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 06:00 on August 16 1.1.1.1

| Unit   | Unit 1   | Unit 2  | Unit 3  | Unit 4  | Unit 5  | Unit 6  |
|--|--|---|---|---|---|---|
| Status of water<br>injection to the<br>reactor | Fresh water feeding<br>Feed water system 3.8m <sup>3</sup> /h<br>(as of 5:00 , 8/16)   | Fresh water feeding<br>Feed water system 3.8m <sup>3</sup> /h<br>(as of 5:00 , 8/16)                              | Fresh water feeding<br>Feed water system 9.0m <sup>3</sup> /h<br>(as of 5:00 , 8/16)                              |   | %2<br>(Heat removal of the reactor is functioning, Water<br>injection is unnecessary) |   |
| Water level in the reactor                     | Fuel range A: Downscale<br>Fuel range B:-1700 mm X3<br>(as of 5:00 , 8/16)   | Fuel range A:-1850 mm %3<br>Fuel range B:-2200 mm %3<br>(as of 5:00 , 8/16)                                       | Fuel range A:-1800 mm \$\$3   Fuel range B:-2200 mm \$\$3   (as of 5:00, 8/16) \$\$3                              |   | Stoppage range<br>1888mm<br>(as of 6:00 , 8/16)                                       | Stoppage range<br>2578mm<br>(as of 6:00 , 8/16) |
| Pressure in the reactor                        | System A'0.022 MPa g<br>System B'-MPa g<br>(as of 5:00 , 8/16)   | System A:0.019 MPa g<br>System B:-MPa g<br>(as of 5:00 , 8/16)  | System A:-0.187 MPa g (A) &<br>System B:-0.102 MPa g (C) &<br>(as of 5:00 , 8/16)                                 |   | 0.010 MPa g<br>(as of 6:00 , 8/16)  | 0.026 MPa g<br>(as of 6:00 , 8/16)              |
| later temperature of the reactor               | (Since there is no water inflow in the system it is impossible to collect the data)  |   |   |   | 25.8 °C<br>(as of 6:00 , 8/16)  | 27.4 °C<br>(as of 6:00 , 8/16)                  |
| Femperature around<br>the reactor vessel       | Temperature in feed-water nozzle:102.4 °C<br>Temperature at reactor vessel bottom:92.8 °C<br>(as of 5:00 , 8/16)   | Temperature in feed-water nozzle:108.1 °C<br>Temperature at reactor vessel bottom:114.4 °C<br>(as of 5:00 , 8/16) | Temperature in feed-water nozzle:106.9 °C<br>Temperature at reactor vessel bottom:103.4 °C<br>(as of 5:00 , 8/16) | *2<br>(Monitoring is<br>unnecessary<br>since all fuel are                         | %2 (monitoring through water temperature of the reactor)                              |   |
| Pressure in D/W · S/C                          | <mark>D/WO.1286 MPa abs*</mark><br>S/C:0.110 MPa abs<br>(as of 5:00 , 8/16)  | D/W:0.120 MPa abs<br>S/C: Downscale   | D/W:0.1015 MPa abs<br>S/C:0.1838 MPa abs<br>(as of 5:00 , 8/16)   | takeoff)  | %2<br>(Monitoring is unnecessary since heat removal of<br>reactor is functioning.)    |   |
| D/W Atmosphere<br>temperature                  | RPV bellow seal:92.6 °C<br>HVH return:94.2 °C<br>(as of 5:00 , 8/16)   | RPV bellow seal:90°C %3<br>HVH return:116°C<br>(as of 5:00 , 8/16)  | RPV bellow seal:119.6 °C 33<br>HVH return:110.2 °C (as of 5:00 , 8/16)  |   |   |   |
| CAMS radiation<br>monitor                      | D/W(A):0.00E+00Sv/h  | D/W(A):1.09E+01Sv/h<br>(B):4.61E+00Sv/h %1<br>S/C(A):1.37E-01Sv/h<br>(B):6.21E+00Sv/h %1<br>(as of 5:00 , 8/16)   | D/W(A):3.71E+00Sv/h & %3<br>(B):2.69E+00Sv/h<br>S/C(A):3.23E-01Sv/h<br>(B):3.05E-01Sv/h<br>(as of 5:00 , 8/16)    |   |   |   |
| Temperature in S/C                             | System A:46.0 °C<br>System B:45.8 °C<br>(as of 5:00 , 8/16)  | System A:48,3 °C<br>System B:48,2 °C<br>(as of 5:00 , 8/16)   | System A:45.6 °C<br>System B:45.8 °C<br>(as of 5:00 , 8/16)   |   |   |   |
| Designed usable D/W<br>pressure                | 0.384MPa g (0.485MPa abs)  | 0.384MPa g (0.485MPa abs)   | 0.384MPa g (0.485MPa abs)   |   | _   |   |
| Designed usable D/W<br>maximum pressure        | 0.427MPa g (0.528MPa abs)  | 0.427MPa g (0.528MPa abs)   | 0.427MPa g (0.528MPa abs)   | _   |   |   |
| Temperature in the<br>spent fuel pool          | 34.0°C<br>(as of 5:00 , 8/16)  | 37.0°C<br>(as of 5:00 , 8/16)   | 34.0 °C<br>(as of 5:00 , 8/16)  | 43°C<br>(as of 5:00 , 8/16)   | 28.5 °C<br>(as of 6:00 , 8/16)  | 34.5 °C<br>(as of 6:00 , 8/16)                  |
| FPC skimmer surge<br>tank level                | *1   | 1050mm<br>(as of 5:00 , 8/16)   | <b>%</b> 1  | 3050mm<br>(as of 5:00 ,<br>8/16)  | *   | 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 corrected because it was incorrect,  |   |   | Temperature in the<br>Common Spent<br>Fuel Storage:<br>36°C<br>(as of 6:30, 8/15) | 5u: SHC mode<br>(from 10:43 ,8/8)   | 6u: SHC mode<br>(from 19:16 ,8/15)              |
|  | sion Gauge pressure(MPa g) = Absolute pressure(MPa abs) - atmospheric pressure (normal atmospheric pressure0.1013 MPa)<br>bsolute pressure(MPa abs) = Gauge pressure(MPa g) + atmospheric pressure (normal atmospheric pressure0.1013 MPa)<br>\$\$\colored for colleting data<br>\$\$\colored 3 : continuously monitoring the status |   |   |   |   |   |

## 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<br>systems  |  |
|--|--|--|--|--|
| Status of water<br>injection to the<br>reactor | Water inflow   | 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<br>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<br>representing value is noted among multiple data on each System A, B,  | Unit 1/2 Temporary<br>Unit 3 Measures voltage value through<br>the main indicator panel and converts<br>them to the pressure | Temporary indicator: 1/1 system<br>Main:System A 1/2Ch<br>System B 1/2Ch   |  |
| Temperature in the<br>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<br>Above Bottom Head) are noted among multiple data to view the whole picture.  | Main recorder  | Point of Feed-water nozzle 1/4Ch<br>reactor vessel bottom 1/2Ch (Unit1)<br>1/1Ch (Unit2/3)   |  |
| Pressure in<br>D/W • S/C                       | Data from main instrument. Measure voltage value by the main instrument panel converted to the pressure in case<br>main instruments are not in function.<br>As to the D/W pressure of Unit2, the reading of the temporary indicator is described,<br>(D/W : Dry Well, S/C : Suppression Chamber) | Unit 3:Main instrument panel (converted from voltage)<br>(S/C)   | (D/W)<br>Main recorder wide range 1 /1Ch (Unit 1)<br>Temporary indicator: 1 / 1 system (Unit 2)<br>Main instrument panel 1 /4Ch (Unit 3)<br>(S/C)<br>Main indicator 1 / 1system (Unit 1/2)<br>Main instrument panel 1 / 2Ch (Unit 3) |  |
| D/W Atmosphere<br>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 Bellows Air 1 ∕ 5Ch<br>D/W HVH return 1 ∕ 5Ch  |  |
| CAMS radiation<br>monitor                      | Data from the instrument reading of main indicator,<br>(CAMS : Containment Atmospheric Monitoring System)  | Main indicator   | D/W System A 1 / 1 Ch<br>System B 1 / 1 Ch<br>S/C System A 1 / 1 Ch<br>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<br>System A, B.   | Main recorder  | System A1/4Ch(Unit 1)、8Ch(Unit 2/3)<br>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<br>insuturment<br>(Non-thermal mode : Urgent Heat load Mode、SHC mode : Shut down Cooling Mode)   | Unit:2Main recorder<br>Unit1/3/4:Temporary indicator   | Main:1/1Ch(Unit 2)<br>Temporary indicator: 1/1 system(Unit 1/3/4)  |  |
| FPC skimmer surge<br>tank level                | Data from the instrument reading of main indicator<br>(FPC : Fuel Pool Cooling and Filtering System)   | Main indicator   | System 1 / 1   |  |

## ■Supplemental explanation for notes

| ltem                                  | Contents  | Status As of 06:00 on August 16  |  |  |
|---------------------------------------|---|--|--|--|
| Instrument failure                    | Instrument failure : down of instrument reading (over) scale/failure of instrument  | Unit 1 CAMS D/W radiation monitor, Level of skimmer surge tanks<br>Unit 2 Pressure in S/C, CAMS D/W(B) radiation monitor, CAMS S/C(B) radiation monitor<br>Unit 3 Level of skimmer surge tanks         |  |  |
|                                       | Unit4: Monitoring is not implemented since all fuel are takeoff.<br>Unit5/6: Monitoring is not implemented since heat removal of reactor is functioning | -  |  |  |
| Continuously<br>monitoring the status | Inaccurate Data defined from relation with other Parameters such as negative figure.  | Unit 1 Reactor water level(B)<br>Unit 2 Reactor water level, RPV bellow air temperature,<br>Unit 3 Reactor water level, reactor pressure, RPV bellow air temperature,<br>CAMS D/W(A) radiation monitor |  |  |