Fukushima Daiichi Nuclear Power Station Plant Parameters

[Note]

Some indicators might not be functioning properly beyond the normal condition for usage affected by the earthquake and subsequent events. We comprehensively evaluate situation in plants using all the available information from indicators and also focusing on trends, taking uncertainty of indicators into consideration.

| As of | 12:00 | D on S | Septem | ber 4 | 4 | |
|-------|-------|--------|--------|-------|---|--|
| | | | | | | |

| Unit | Unit 1 | Unit 2 | Unit 3 | Unit 4 | Unit 5 | Unit 6 | |
|---|---|---|--|---|---|---|--|
| Status of water injection to the reactor | Fresh water feeding Feed water system 3.8m ³ /h (as of 11:00 , 9/4) | Fresh water feeding Feed water system 3.8m ³ /h (as of 11:00 , 9/4) | Fresh water feeding Feed water system 7.0m ³ /h, CS line 3.0m ³ /h (as of 11:00 , 9/4) | | %2 (Heat removal of the react injection is unnecessary) | or is functioning. Water | |
| Water level in the reactor | Fuel range A: Downscale Fuel range B:-1700 mm X3 (as of 11:00 , 9/4) | Fuel range A:-1900 mm %3 Fuel range B:-2200 mm %3 (as of 11:00 , 9/4) | Fuel range A:-2650 mm %3 Fuel range B:-2250 mm %3 (as of 11:00, 9/4) %3 | | Stoppage range 1877mm (as of 12:00 , 9/4) | Stoppage range 2146mm (as of 12:00 , 9/4) | |
| Pressure in the reactor | System A'0.016 MPa g System B'-MPa g (as of 11:00 , 9/4) | System A:0.014 MPa g System B:-MPa g (as of 11:00 , 9/4) | System A:-0.187 MPa g (A) %3 System B:-0.100 MPa g (C) %3 (as of 11:00 , 9/4) (C) %3 | | 0.007 MPa g (as of 12:00 , 9/4) | 0.021 MPa g (as of 12:00 , 9/4) | |
| Water temperature of the reactor | (Since there is no water inflow in the system it is impossible to collect the data) | | | | 24.4 °C (as of 12:00 , 9/4) | 31.9 °C (as of 12:00 , 9/4) | |
| Temperature around the reactor vessel | Temperature in feed-water nozzle:90.0 °C Temperature at reactor vessel bottom:85.3 °C (as of 11:00 , 9/4) | Temperature in feed-water nozzle:106.8 °C Temperature in feed-water nozzle:110.5 °C Temperature at reactor vessel bottom:113.0 °C Temperature at reactor vessel bottom:101.4 °C (as of 11:00, 9/4) (as of 11:00, 9/4) | | | %2 (monitoring through water temperature of the reactor) | | |
| Pressure in D/W · S/C | <mark>D/₩0.1238 MPa abs*</mark> S/C:0.105 MPa abs (as of 11:00 , 9/4) | D/W:0.115 MPa abs S/C: Downscale | D/W:0.1015 MPa abs S/C:0.1836 MPa abs (as of 11:00 , 9/4) | takeoff) | | | |
| D/W Atmosphere temperature | RPV beilow seal:85,2 °C HVH return:87,1 °C (as of 11:00 , 9/4) | RPV bellow seal:122°C %3 HVH return:125°C (as of 11:00 , 9/4) | RPV bellow seal:113.1 °C & & & & & & & & & & & & & & & & & & | | *2 | 2 | |
| CAMS radiation monitor | D/W(A):0.00E+00Sv/h | D/W(A):1.03E+01Sv/h (B):5.46E+00Sv/h %1 S/C(A):1.15E-01Sv/h (B):5.35E+00Sv/h %1 (as of 11:00 , 9/4) | D/W(A):3.50E+00Sv/h %3 (B):2.48E+00Sv/h S/C(A):3.11E-01Sv/h (B):2.95E-01Sv/h (as of 11:00 , 9/4) | | Monitoring is unnecessary since heat removal of actor is functioning.) | | |
| Temperature in S/C | System A:45.6 °C System B:45.3 °C (as of 11:00 , 9/4) | System A:46.6 °C System B:46.5 °C (as of 11:00 , 9/4) | System A:44.8 °C System B:45.0 °C (as of 11:00 , 9/4) | | | | |
| Designed usable D/W pressure | 0.384MPa g (0.485MPa abs) | 0.384MPa g (0.485MPa abs) | 0.384MPa g (0.485MPa abs) | | | | |
| Designed usable D/W maximum pressure | 0.427MPa g (0.528MPa abs) | 0.427MPa g (0.528MPa abs) | 0.427MPa g (0.528MPa abs) | _ | - | = | |
| Temperature in the spent fuel pool | 30.0 ℃ (as of 11:00 , 9/4) | 35.0°C (as of 11:00 , 9/4) | 32.9 °C (as of 11:00 , 9/4) | 40℃ (as of 11:00 , 9/4) | 28.6 °C (as of 12:00 , 9/4) | 36.0 ℃ (as of 12:00 , 9/4) | |
| FPC skimmer surge tank level | 1620mm 2550mm (as of 11:00, 9/4) (as of 11:00, 9/4) | | 4510mm (as of 11:00 , 9/4) | 5400mm (as of 11:00 , 9/4) | * | 2 | |
| Power source | Receiving offsite power (P/C2C) | | Receiving offsite power (P/C4D) | | Receiving offsite power | | |
| Others | * Data of Pressure in D/W of Unit 1 on 11/29 was corre | acted because it was incorrect. | | Temperature in the Common Spent Fuel Storage: 32°C (as of 6:40 , 9/4) | 5u: SHC mode (from 10:43 ,8/8) | 6u: Non-thermal mode (from 10:11 ,9/4) | |
| Pressure conversion Gauge pressure(MPa g) = Absolute pressure(MPa abs) - atmospheric pressure (normal atmospheric pressure0.1013 MPa) Absolute pressure(MPa abs) = Gauge pressure(MPa g) + atmospheric pressure (normal atmospheric pressure0.1013 MPa) | | | | | | | |

Fukushima Daiichi Nuclear Power Station Supplemental explanation for the plant parameters

■Supplemental explanation for each parameter

| ltem | Recording manner | Measurement manner | Ch number or number of systems |
|--|--|--|--|
| Status of water injection to the reactor | Water inflow (CS line : Core Spray system) | Temporary | System 1 / 1 |
| Water level in the reactors | Data measured by the water gauge, which monitor the fuel range | Main indicator | System A 1∕1Ch System B 1∕1Ch |
| Pressure in the reactor | Measure voltage value of pressure instrument by the main indicator panel and convert to the pressure. One representing value is noted among multiple data on each System A, B. | Unit 1/2 Temporary Unit 3 Measures voltage value through the main indicator panel and converts them to the pressure | Temporary indicator: 1/1 system Main:System A 1/2Ch System B 1/2Ch |
| Temperature in the reactor | Since there is no water inflow at the points, where thermometers are set, no data is collected. | - | - |
| Temperature around the reactor vessel | Data measured at feed-water nozzle and at reactor vessel bottom (1U、3U:RPV Bottom Head、2U:RPV Wall Above Bottom Head) are noted among multiple data to view the whole picture. | Main recorder | Point of Feed-water nozzle 1/4Ch reactor vessel bottom 1/2Ch (Unit1) 1/1Ch (Unit2/3) |
| Pressure in D/W • S/C | Data from main instrument. Measure voltage value by the main instrument panel converted to the pressure in case main instruments are not in function. As to the D/W pressure of Unit2, the reading of the temporary indicator is described. (D/W : Dry Well, S/C : Suppression Chamber) | (D/W) Unit 1:Main recorder Unit 2:Temporary Unit 3:Main instrument panel (converted from voltage) (S/C) Unit 1/2:Main indicator Unit 3 :Main instrument panel (converted from voltage) | (D/W) Main recorder wide range 1 /1Ch (Unit 1) Temporary indicator: 1 / 1 system (Unit 2) Main instrument panel 1 /4Ch (Unit 3) (S/C) Main indicator 1 /1system (Unit 1/2) Main instrument panel 1 /2Ch (Unit 3) |
| D/W Atmosphere temperature | Data at upper point (RPV Bellows Air) and middle point (HVH return) are noted among multiple data to view the whole picture, (RPV : Reactor Pressure Vessel, HVH : Heating Ventilating Handling Unit) | Main recorder | RPV Beilows Air 1 / 5Ch D/W HVH return 1 / 5Ch |
| CAMS radiation monitor | Data from the instrument reading of main indicator. (CAMS : Containment Atmospheric Monitoring System) | Main indicator | D/W System A 1 / 1 Ch System B 1 / 1 Ch S/C System A 1 / 1 Ch System B 1 / 1 Ch |
| Temperature in S/C | Data from the instrument reading of main recorder. One representing value is noted among multiple data on each System A, B. | Main recorder | System A1/4Ch(Unit 1)、8Ch(Unit 2/3) System B1/4Ch(Unit 1)、8Ch(Unit 2/3) |
| Temperature in the spent fuel pool | Data from the instrument reading or from the measurement reading of samples of main indicator and temporary insuturment (Non-thermal mode : Urgent Heat load Mode、SHC mode : Shut down Cooling Mode) | Unit:2Main recorder Unit1/3/4:Temporary indicator | Main:1/1Ch (Unit 2) Temporary indicator: 1/1 system (Unit 1/3/4) |
| FPC skimmer surge tank level | Unit2, 4 are the FPC skimmer surge tank level measured main indicator. Unit1, 3 are the FPC skimmer surge tank level estimated from temporary pressure gages.(reference value) (FPC : Fuel Pool Cooling system) | Unit2/4:Main indicator Unit1/3:Temporary instrument (Pressure gages) | Main indicator: 1/1system (Unit 2/4) Temporary instrument: 1/1system (Unit 1/3) |

■Supplemental explanation for notes

| ltem | Contents | Status As of 12:00 on September 4 |
|---------------------------------------|---|---|
| Instrument failure | Instrument failure : down of instrument reading (over) scale/failure of instrument | Unit 1 CAMS D/W radiation monitor Unit 2 Pressure in S/C, CAMS D/W(B) radiation monitor, CAMS S/C(B) radiation monitor Unit 3 $-$ |
| | Unit4: Monitoring is not implemented since all fuel are takeoff. Unit5/6: Monitoring is not implemented since heat removal of reactor is functioning | - |
| Continuously monitoring the status | Inaccurate Data defined from relation with other Parameters such as negative figure. | Unit 1 Reactor water level (B) Unit 2 Reactor water level, RPV bellow air temperature, Unit 3 Reactor water level, reactor pressure, RPV bellow air temperature, CAMS D/W(A) radiation monitor |