi Nuclear Power Station Unit 5 (As of 6:00 April 7th, 2011)

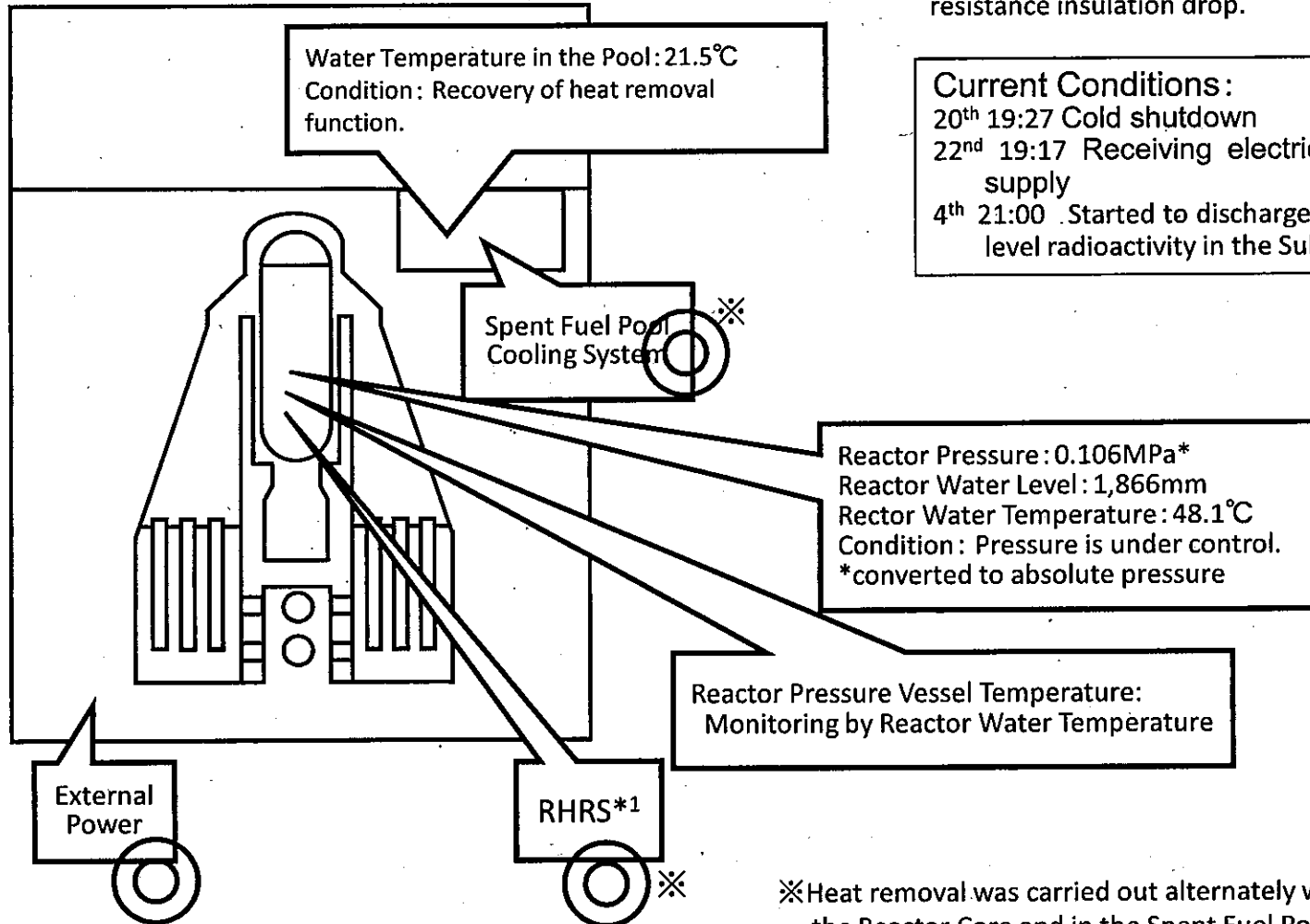
In periodic inspection outage



Conditions of Fukushima Dai-ichi Nuclear Power Station Unit 6 (As of 6:00 April 7th, 2011)

In periodic inspection outage

The Emergency Diesel Generator (D/G) 6A was excluded from standby because of insulation resistance insulation drop.



Current Conditions:
 20th 19:27 Cold shutdown
 22nd 19:17 Receiving electricity from external power supply
 4th 21:00 Started to discharge the groundwater with low-level radioactivity in the Sub Drain Pit to the sea

*1 Residual Heat Removal System

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

April 6, 2011

Nuclear and Industrial Safety Agency

Seismic Damage Information (the 77th Release)

(As of 14:30 April 6th, 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. (TEPCO); Tokai Dai-ni NPS, Japan Atomic Power Co. Inc. as follows:

Major updates are as follows.

1. Nuclear Power Stations (NPSs)

● Fukushima Dai-ichi NPS

- The tracer was put in from the two holes dug around the Pit for the Conduit near the Inlet Bar Screen of Unit 2 and was confirmed to be flowed out from the crack to the sea. (14:15 April 5th) The coagulant (soluble glass) started to be injected from the holes around the Pit in order to prevent the outflowing of the water. (15:07 April 5th) The outflow of the water was confirmed to stop. (05:38 April 6th) In addition, it was confirmed that the water level in the turbine building did not rise.

For more information:

NISA English Home Page

<http://www.nisa.meti.go.jp/english/index.html>

April 7, 2011

Nuclear and Industrial Safety Agency

Seismic Damage Information (the 78th Release)
(As of 08:00 April 7th, 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. (TEPCO); Tokai Dai-ni NPS, Japan Atomic Power Co. Inc. as follows:

Major updates are as follows.

1. Nuclear Power Stations (NPSs)

● Fukushima Dai-ichi NPS

- Aiming at lowering the possibility of hydrogen combustion in the Primary Containment Vessel (PCV) of Unit 1, the operations for the injection of nitrogen to PCV were started. (22:30 April 6th)
- The start of nitrogen injection to PCV of Unit 1 was confirmed. (01:31 April 7th)
- The outflow of the contaminated water from around the Pit for the Conduit near the Inlet Bar Screen of Unit 2 was confirmed to stop. Furthermore, the measurements to stop water by means of rubber board and jig (prop) were implemented at the outflowing point. (Finished at 13:15 April 6th)
- Fresh water spray for Unit 3 using Concrete Pump Truck (50t/h) was started. (06:53 April 7th)
- In the samples of soil (7 samples in total) collected on 25 March (at 4 points) and 28 March (at 3 points) in the site of Fukushima Dai-ichi NPS, ^{238}P (Plutonium), ^{239}P (Plutonium) and ^{240}P (Plutonium) were detected (18:30 April 6th announced by TEPCO). The concentration of the detected plutonium was, in the same as the last one (Announced on 28 March), at the equivalent level of the fallout (radioactive fallout) that was observed in Japan concerning the past atmospheric nuclear testing, i.e. at the equivalent level of the normal condition of environment, and

was not at the level of having harmful influence on human body.

- In order to prevent the outflow of the contaminated water from the exclusive port, the work for stopping water by means of large-sized sandbags was implemented around the seawall on the south side of the NPS. (From 15:00 till 16:30 April 5th)
- The spraying for test scattering of antiscattering agent which prevents the scattering of radioactive materials from the ground was carried out in the area of about 600 m² on the mountain-side of the Common Pool. (April 5th, 6th)

<Others>

- On the implementation of the nitrogen injection to PCV of Unit 1, NISA directed TEPCO on the following three points. (12:40 April 6th)
 - Properly control the plant parameters, and take measures appropriately to ensure safety in response to changes in the parameters.
 - Establish and implement an organizational structure and so on that will ensure the safety of the workers who will engage in the operation.
 - As the possibility of leakage of the air in PCV to the outside due to the nitrogen injection cannot be ruled out, through the judicious and further strengthened monitoring, TEPCO should survey and confirm the impact of the release and spreading of radioactive materials due to the nitrogen injection, and strive to disclose information.

For more information:

NISA English Home Page

<http://www.nisa.meti.go.jp/english/index.html>