

March 28, 2011

Nuclear and Industrial Safety Agency

**Regarding the detection of radioactive material in the soil
on the site of Fukushima Dai-ichi Nuclear Power Station**

Regarding the analysis of plutonium contained in the samples of soil, which Tokyo Electric Power Company (TEPCO) collected on 21 and 22 March on the site of Fukushima Dai-ichi Nuclear Power Station (5 points), TEPCO reported the result of it, it is informed as attached.

(Contact Person)

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Press Releases

Press Release (Mar 28,2011)

Detection of radioactive material in the soil in Fukushima Daiichi Nuclear Power Station

On March 28th 2011, as part of monitoring activity of the surrounding environment, we conducted analysis of plutonium contained in the soil collected on March 21st and 22nd at the 5 spots in Fukushima Daiichi Nuclear Power Station. As a result, plutonium 238, 239 and 240 were detected as shown in the attachment.

We will continue the radionuclide analysis contained in the soil.

<Results of the analysis>

- Plutonium was detected in the soil of Fukushima Daiichi Nuclear Power Station.
- The density of detected plutonium is equivalent to the fallout observed in Japan when the atmospheric nuclear test was conducted in the past.
- The detected plutonium from two samples out of five may be the direct result of the recent incident, considering their activity ratio of the plutonium isotopes.
- The density of detected plutonium is equivalent to the density in the soil under normal environmental conditions and therefore poses no major impact on human health. TEPCO strengthens environment monitoring inside the station and surrounding areas.
- We will conduct analysis of the three additional soil samples.

attachment1:Result of Pu measurement in the soil in Fukushima Daiichi Nuclear Power Plant(PDF 80.9KB)

attachment2:Fukushima Daiichi Nuclear Power Station Sampling Spots of Soil (PDF 112KB)

attachment3:Fukushima Daiichi Nuclear Power Station Regular Sampling Spots of Soil(PDF 135KB)

[☐ back to page top](#)

(Attachment)

Result of Pu measurement in the soil in Fukushima Daiichi Nuclear Power Plant

1. Result of the measurement

(Unit: Bq/kg·dry soil)

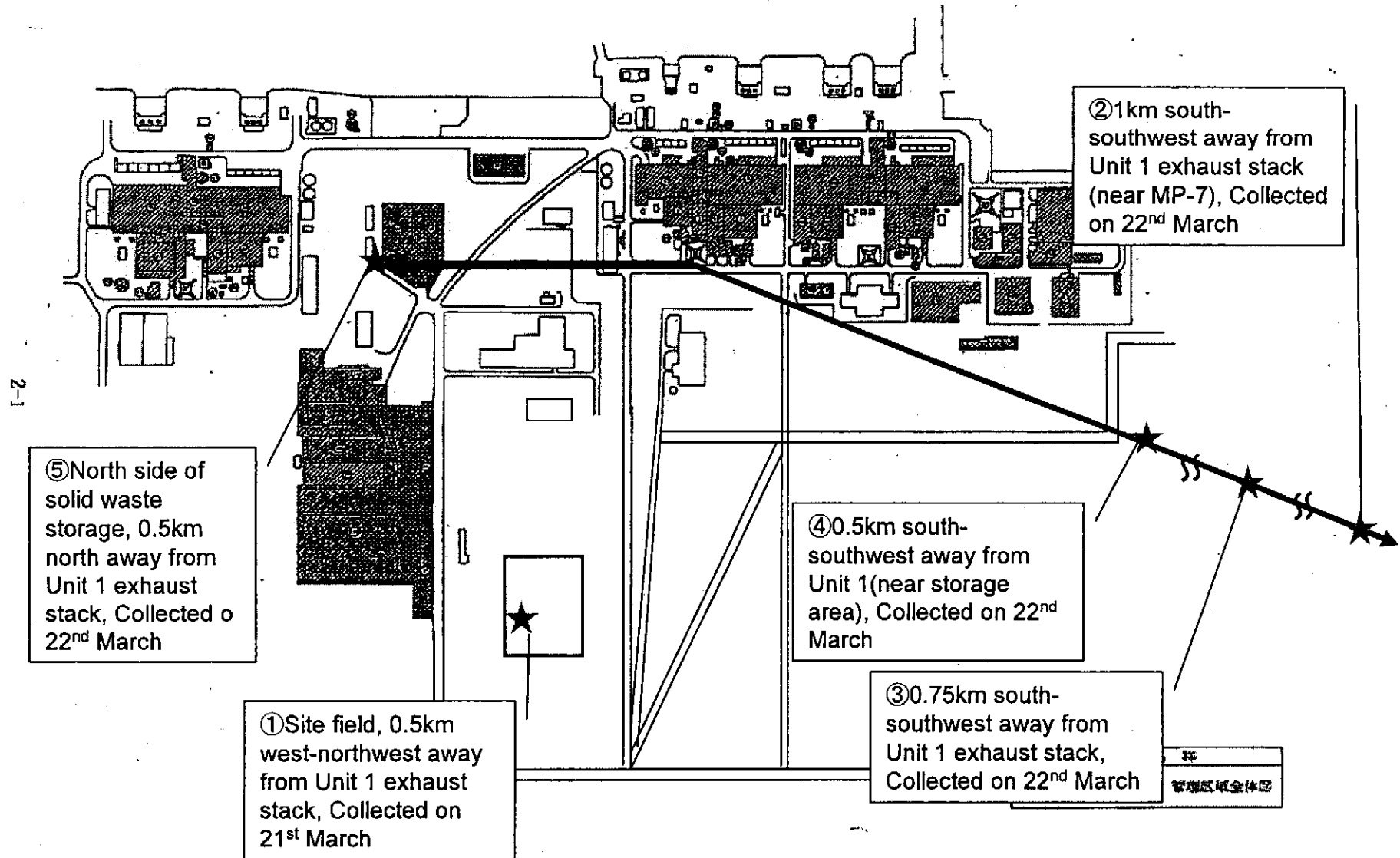
Sampling spot	Time of sampling	Pu-238	Pu-239,Pu-240
①site field	13:30, March 21 st	$(5.4 \pm 0.62) \times 10^{-1}$	$(2.7 \pm 0.42) \times 10^{-1}$
②1km away from Unit 1/2 exhaust stack	7:00, March 22 nd	N.D.	$(2.6 \pm 0.58) \times 10^{-1}$
③ 0.75km away from Unit 1/2 exhaust stack	7:10, March 22 nd	N.D.	1.2±0.12
④0.5km away from Unit 1/2 exhaust stack	7:18, March 22 nd	N.D.	1.2±0.11
⑤solid waste storage	7:45, March 22 nd	$(1.8 \pm 0.33) \times 10^{-1}$	$(1.9 \pm 0.34) \times 10^{-1}$
ordinary domestic soil [※]		N.D.~ 1.5×10^{-1}	N.D.~4.5

※ :MEXT environmental radiation database; 1978-2008

2. Analysis

Density of detected Pu-238, Pu-239 and Pu-240 are within the same level of the fallout observed in Japan after the atmospheric nuclear test in the past. Activity ratio of Pu-238 detected in site field and solid waste storage against Pu-239 and Pu-240 are 2.0 and 0.94 respectively. They exceed activity ratio of 0.026 which resulted from the atmospheric nuclear test in the past, thus those Pus are considered to come from the recent incident.

Fukushima Daiichi Nuclear Power Station Sampling Spots of Soil



Fukushima Daiichi Nuclear Power Station Regular Sampling Spots of Soil

- 0.5km away from exhaust stack Unit 1 and 2
- Spot where soil can be collected from wide area

2-1

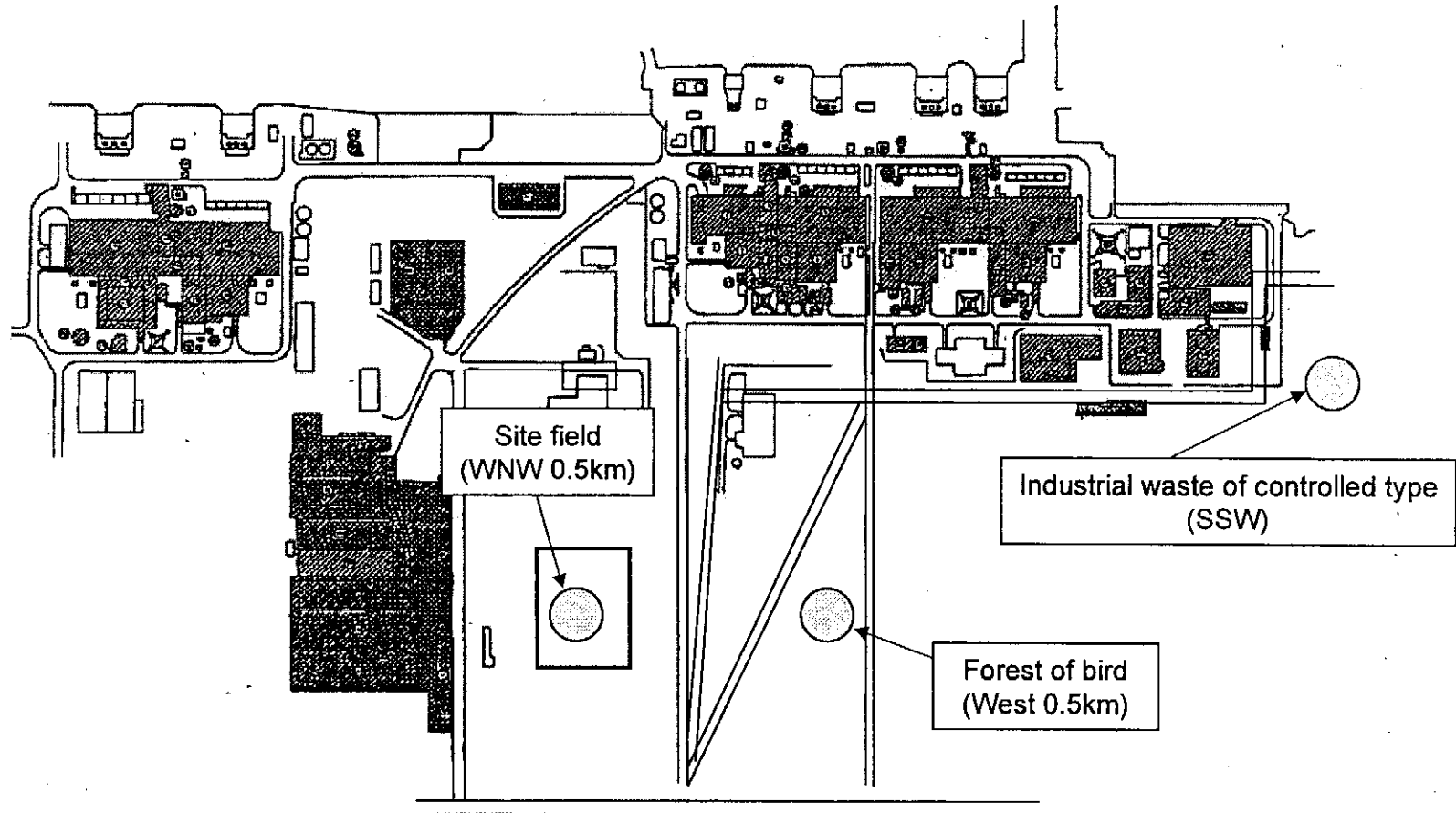


図 名 稱
福島第一原子力発電所 管理区域全体図

March 29, 2011

Nuclear and Industrial Safety Agency

Seismic Damage Information (the 61th Release)
(As of 15:00 March 29th, 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 pump for the fresh water injection to RPV of Unit 1 was switched from the Fire Pump Truck to the temporary motor-driven pump.(08:32 March 29th)
- Water spray (fresh water) for Unit 3 using Concrete Pump Truck (50t/h) was started. (14:17 March 29th)
- Lighting of Central Operation Room of Unit 4 was recovered (11:50 March 29th)
- When removing the flange of pipes of Residual Heat Removal Seawater System outside the building of Unit 3, three sub-contractor's employees were wetted by the water remaining in the pipe. However, as the result of wiping the water off, no radioactive materials were attached to their bodies.

2. Action taken by NISA

- On March 28th, Chief Cabinet Secretary mentioned the continuation of the limited-access within the area of 20 km from Fukushima Dai-ichi NPS. At the same day, the Local Emergency Response Headquarters notified the related municipalities of forbidding entry to the evacuation area within the 20 km zone.
- The report was received, regarding the accident and trouble etc. in Onagawa Nuclear Power Station of Tohoku Electric Power Co. Inc. (the trouble of pump of component cooling water system etc. in Unit 2 and the

fall of heavy oil tank for auxiliary boiler in Unit 1 by tsunami), pursuant to the Article 62-3 of Nuclear Regulation Act and Ministerial Ordinance for the electricity related report.(11:16 March 29th)

For more information:

NISA English Home Page

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

March 29, 2011

Nuclear and Industrial Safety Agency

Seismic Damage Information (the 60th Release)

(As of 08:00 March 29th, 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 water was confirmed in the vertical parts of the trenches (an underground structure for laying pipes, shaped like a tunnel) outside of the turbine building of Units 1 to 3. The dose rates on the water surface were 0.4 mSv/h of the Unit 1's trench and 1,000 mSv/h of the Unit 2's trench. The rate of the Unit 3's trench could not measure because of the rubble. (Around 15:30 March 27th)
- The pump for the fresh water injection to RPV of Unit 3 was switched from the Fire Pump Truck to the temporary motor-driven pump. (20:30 March 28th)
- In the samples of soil collected on 21 and 22 March 2011 on the site (at 5 points) of Fukushima Dai-ichi NPS, plutonium 238, 239 and 240 were detected (23:45 March 28th announced by TEPCO). The concentration of the detected plutonium was 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.

2. Action taken by NISA

(March 28th)

Regarding the delay in the reporting of the water confirmed outside of the turbine buildings, NISA directed TEPCO to accomplish the communication in the company on significant information in a timely manner and to inform it in a timely and appropriate manner.

For more information:

NISA English Home Page

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

March 28, 2011

Nuclear and Industrial Safety Agency

Seismic Damage Information (the 59th Release)
(As of 15:00 March 28th, 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

2. Action taken by NISA

(March 28th)

13:50 Receiving the suggestion by the special meeting of Nuclear Safety Commission (Stagnant water on the underground floor of the turbine building at Fukushima Dai-ichi Plant Unit 2), NISA directed TEPCO orally to add the sea water monitoring points and carry out the underwater monitoring.

< Possibility on radiation exposure (workers)>

All three workers who have been monitoring in the National Institute of Radiological Sciences since 24 March have discharged from the hospital around the noon 28 March.

For more information:

NISA English Home Page

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

Fukushima Di-ichi Nuclear Power Station Major Parameters of the Plant (As of 6:00, March 29th)

Unit No.	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Situation of water injection	Injecting freshwater via the Water Supply Line. Flow rate of injected water : 141 ℓ/min (As of 20:00, March 28th) temporary measuring instrument	Injecting freshwater via the Fire Extinguish Line. Flow rate of injected water : 117 ℓ/min (As of 0:12, March 28th) temporary measuring instrument	Injecting freshwater via the Fire Extinguish Line. Flow rate of injected water: 200 ℓ/min (As of 20:32, March 28th) temporary measuring instrument	Under shutdown	Under shutdown	Under shutdown
Reactor water level	Fuel range A : -1,600mm Fuel range B : -1,600mm (As of 4:00, March 29th)	Fuel range A : -1,500mm (As of 4:00, March 29th)	Fuel range A: -1,900mm Fuel range B: -2,300mm (As of 4:45, March 29th)	#2	Shutdown range measurement 2,363mm (As of 6:00, March 29th)	Shutdown range measurement 1,965mm (As of 6:00, March 29th)
Reactor pressure	0.392MPa g(A) 0.502MPa g(B) (As of 4:00, March 29th)	-0.027MPa g (A) -0.029MPa g (B) (As of 4:00, March 29th)	0.034MPa g (A) -0.090MPa g (C) (As of 4:45, March 29th)	#2	0.010MPa g (As of 6:00, March 29th)	0.005MPa g (As of 6:00, March 29th)
Reactor water temperature	(Impossible collection due to low system flow rate)			#2	29.8°C (As of 6:00, March 29th)	48.9°C (As of 6:00, March 29th)
Reactor Pressure Vessel (RPV) temperature	Feedwater nozzle temperature: 323.3°C Temperature at the bottom head of RPV: 139.4°C (As of 4:00, March 29th)	Feedwater nozzle temperature: 153.7°C Temperature at the bottom head of RPV: 77.7°C (As of 4:00, March 29th)	Feedwater nozzle temperature: 61.5°C (under survey) Temperature at the bottom head of RPV: 120.9°C (As of 4:45, March 29th)	Unit 4 No heating element (fuel) inside the reactor Unit 5,6 Monitoring by the reactor water temperature		
D/W*1 Pressure, S/C*2 Pressure	D/W: 0.285MPa abs S/C: 0.285MPa abs (As of 4:00, March 29th)	D/W: 0.100MPa abs S/C: Down scale (under survey) (As of 4:00, March 29th)	D/W: 0.1085MPa abs S/C: 0.1792MPa abs (As of 4:45, March 29th)	#2		
CAMS*3	D/W: 3.60×10^1 Sv/h S/C: 2.00×10^1 Sv/h (As of 4:00, March 29th)	D/W: 4.04×10^1 Sv/h S/C: 1.37×10^0 Sv/h (As of 4:00, March 29th)	D/W: 2.92×10^1 Sv/h S/C: 1.18×10^0 Sv/h (As of 4:45, March 29th)	#2		
D/W*1 design operating pressure	0.384MPa g(0.485MPa abs)	0.384MPa g(0.485MPa abs)	0.384MPa g(0.485MPa abs)	#2		
D/W*1 maximum operating pressure	0.427MPa g(0.528MPa abs)	0.427MPa g(0.528MPa abs)	0.427MPa g(0.528MPa abs)	#2		
Spent Fuel Pool water	#1	45°C (As of 4:00, March 29th)	#1	#1	37.1°C (As of 6:00, March 29th)	22.0°C (As of 6:00, March 29th)
FPC skimmer level	4,500mm (As of 4:00, March 29th)	5,700mm (As of 4:00, March 29th)	#1	5,250mm (As of 4:45, March 29th)	#2	
Power supply	Receiving external power supply (P/C*4 2C)		Receiving external power supply (P/C4D)		Receiving external power supply	

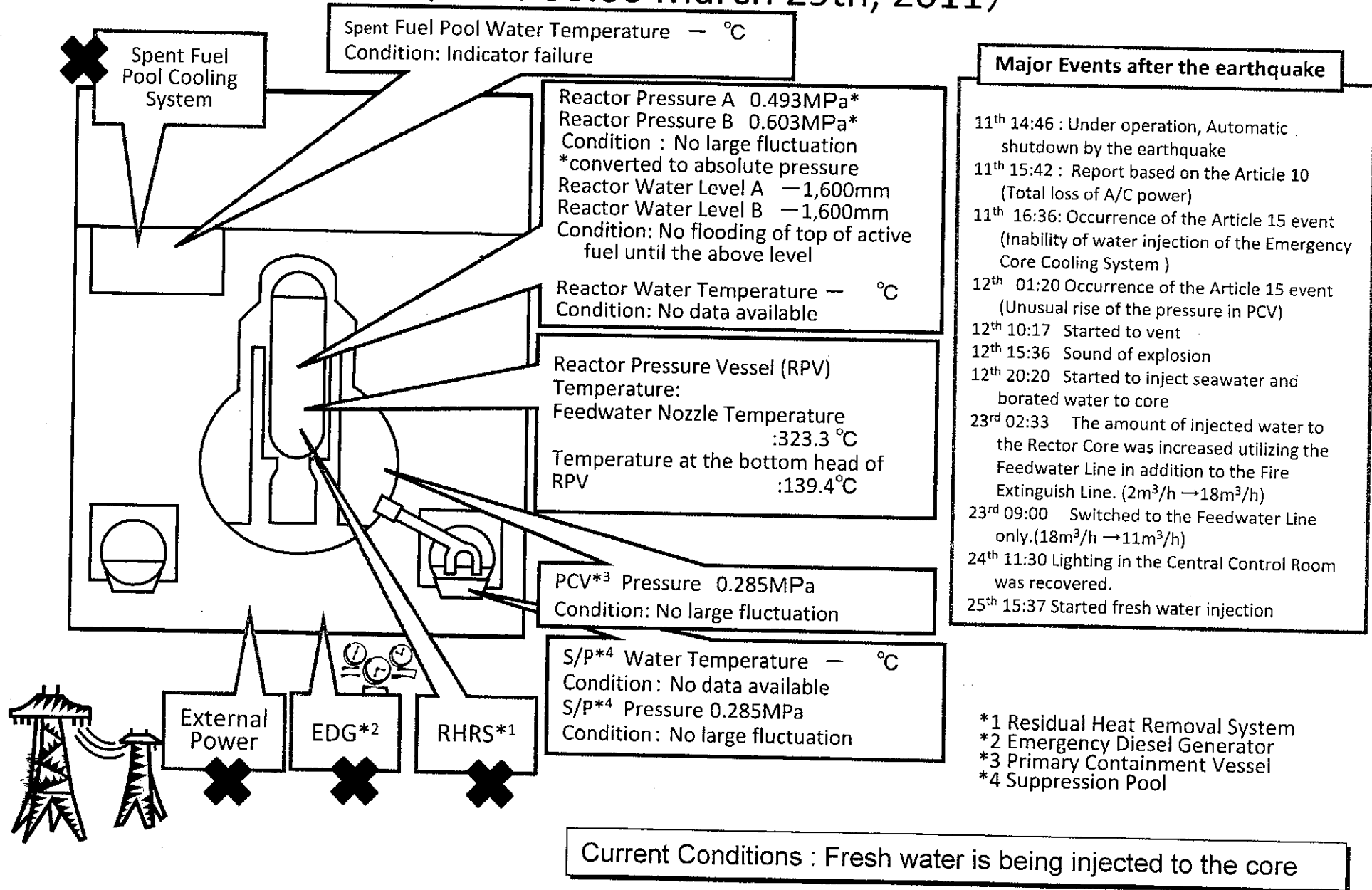
Other information	Unit3: Collecting the data of RPV temperature and continuing survey for transitional situation Unit2: Confirmed the indicated value of S/C Pressure but continuing to survey the transition of condition	Common pool: about 34 °C (As of 8:00, March 28th)	Unit5:SHC mode (From 11:47 March 28th)	Unit6:SHC mode (From . 18:06 March 28th)
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Pressure conversion Gauge pressure (MPa g) = Absolute pressure (MPa abs) – Atmospheric pressure (Normal atmospheric pressure 0.1013MPa)
 Absolute pressure (MPa abs) = Gauge pressure (MPa g) + Atmospheric pressure (Normal atmospheric pressure 0.1013MPa)

- *1 D/W : Dry Well
- *2 S/C : Suppression Chamber
- *3 CAMS : Containment Atmospheric Monitoring System
- *4 P/C : Power Center

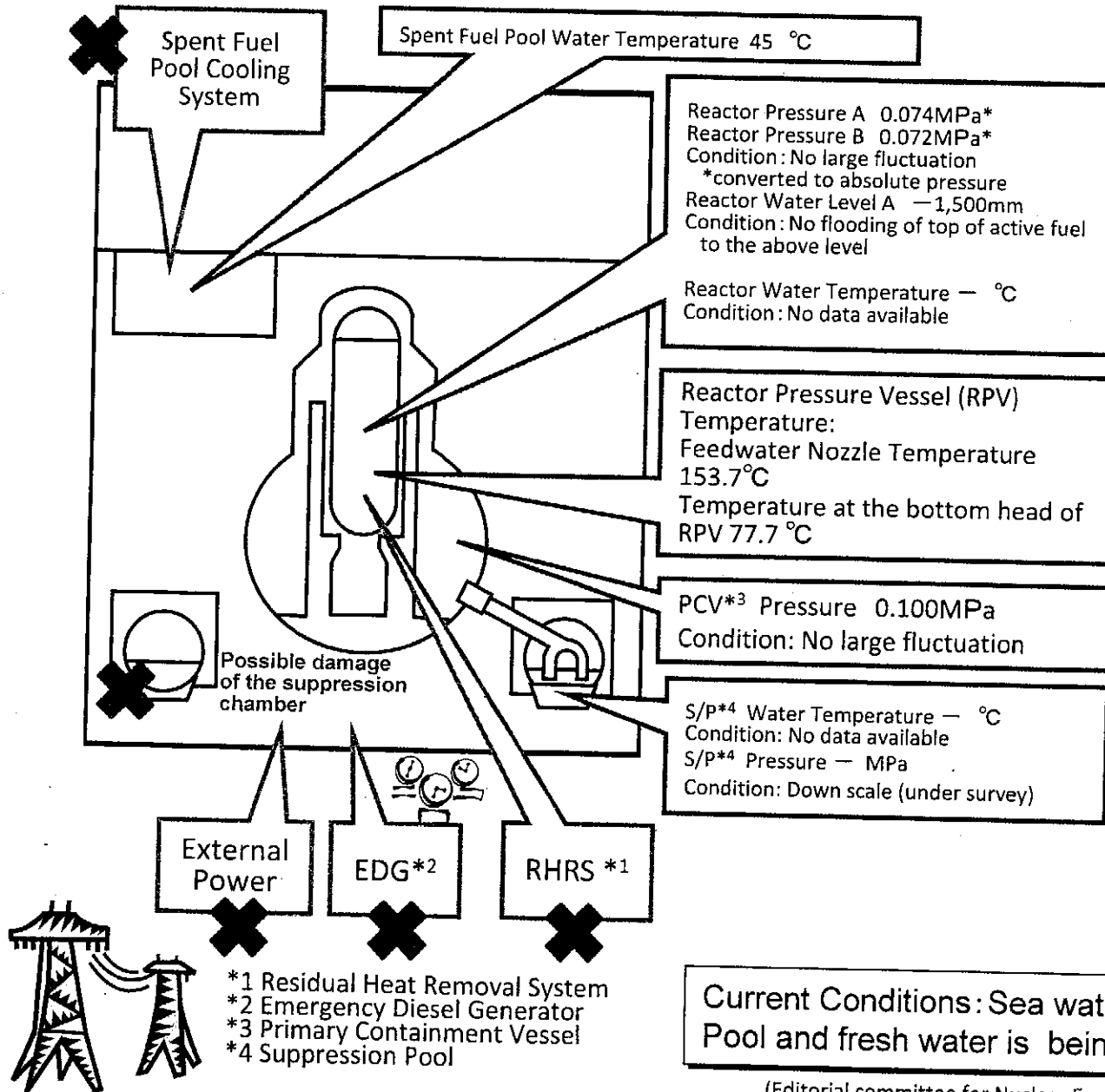
- #1 : Measuring instrument malfunction
- #2 : Except from data collection

Conditions of Fukushima Dai-ichi Nuclear Power Station Unit 1 (As of 06:00 March 29th, 2011)



Conditions of Fukushima Dai-ichi Nuclear Power Station Unit 2 (As of 06:00 March 29th, 2011)

Major Events after the earthquake

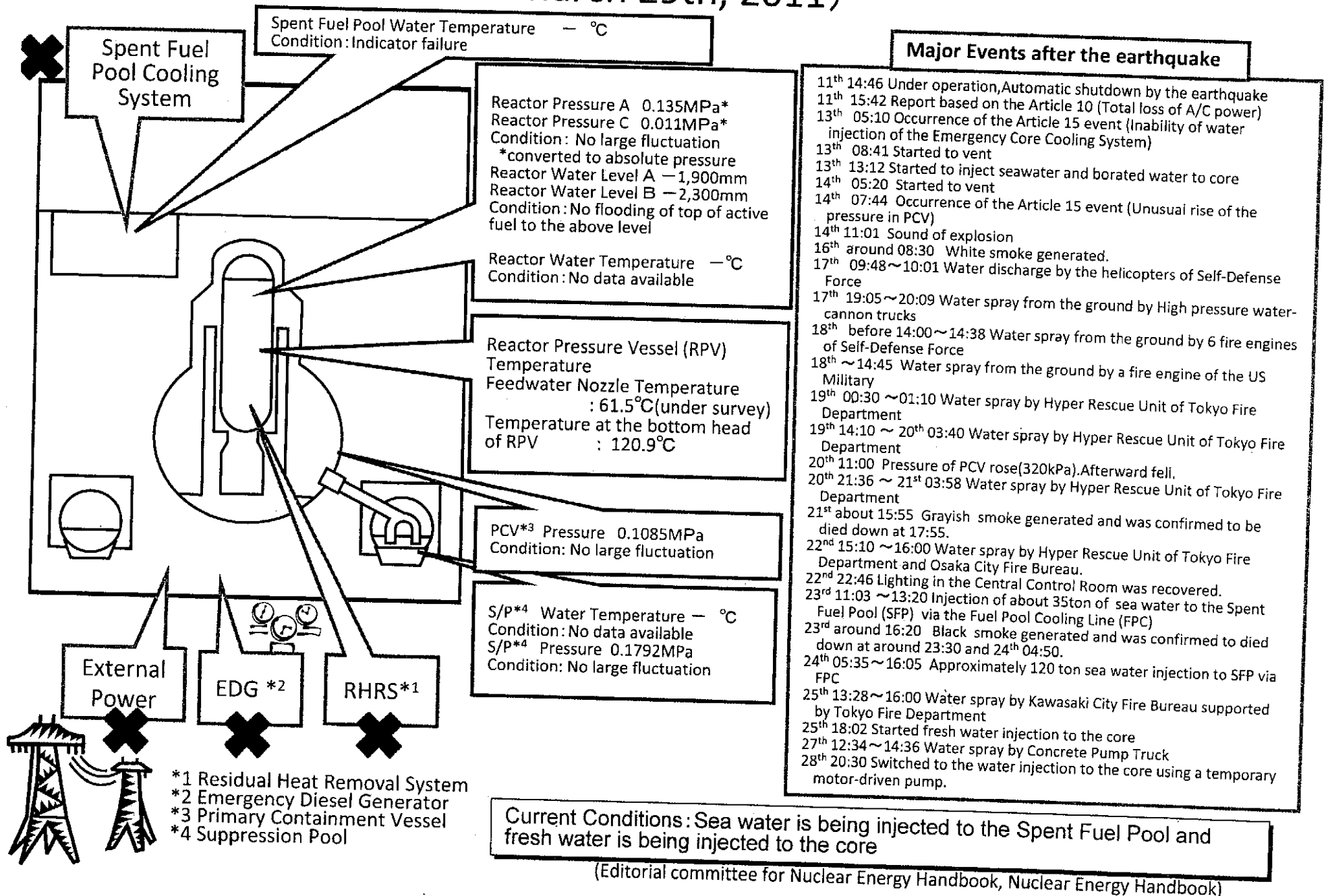


- 11th 14:46 Under operation, Automatic shutdown by the earthquake
- 11th 15:42 Report based on the Article 10 (Total loss of A/C power)
- 11th 16:36 Occurrence of the Article 15 event (Inability of water injection of the Emergency Core Cooling System)
- 13th 11:00 Started to vent
- 14th 13:25 Occurrence 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 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 a temporary motor-driven pump.

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

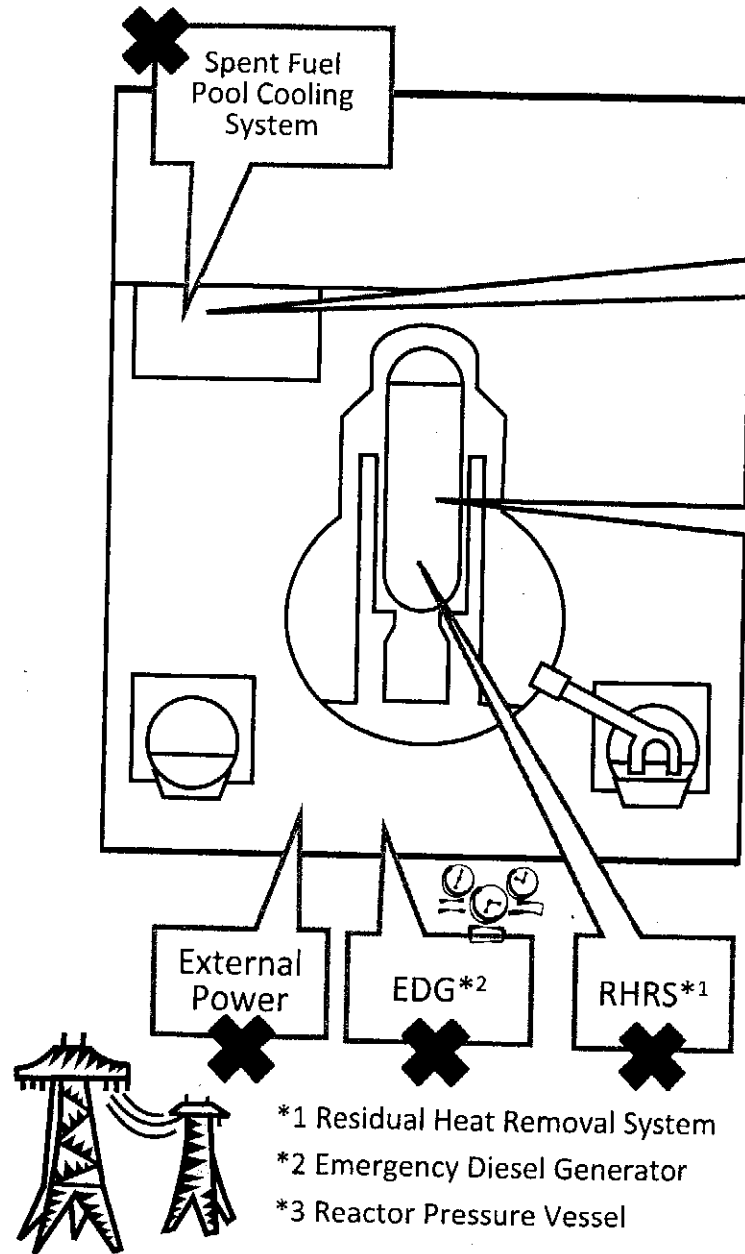
(Editorial committee for Nuclear Energy Handbook, Nuclear Energy Handbook)

Conditions of Fukushima Dai-ichi Nuclear Power Station Unit 3 (As of 06:00 March 29th, 2011)



Conditions of Fukushima Dai-ichi Nuclear Power Station Unit 4 (As of 06:00 March 29th, 2011)

Major events after the earthquake



In periodic inspection outage

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

No fuel is inside the reactor core

Spent Fuel Pool Cooling System

External Power

EDG*2

RHRS*1

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

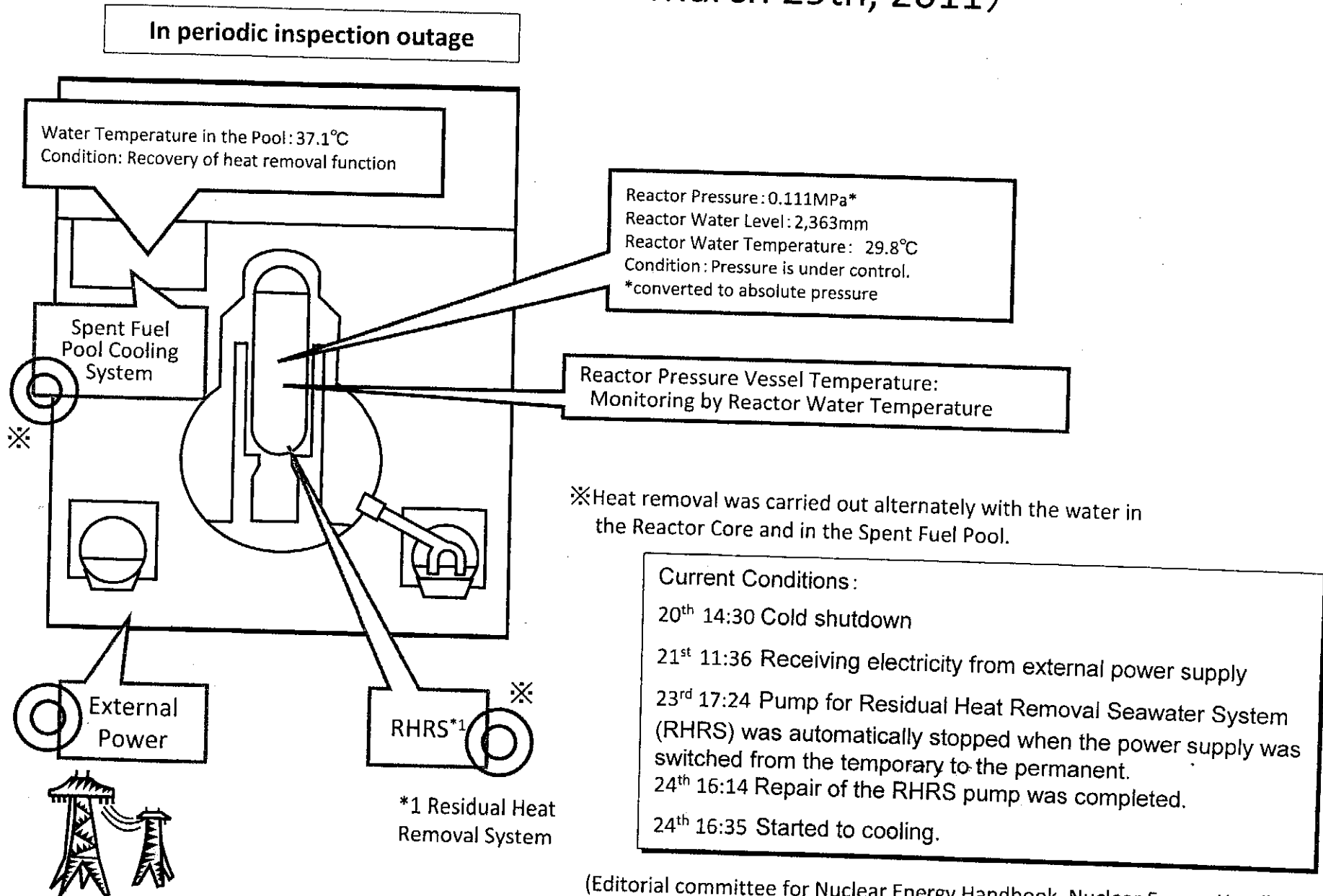
In periodic inspection outage when the earthquake occurred.

- 14th 04:08 Water temperature in the Spent Fuel Pool (SFP), 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 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 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
- 27th 16:55 ~ 19:25 Water spray by Concrete Pump Truck

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

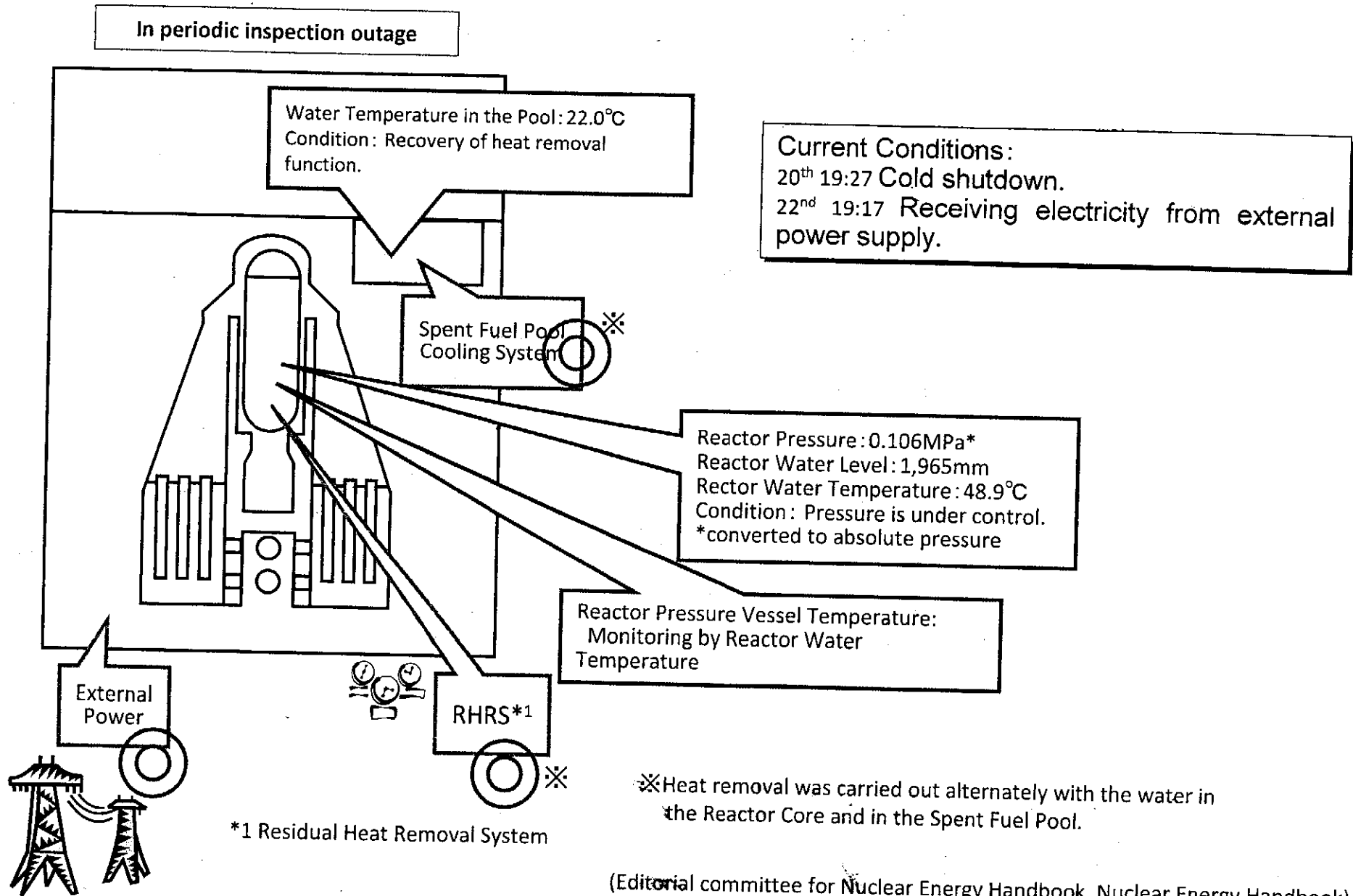
(Editorial committee for Nuclear Energy Handbook, Nuclear Energy Handbook)

Conditions of Fukushima Dai-ichi Nuclear Power Station Unit 5 (As of 06:00 March 29th, 2011)



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

Conditions of Fukushima Dai-ichi Nuclear Power Station Unit 6 (As of 06:00 March 29th, 2011)



March 28th, 2011

Fukushima Dai-ichi
Monitoring points

- ① North side of main office building (approx. 0.5km from Unit 2 in northwest direction)
- ② Near Gymnasium (East side of MP-5) (approx. 0.9km from Unit 2 in westnorthwest direction)
- ③ Near West Gate (near MP-5) (approx. 1.1km from Unit 2 in west direction)
- ④ Front of near Main Gate (near MP-6) (approx. 1.0km from Unit 2 in westnorthwest direction)
- ⑤ Front of Earthquake Isolation Building (approx. 0.5km from Unit2 in northwest dirction)

Monitoring points		③																							
Reading time		12:00	12:10	12:20	12:30	12:40	12:50	13:00	13:10	13:20	13:30	13:40	13:50	14:00	14:10	14:20	14:30	14:40	14:50	15:00	15:10	15:20	15:30	15:40	15:50
MC	Reading(μ Sv/h)	125.4	125.4	125.2	125.1	125.0	124.9	124.7	124.7	124.6	124.3	123.9	124.0	123.8	123.7	123.5	123.4	123.2	123.3	123.1	123.0	123.0	122.8	122.8	122.6
	neutron	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D
Car	SMOB(mSv/h)*1	1,300	—	—	1,310	—	—	1,290	—	—	1,250	—	—	1,250	—	—	1,280	—	—	1,260	—	—	1,290	—	—
	MG(μ Sv/h)*2	195	—	—	192	—	—	192	—	—	191	—	—	188	—	—	191	—	—	191	—	—	188	—	—
	WG(μ Sv/h)*3	88.7	—	—	87.1	—	—	87	—	—	86.9	—	—	87.2	—	—	86.9	—	—	85.4	—	—	85.4	—	—
wind direction		SSE	SE	E	E	E	ESE	E	SE	SW	S	ESE	NW	S	ESE	E	S	E	E	S	SE	SE	E	S	SSW
wind speed (m/s)		2.8	3.0	4.3	2.4	3.5	3.8	3.1	3.0	2.4	2.1	2.0	3.2	2.7	2.3	3.4	3.2	2.3	2.4	2.1	2.0	2.1	1.8	1.9	1.3

*1: SMOB : South Side of Main Office Building
*2: MG: Main Gate
*3: WG:West Gate

Monitoring points		③																							
Reading time		16:00	16:10	16:20	16:30	16:40	16:50	17:00	17:10	17:20	17:30	17:40	17:50	18:00	18:10	18:20	18:30	18:40	18:50	19:00	19:10	19:20	19:30	19:40	19:50
MC	Reading(μ Sv/h)	122.7	122.5	122.5	122.5	122.4	122.2	121.9	122.0	121.9	121.8	121.8	121.7	121.6	121.6	121.7	121.4	120.8	120.8	120.7	120.6	120.4	120.4	120.5	120.4
	neutron	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D
Car	SMOB(mSv/h)*1	1,280	—	—	1,300	—	—	1,240	—	—	1,230	—	—	1,210	—	—	1,230	—	—	1,190	—	—	1,180	—	—
	MG(μ Sv/h)*2	188	—	—	186	—	—	188	—	—	189	—	—	186	—	—	185	—	—	183	—	—	184	—	—
	WG(μ Sv/h)*3	84.1	—	—	85.5	—	—	84.6	—	—	83.7	—	—	82.4	—	—	83.9	—	—	84	—	—	85	—	—
wind direction		E	E	SSE	S	ESE	E	SSE	ESE	SE	E	SW	SSW	WSW	SW	SSE	N	S	NW	WSW	SW	SW	NW	NW	WSW
wind speed (m/s)		1.7	1.9	2.3	1.3	1.6	1.2	1.9	0.9	1.2	0.8	0.6	0.6	0.5	0.4	0.3	0.5	0.3	0.6	0.5	0.4	0.7	0.6	0.5	0.7

Monitoring points		③																							
Reading time		20:00	20:10	20:20	20:30	20:40	20:50	21:00	21:10	21:20	21:30	21:40	21:50	22:00	22:10	22:20	22:30	22:40	22:50	23:00	23:10	23:20	23:30	23:40	23:50
MC	Reading(μ Sv/h)	120.4	120.3	120.0	120.1	118.6	120.0	120.0	119.9	120.0	119.9	118.1	119.7	119.6	118.1	119.6	118.0	117.8	118.0	117.8	117.9	117.8	117.6	117.8	117.7
	neutron	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D
Car	SMOB(mSv/h)*1	1,180	—	—	1,170	—	—	1,170	—	—	1,160	—	—	1,160	—	—	1,160	—	—	1,150	—	—	1,150	—	—
	MG(μ Sv/h)*2	183	—	—	185	—	—	183	—	—	182	—	—	182	—	—	181	—	—	180	—	—	181	—	—
	WG(μ Sv/h)*3	84.4	—	—	85	—	—	85.4	—	—	84.7	—	—	85.4	—	—	85.5	—	—	85.5	—	—	83.7	—	—
wind direction		NW	N	W	WNW	SW	W	WSW	NW	WSW	WSW	WNW	WNW	WSW	W	WNW	W	WSW	W	WNW	WNW	WSW	SSW	W	NW
wind speed (m/s)		0.7	0.4	0.6	0.7	0.8	1.0	0.9	0.8	0.8	1.1	1.1	1.0	0.8	1.3	1.1	0.8	0.9	0.8	0.8	0.9	0.9	0.7	0.4	0.5

Dose Rate in the Fukushima Dai-ichi NPS

(Measured by monitoring car)

$\mu\text{Sv/h}$

6000.0

5000.0

4000.0

3000.0

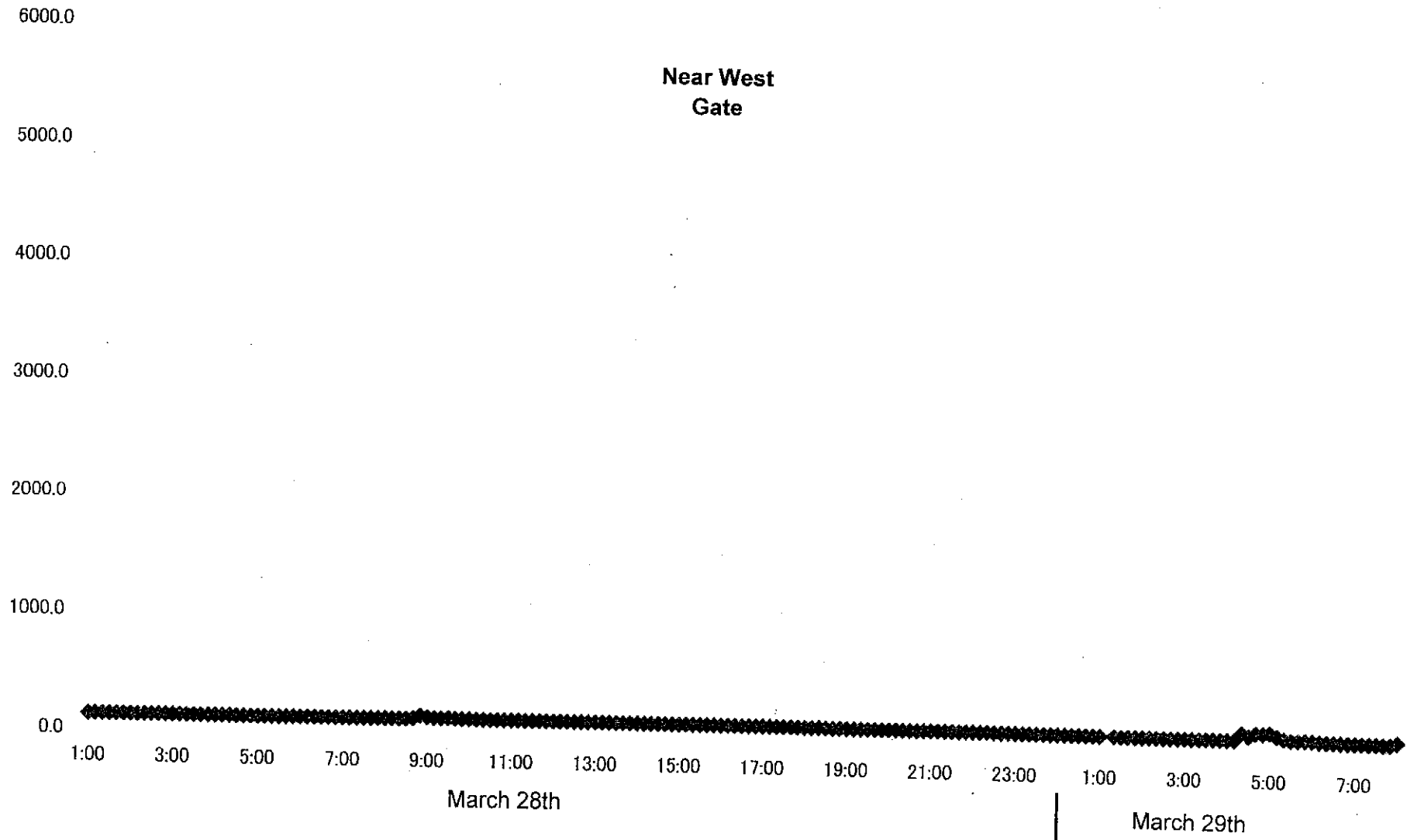
2000.0

1000.0

0.0

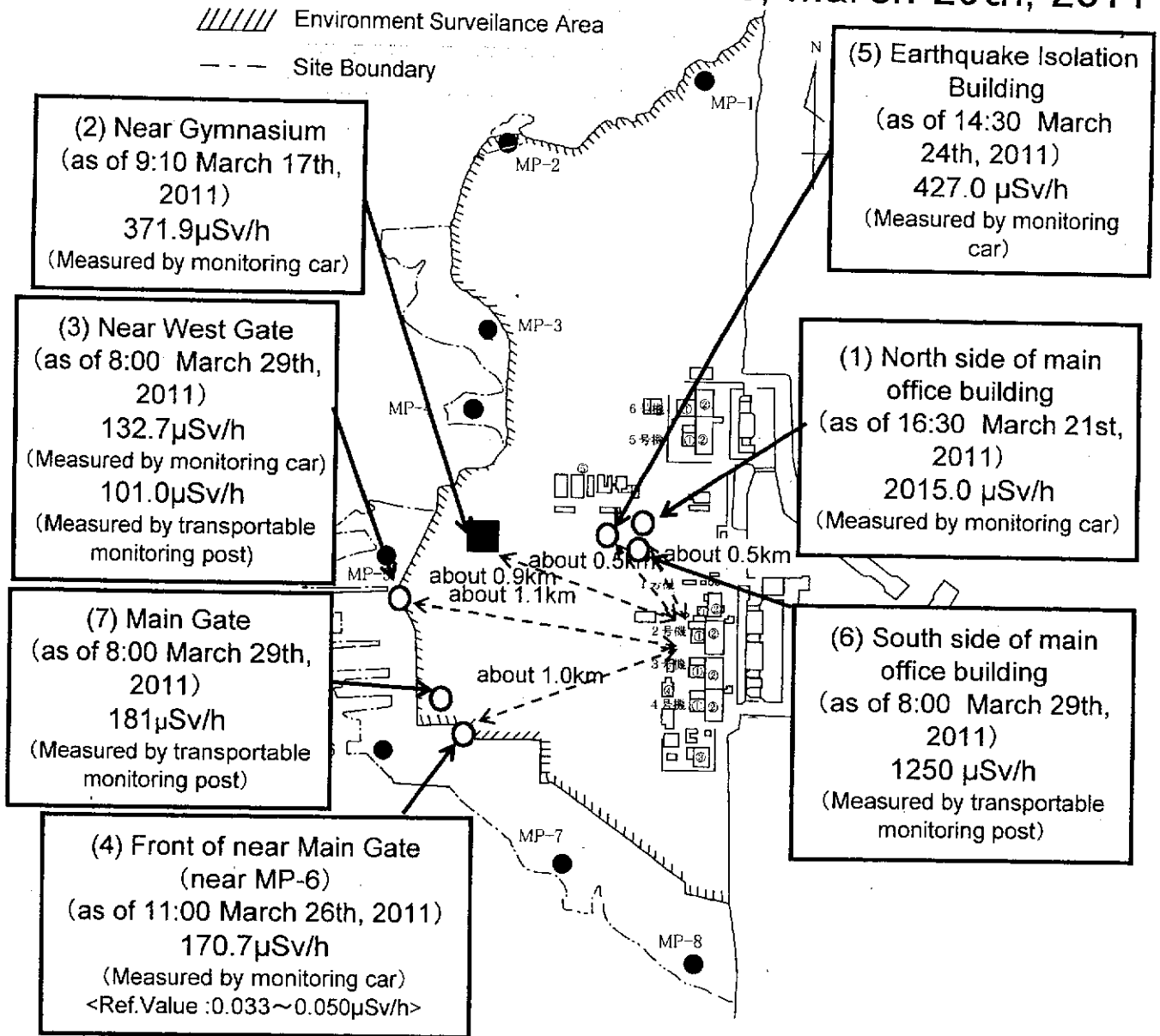
Near West
Gate

1:00 3:00 5:00 7:00 9:00 11:00 13:00 15:00 17:00 19:00 21:00 23:00 1:00 3:00 5:00 7:00
March 28th March 29th



Fukushima Dai-ichi NPS

as of 10:00, March 29th, 2011



Fukushima Dai-ri (TEPCO's Monitoring Post)

March 28th, 2011		12:00	12:10	12:20	12:30	12:40	12:50	13:00	13:10	13:20	13:30	13:40	13:50	14:00	14:10	14:20	14:30	14:40	14:50	15:00	15:10	15:20	15:30	15:40	15:50	
monitoring point																										
MP1 (μSv/h)		9.080	9.073	9.070	9.053	9.043	9.053	9.010	9.043	9.033	9.053	9.030	9.017	9.000	9.017	9.027	8.980	9.003	8.993	8.997	8.973	8.980	8.933	8.940	8.997	
MP2 (μSv/h)		4.850	4.850	4.860	4.843	4.827	4.827	4.830	4.810	4.847	4.823	4.823	4.827	4.823	4.807	4.770	4.827	4.810	4.787	4.810	4.807	4.793	4.787	4.783	4.807	
MP3 (μSv/h)		8.570	8.573	8.573	8.573	8.530	8.543	8.540	8.527	8.543	8.537	8.510	8.473	8.510	8.513	8.500	8.490	8.477	8.483	8.493	8.483	8.483	8.470	8.440	8.443	
MP4 (μSv/h)		6.490	6.500	6.480	6.477	6.477	6.467	6.450	6.473	6.427	6.473	6.420	6.483	6.440	6.410	6.410	6.450	6.443	6.413	6.417	6.423	6.397	6.337	6.373	6.400	
MP5 (μSv/h)		5.887	5.900	5.893	5.893	5.887	5.887	5.893	5.893	5.893	5.887	5.893	5.893	5.893	5.893	5.893	5.893	5.893	5.833	5.893	5.853	5.493	5.833	5.893	5.847	
MP6 (μSv/h)		7.110	7.113	7.097	7.097	7.067	7.090	7.077	7.063	7.080	7.087	7.073	7.087	7.080	7.063	7.077	7.063	7.067	7.067	7.030	7.080	7.053	7.027	7.010	7.017	
MP7 (μSv/h)		N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	
wind direction		SSE	SSE	SSE	SSE	SSE	SE	ESE	SE	SE	SE	SE	SE	SE	ESE	E	ESE	E	E	SSE	SE	ENE	ENE	ENE	N	
wind speed (m/s)		5.7	4.7	6.1	5.2	4.1	3.9	3.7	3.8	2.5	2.9	2.7	2.9	3.3	2.3	1.9	2.1	3.6	2.9	2.5	1.9	2.3	2.2	1.7	0.2	

March 28th, 2011		16:00	16:10	16:20	16:30	16:40	16:50	17:00	17:10	17:20	17:30	17:40	17:50	18:00	18:10	18:20	18:30	18:40	18:50	19:00	19:10	19:20	19:30	19:40	19:50
monitoring point																									
MP1 (μSv/h)		8.950	8.933	8.907	8.913	8.913	8.937	8.917	8.917	8.890	8.893	8.867	8.867	8.863	8.843	8.873	8.867	8.847	8.847	8.863	8.837	8.833	8.817	8.817	8.840
MP2 (μSv/h)		4.773	4.787	4.800	4.733	4.773	4.790	4.767	4.760	4.773	4.773	4.750	4.760	4.743	4.727	4.743	4.737	4.727	4.737	4.727	4.713	4.727	4.710	4.733	4.710
MP3 (μSv/h)		8.443	8.440	8.477	8.427	8.410	8.450	8.403	8.400	8.403	8.390	8.407	8.377	8.383	8.373	8.370	8.380	8.360	8.373	8.370	8.333	8.343	8.330	8.347	8.320
MP4 (μSv/h)		6.420	6.387	6.363	6.370	6.367	6.363	6.363	6.377	6.353	6.363	6.353	6.323	6.333	6.363	6.340	6.313	6.323	6.330	6.310	6.323	6.317	6.337	6.307	6.337
MP5 (μSv/h)		5.840	5.793	5.833	5.793	5.793	5.793	5.787	5.787	5.787	5.787	5.787	5.787	5.793	5.793	5.793	5.793	5.787	5.787	5.793	5.760	5.787	5.793	5.747	5.747
MP6 (μSv/h)		7.050	7.033	7.020	6.990	7.033	6.997	6.997	7.017	6.983	6.970	6.990	6.990	6.970	6.947	6.977	6.987	6.957	6.970	6.953	6.977	6.967	6.960	6.940	6.937
MP7 (μSv/h)		N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D
wind direction		S	NNW	SSW	S	SSW	SSW	SSE	SE	E	ESE	SSW	S	S	S	S	S	S	S	N.D	N.D	N.D	N.D	N.D	N.D
wind speed (m/s)		1.1	0.0	1.4	0.6	1.6	1.7	2.1	2.3	0.9	0.5	1.6	0.8	1.5	1.7	2.4	1.1	1.5	1.3	2.2	2.2	2.0	3.1	2.9	2.9

March 28th, 2011		20:00	20:10	20:20	20:30	20:40	20:50	21:00	21:10	21:20	21:30	21:40	21:50	22:00	22:10	22:20	22:30	22:40	22:50	23:00	23:10	23:20	23:30	23:40	23:50
monitoring point																									
MP1 (μSv/h)		8.800	8.787	8.763	8.823	8.790	8.747	8.753	8.780	8.783	8.770	8.770	8.747	8.763	8.743	8.740	8.743	8.713	8.720	8.707	8.697	8.727	8.703	8.703	8.687
MP2 (μSv/h)		4.723	4.703	4.690	4.683	4.700	4.687	4.693	4.687	4.677	4.687	4.680	4.663	4.680	4.673	4.653	4.663	4.663	4.667	4.673	4.673	4.667	4.653	4.653	4.647
MP3 (μSv/h)		8.343	8.340	8.340	8.333	8.240	8.343	8.257	8.323	8.277	8.300	8.300	8.283	8.233	8.300	8.273	8.280	8.257	8.260	8.250	8.203	8.267	8.240	8.213	8.193
MP4 (μSv/h)		6.323	6.310	6.303	6.293	6.300	6.283	6.280	6.267	6.273	6.287	6.287	6.267	6.243	6.263	6.257	6.267	6.273	6.243	6.250	6.247	6.210	6.230	6.233	6.243
MP5 (μSv/h)		5.760	5.793	5.787	5.787	5.787	5.747	5.733	5.693	5.693	5.747	5.693	5.733	5.693	5.963	5.963	5.693	5.687	5.693	5.693	5.693	5.693	5.693	5.687	5.693
MP6 (μSv/h)		6.903	6.937	6.917	6.930	6.903	6.890	6.917	6.923	6.920	6.920	6.920	6.900	6.917	6.900	6.880	6.863	6.867	6.877	6.860	6.877	6.863	6.843	6.850	6.867
MP7 (μSv/h)		N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D
wind direction		S	SSW	SSW	SSW	S	W	WNW	WNW	WNW	WNW	SSW	W	W	WSW	WSW	WSW	WSW	WSW	W	W	WNW	WNW	NW	WNW
wind speed (m/s)		3.0	1.9	1.8	2.2	1.4	1.9	1.6	1.8	2.5	1.1	1.1	1.5	2.3	4.2	6.2	3.2	3.6	3.1	4.1	3.9	3.9	4.8	5.4	5.2

Fukushima Dai-ri NPS

as of 10:00, March 29th, 2011

MP1 : 8.650 μ Sv/h (as of 8:00 March 29th)
(Ref. Value: 0.035~0.054 μ Sv/h)

MP2 : 4.653 μ Sv/h (as of 8:00 March 29th)
(Ref. Value: 0.042~0.062 μ Sv/h)

MP3 : 8.193 μ Sv/h (as of 8:00 March 29th)
(Ref. Value: 0.036~0.052 μ Sv/h)

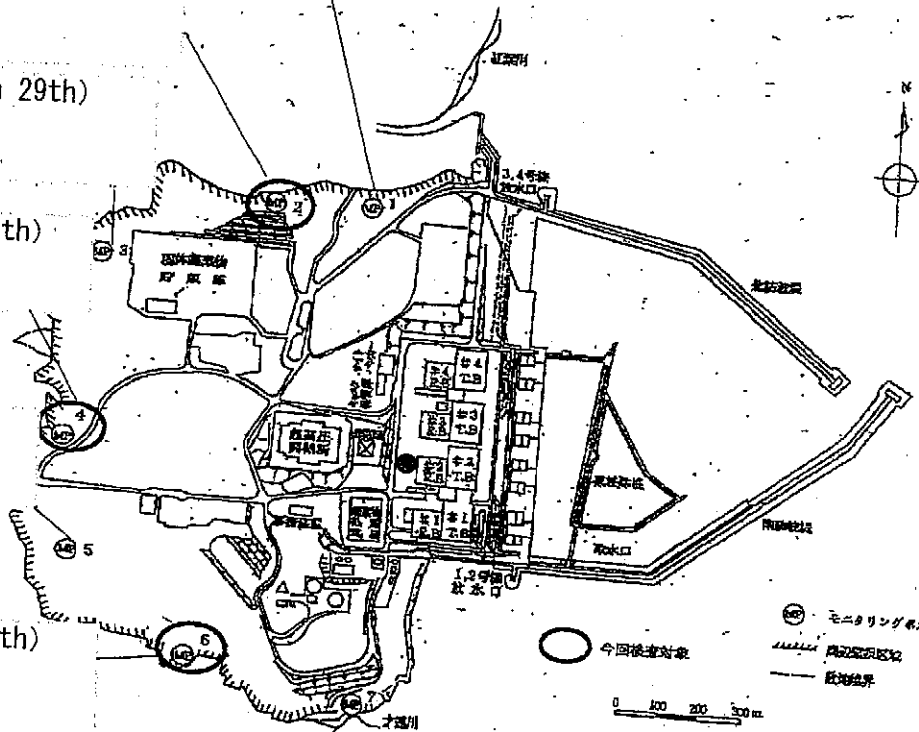
MP4 : 6.230 μ Sv/h (as of 8:00 March 29th)
(Ref. value: 0.036~0.052 μ Sv/h)

MP5 : 5.793 μ Sv/h (as of 8:00 March 29th)
(Ref. Value: 0.041~0.058 μ Sv/h)

MP6 : 6.823 μ Sv/h (as of 8:00 March 29th)
(Ref. value: 0.044~0.063 μ Sv/h)

MP7 : 3.870 μ Sv/h (as of 12:00 March 28th)
(Ref. Value: 0.043~0.062 μ Sv/h)

Location of Monitoring Post



添付資料 (2)

Results of environmental monitoring at each NPSs etc.

Range of normal average value	Company	NPS	March 28th, 2011												
			0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	
0.023~0.027	Hokkaido Electric Power Co.	Tomari NPS	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.024	0.024	0.024	
0.024~0.060	Tohoku Electric Power Co.	Onagawa NPS	0.74	0.74	0.73	0.73	0.73	0.73	0.72	0.72	0.72	0.71	0.71		
0.012~0.060		Higashidori NPS	0.016	0.017	0.018	0.017	0.018	0.018	0.017	0.017	0.017	0.017	0.017		
0.033~0.050	Tokyo Electric Power Co.	Fukushima Dai-ichi*	128.0	127.5	127.1	126.7	126.2	125.7	125.8	125.1	124.9	140.4	128.1		
0.036~0.052		Fukushima Dai-ni	8.963	8.930	8.910	8.837	8.817	8.787	8.777	8.777	8.710	8.660	8.613		
0.011~0.159		Kashiwazaki kariwa NPS	0.064	0.064	0.065	0.065	0.065	0.065	0.065	0.065	0.064	0.064	0.064		
0.036~0.053	Japan Atomic Power Co.	Tokai Dai-ni NPS	0.740	0.736	0.739	0.731	0.733	0.723	0.729	0.726	0.723	0.718	0.723		
0.039~0.110		Tsuruga NPS	0.073	0.073	0.072	0.073	0.072	0.073	0.073	0.072	0.072	0.072	0.072		
0.064~0.108	Chubu Electric Power Co.	Hamaoka NPS	0.077	0.078	0.077	0.077	0.077	0.077	0.077	0.075	0.074	0.072	0.073		
0.0207~0.132	Hokuriku Electric Power Co.	Shika NPS	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032		
0.028~0.130	Chugoku Electric Power Co.	Shimane NPS	0.031	0.031	0.029	0.029	0.030	0.030	0.030	0.030	0.030	0.030	0.030		
0.070~0.077		Mihama NPS	0.073	0.071	0.071	0.072	0.072	0.072	0.071	0.072	0.072	0.073	0.073		
0.045~0.047	Kansai Electric Power Co.	Takahama NPS	0.042	0.042	0.041	0.042	0.041	0.042	0.042	0.042	0.042	0.043	0.043		
0.036~0.040		Ooi NPS	0.036	0.036	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037		
0.011~0.080	Shikoku Electric Power Co.	Ikata NPS	0.014	0.015	0.014	0.015	0.014	0.015	0.015	0.015	0.014	0.014	0.014		
0.023~0.087	Kyushu Electric Power Co.	Genkai NPS	0.026	0.027	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026		
0.034~0.120		Sendai NPS	0.037	0.038	0.042	0.038	0.038	0.037	0.037	0.038	0.037	0.037	0.037		
0.009~0.069	Japan Nuclear Fuel Limited	Japan Nuclear Fuel Reprocessing Plant	0.016	0.016	0.016	0.017	0.016	0.016	0.016	0.016	0.016	0.016	0.016		
0.009~0.071		Japan Nuclear Fuel Plant Disposal	0.020	0.020	0.020	0.020	0.020	0.020	0.021	0.020	0.020	0.020	0.020		

*There could be small deviation on the monitoring time and area because of operational situation concerning with data of Fukushima Dai-ichi NPS

Range of normal average value	Company	NPS	March 28th, 2011											
			12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
0.023~0.027	Hokkaido Electric Power Co.	Tomari NPS	0.025	0.024	0.024	0.024	0.024	0.024	0.023	0.023	0.024	0.024	0.023	0.024
0.024~0.060	Tohoku Electric Power Co.	Onagawa NPS	0.70	0.69	0.69	0.69	0.68	0.68	0.68	0.68	0.68	0.68	0.68	
0.012~0.060		Higashidori NPS	0.018	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	
0.033~0.050	Tokyo Electric Power Co.	Fukushima Dai-ichi*	125.4	124.7	123.8	123.1	122.7	121.9	121.6	120.7	120.4	120.0	120.0	
0.036~0.052		Fukushima Dai-ni	8.570	8.540	8.510	8.493	8.443	8.400	8.383	8.370	8.343	8.257	8.257	
0.011~0.159		Kashiwazaki kariwa NPS	0.064	0.065	0.065	0.064	0.064	0.064	0.064	0.066	0.065	0.065	0.065	
0.036~0.053	Japan Atomic Power Co.	Tokai Dai-ni NPS	0.717	0.717	0.717	0.709	0.708	0.708	0.708	0.706	0.701	0.698	0.697	
0.039~0.110		Tsuruga NPS	0.072	0.073	0.073	0.072	0.073	0.072	0.073	0.073	0.073	0.072	0.072	
0.064~0.108	Chubu Electric Power Co.	Hamaoka NPS	0.076	0.076	0.076	0.076	0.076	0.076	0.076	0.076	0.076	0.076	0.076	
0.0207~0.132	Hokuriku Electric Power Co.	Shika NPS	0.032	0.031	0.033	0.033	0.032	0.033	0.033	0.033	0.033	0.033	0.033	
0.028~0.130	Chugoku Electric Power Co.	Shimane NPS	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030	
0.070~0.077		Mihama NPS	0.072	0.073	0.071	0.072	0.071	0.071	0.071	0.072	0.073	0.073	0.073	
0.045~0.047	Kansai Electric Power Co.	Takahama NPS	0.042	0.042	0.042	0.043	0.043	0.043	0.042	0.042	0.042	0.042	0.042	
0.036~0.040		Ooi NPS	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	
0.011~0.080	Shikoku Electric Power Co.	Ikata NPS	0.014	0.015	0.014	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	
0.023~0.087	Kyushu Electric Power Co.	Genkai NPS	0.026	0.026	0.027	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	
0.034~0.120		Sendai NPS	0.038	0.040	0.037	0.038	0.036	0.035	0.035	0.036	0.037	0.037	0.037	
0.009~0.069	Japan Nuclear Fuel Limited	Japan Nuclear Fuel Reprocessing Plant	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	
0.009~0.071		Japan Nuclear Fuel Plant Disposal	0.020	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	

*There could be small deviation on the monitoring time and area because of operational situation concerning with data of Fukushima Dai-ichi NPS