

Power Supply Facilities Failure at Fukushima Daiichi Nuclear Power Station (As of 10:00 AM on March 20)

< Reference >
March 20, 2013

Tokyo Electric Power Company

At around 6:57 PM on March 18, 2013, there was an incident where the power supply facilities in the Main Anti-earthquake Building at Fukushima Daiichi Nuclear Power Station momentarily stopped. Upon investigation, the regular M/C (Metal-clad switch gear) in the Process Building, common M/C4A and Units 3-4 temporary M/C (A) were found to be stopped due to the incident.

Affected (suspended) facilities [The facilities indicated in blue are back in operation]

- Cesium adsorption apparatus (Kurion) of the water treatment facility: Started at 12:01 PM on March 19 and the steady flow rate achieved at 12:17 PM.
- Unit 3 spent fuel pool alternative cooling system (Primary and secondary systems): Recovered at 10:43 PM on March 19.
- Unit 4 spent fuel pool alternative cooling system (Primary and secondary systems):
Temporarily recovered at 4:13 PM on March 19 (Temporarily recovered by power supplied from a diesel generator). Suspended at 6:48 PM. Recovered at 10:26 PM on March 19 (Recovered by power supplied from the regular M/C in the Process Building).
- Unit 3 PCV gas control system (A system): In-service at 5:00 PM on March 19.
- Common pool cooling purification system: Recovered at 12:12 AM on March 20.

The following two facilities were found to be suspended though not due to the M/C main line being suspended.

- Unit 1 spent fuel pool alternative cooling system (Secondary system)*¹: Recovered at 2:20 PM on March 19.
- Nitrogen separator (B)*² (Has been recovered): Recovered at 3:00 AM on March 19.

*¹ The primary system of Unit 1 spent fuel pool alternative cooling system was manually stopped at 9:10 PM for the purpose of protecting the pumps of the system.

*² No impact on nitrogen injection at Units 1-3 as the nitrogen separator (A) has been in operation.

Facilities not affected

- Units 1-3 reactor water injection systems
- Unit 2 spent fuel pool alternative cooling system
- Units 1-3 PCV gas control systems (being monitored)
- Monitoring posts

Status of investigation/recovery

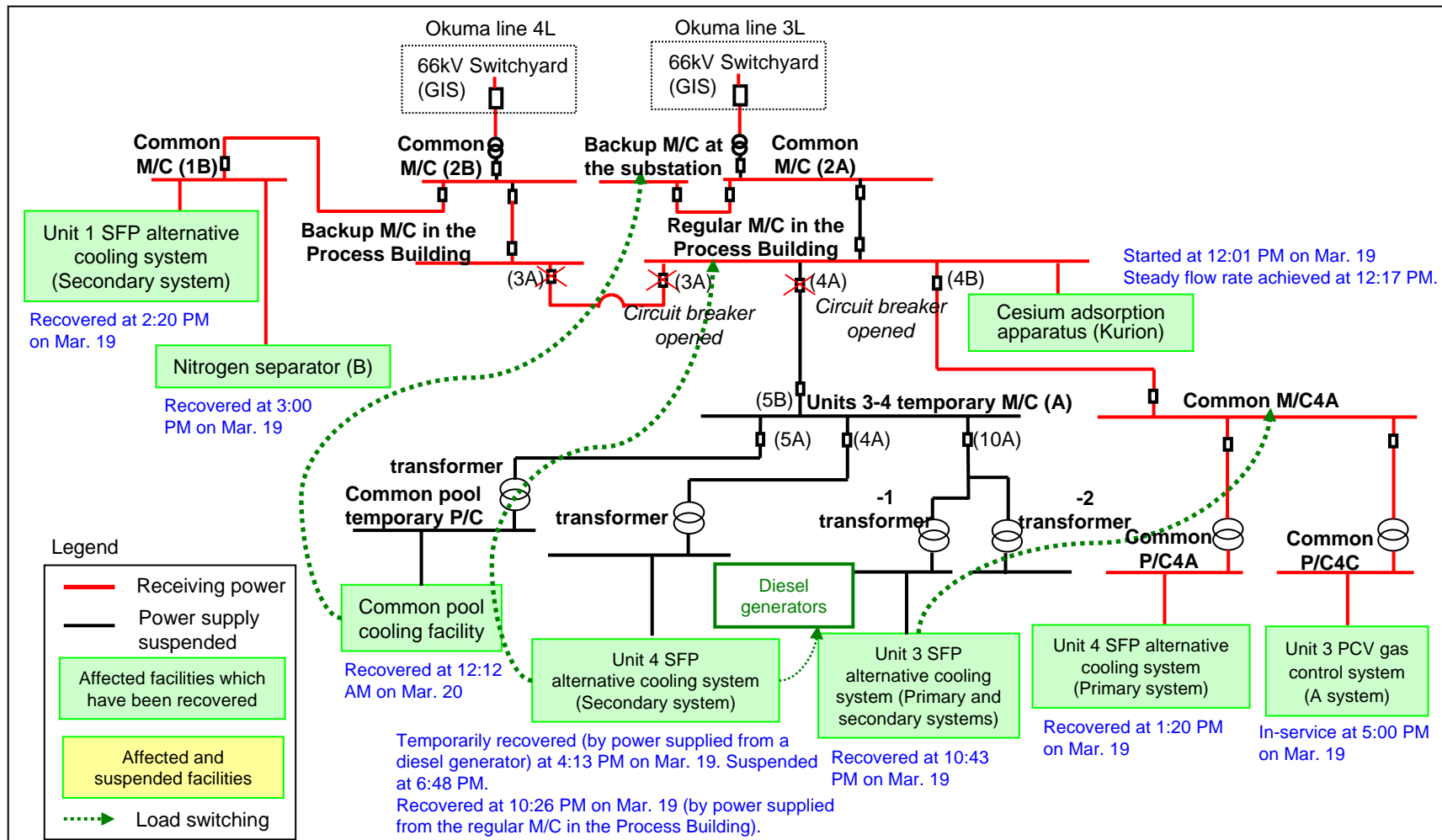
- The facilities above have been recovered (At 12:12 AM on March 20, the common pool cooling purification system was started).
- Investigation of the cause has been started today (March 20).

Affected facilities	Power supply
Cesium adsorption apparatus (Kurion)	Regular M/C in the Process Building
Unit 1 spent fuel pool alternative cooling system (Secondary system)	Common M/C 1B
Unit 3 spent fuel pool alternative cooling system (Primary system)	Units 3-4 temporary M/C (A)
Unit 3 spent fuel pool alternative cooling system (Secondary system)	Units 3-4 temporary M/C (A)
Unit 4 spent fuel pool alternative cooling system (Primary system)	Common M/C 4A
Unit 4 spent fuel pool alternative cooling system (Secondary system)	Units 3-4 temporary M/C (A)
Common pool cooling facility	Units 3-4 temporary M/C (A)
Unit 3 PCV gas control system (A system)	Common M/C 4A
Nitrogen separator (B)	Common M/C 1B

[Changes which have been made]

1. The power receiving status of the facility connected to the common M/C (1B) (red line and black line) has been corrected. (Change has been incorporated into the document released earlier.)
2. Unit 3 PCV gas control system (A system) is connected to the common P/C4C (not the common M/C (1A)).
3. The load switching for the common pool cooling facility has been changed to the backup M/C at the substation from the common D/G (A) M/C or the common D/G (B) M/C after careful consideration.

Power supply structure of the affected facilities



Data Related to the Spent Fuel Pool and Common Pool Temperatures

	Spent fuel pool water temperature before cooling was suspended (As of 4:00 PM on March 18)	Spent fuel pool water temperature after cooling was restarted (As of March 19 and 20)		Current spent fuel pool water temperature (As of 5:00 AM on March 20)
Unit 1	16	17.0		17.5
Unit 3	13.7	17.0		17.7
Unit 4	25	(Temporarily recovered) 30	(Recovered) 31	31
Common pool	25.2	31.8		31.3