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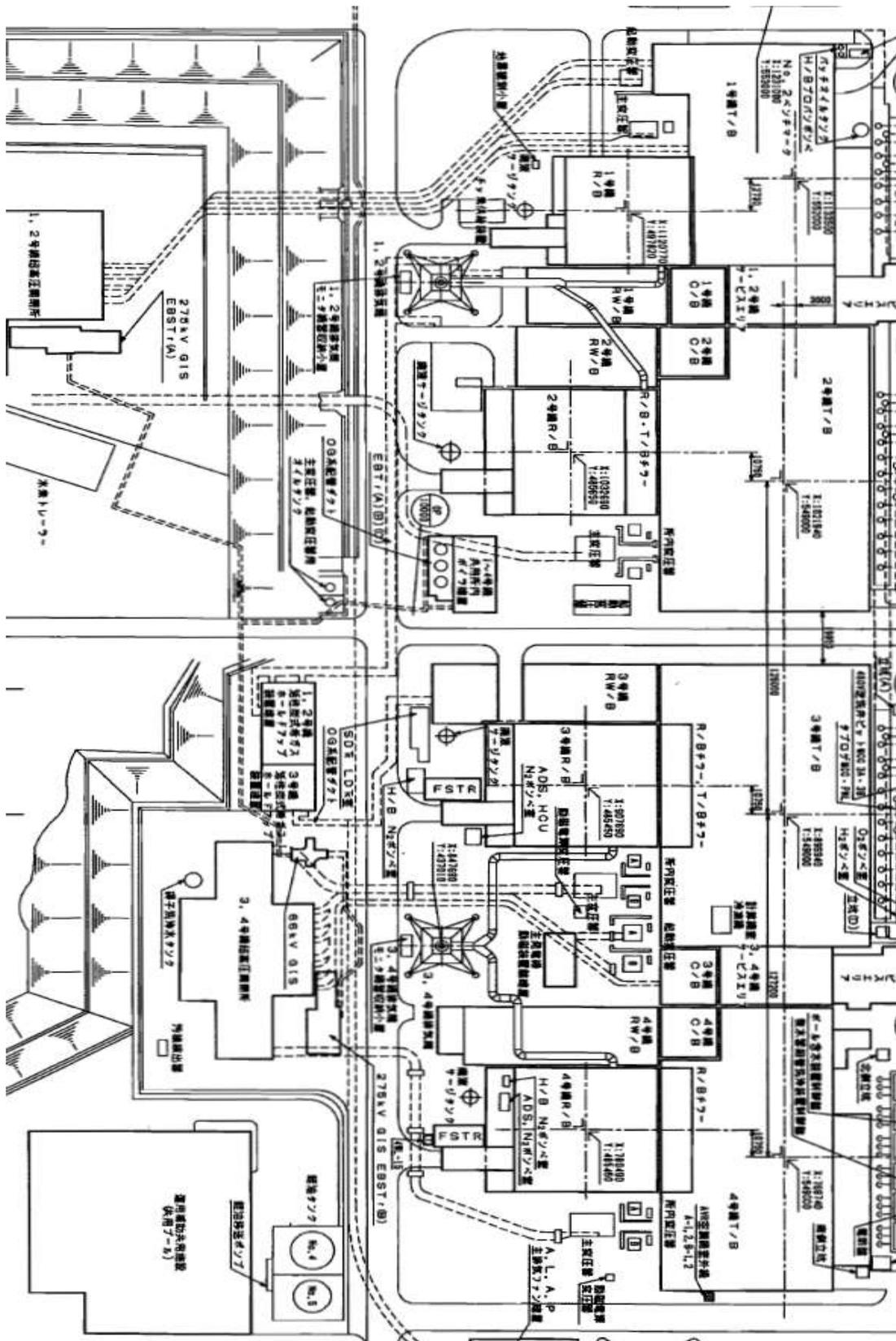


Fig. 1-1 Building Layout for Units 1 to 4, Fukushima Dai-ichi NPS

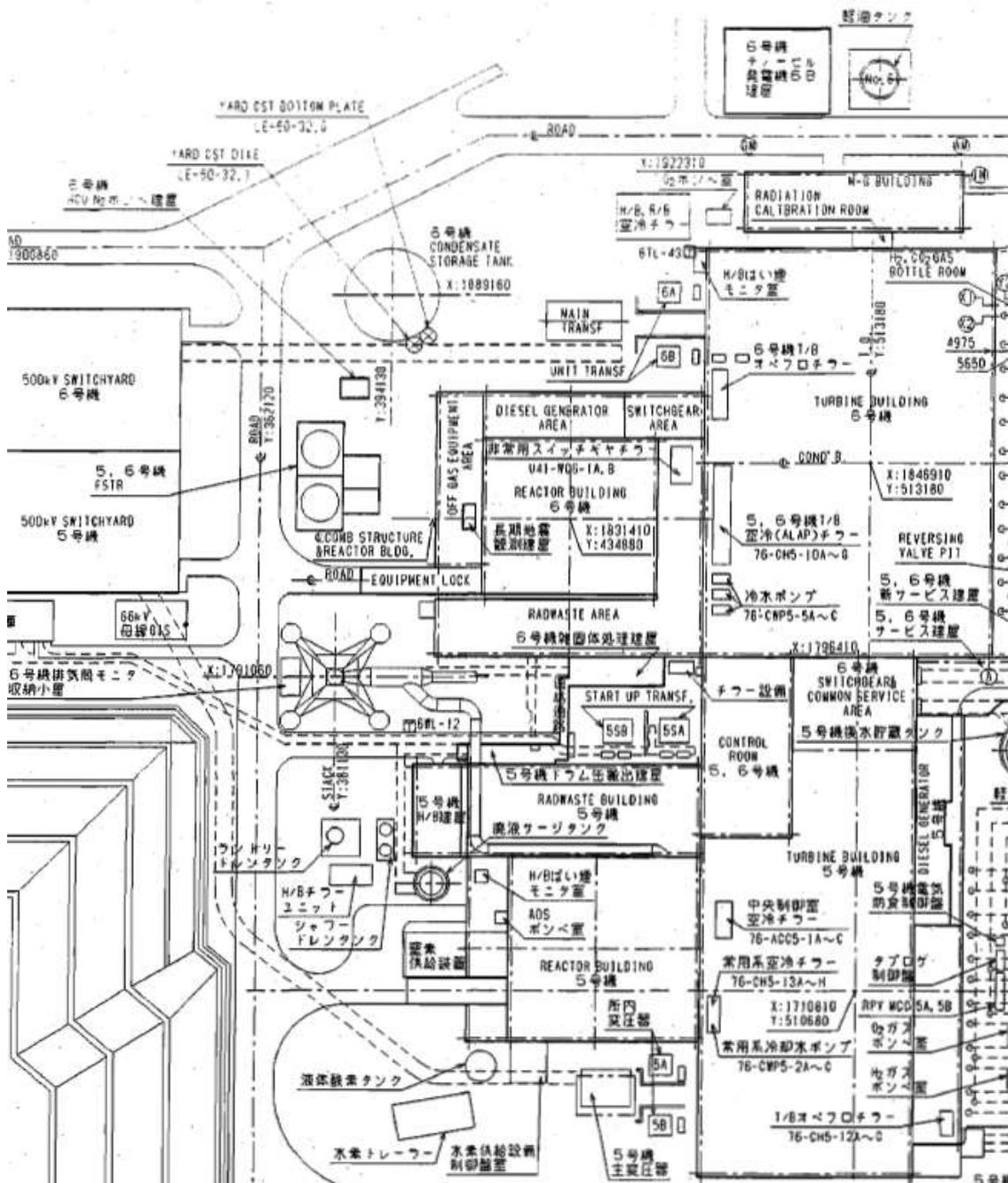


Fig. 1-2 Building Layout for Units 5 and 6, Fukushima Dai-ichi NPS

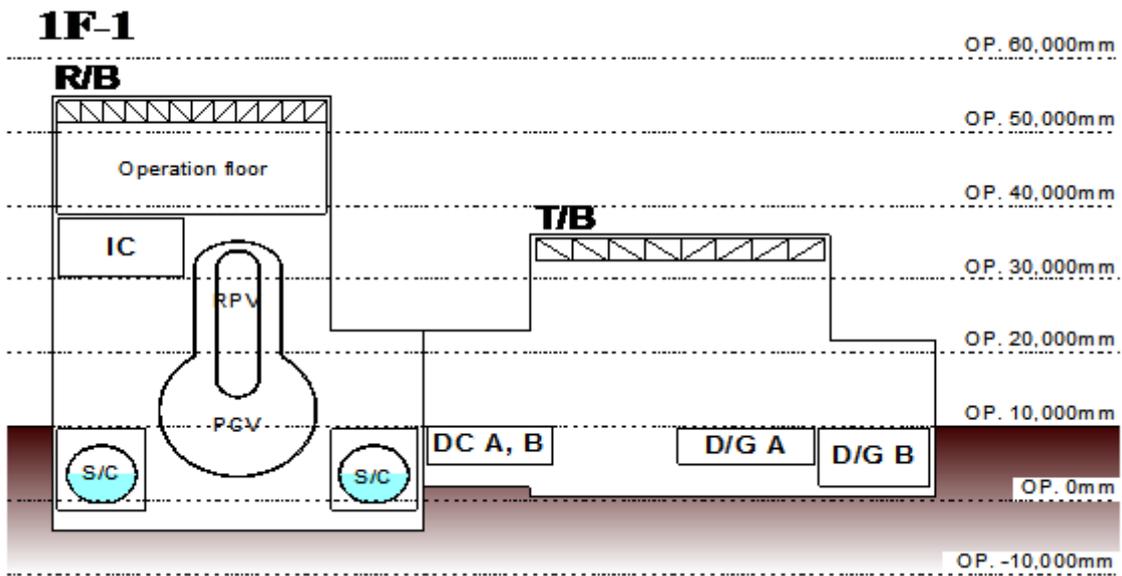


Fig. 2-1 Building Cross-section for Unit 1, Fukushima Dai-ichi NPS

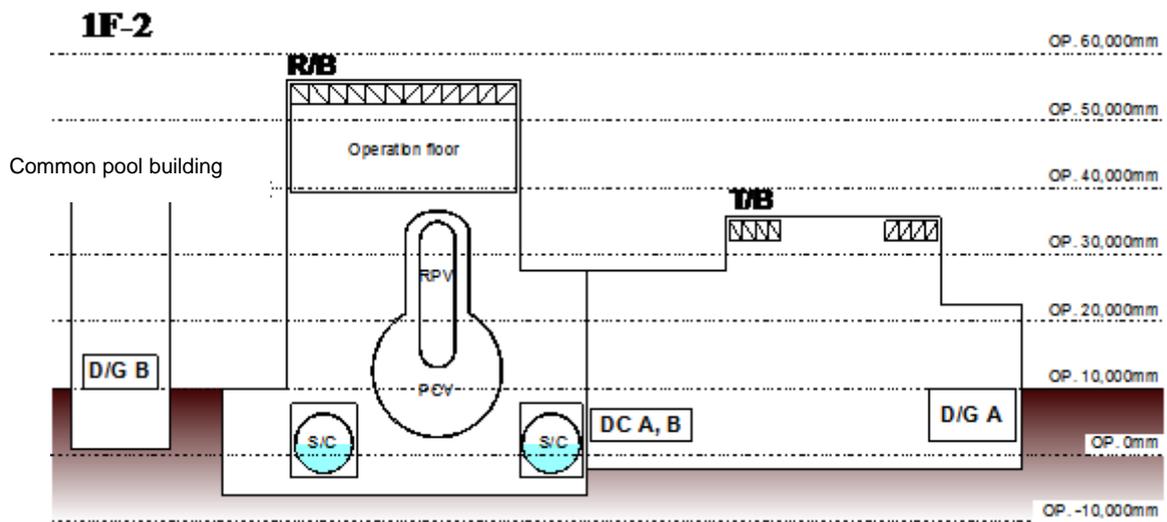


Fig. 2-2 Building Cross-section for Unit 2, Fukushima Dai-ichi NPS

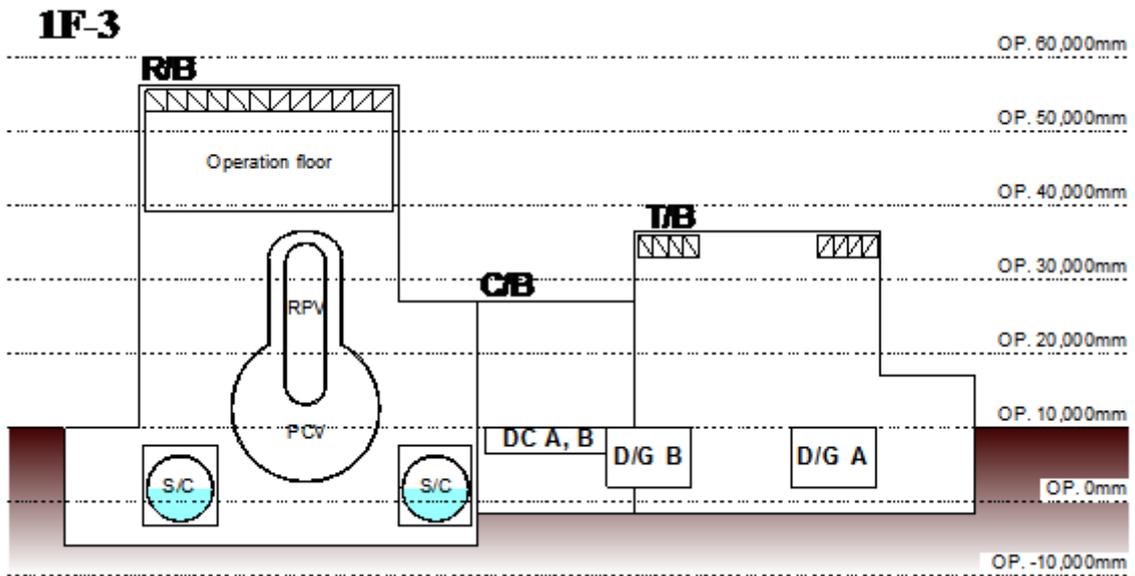


Fig. 2-3 Building Cross-section for Unit 3, Fukushima Dai-ichi NPS

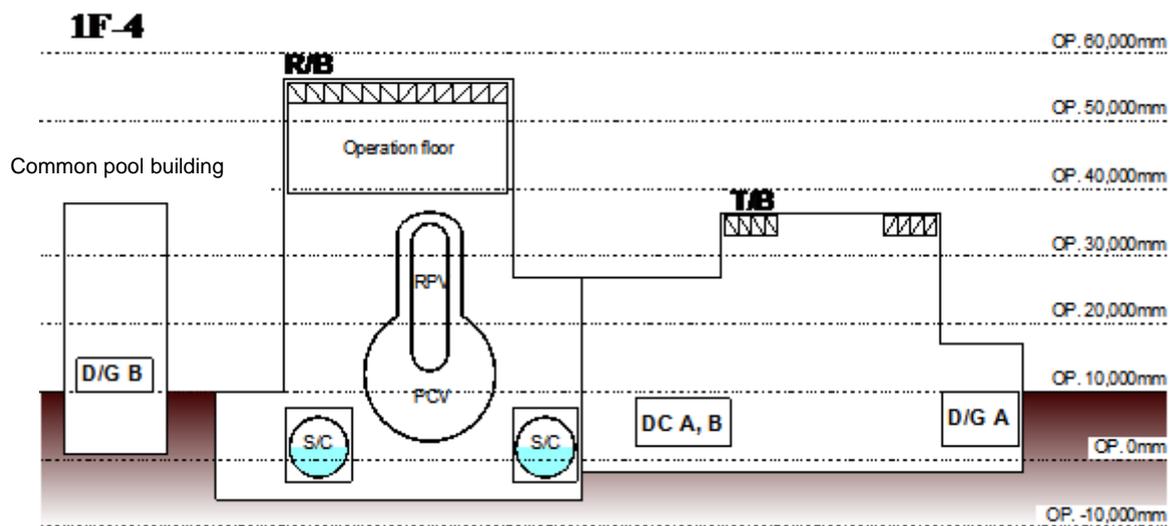


Fig. 2-4 Building Cross-section for Unit 4, Fukushima Dai-ichi NPS

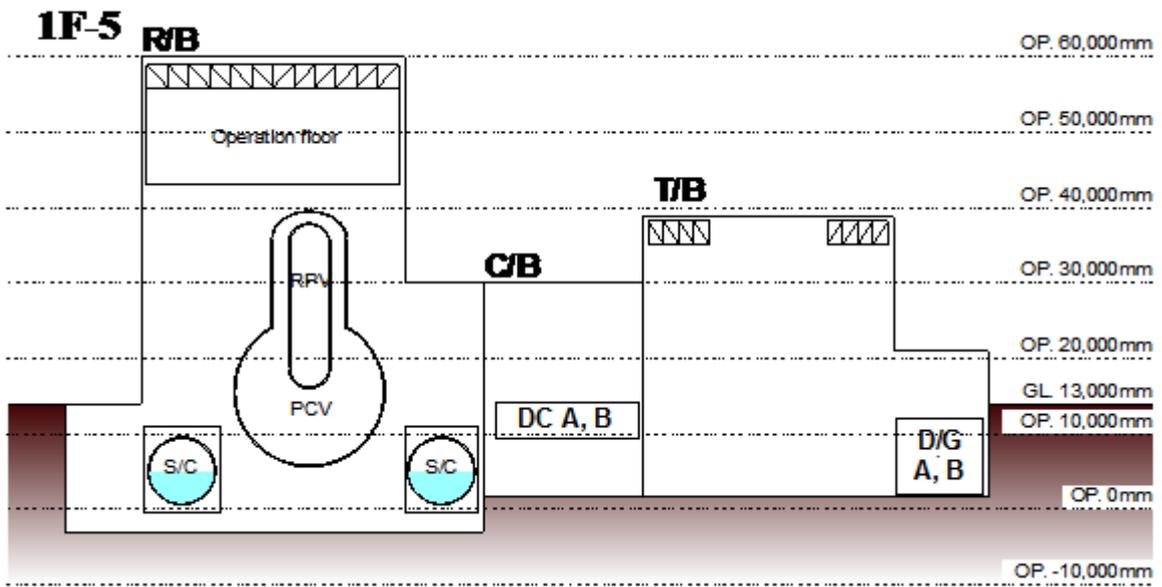


Fig. 2-5 Building Cross-section for Unit 5, Fukushima Dai-ichi NPS

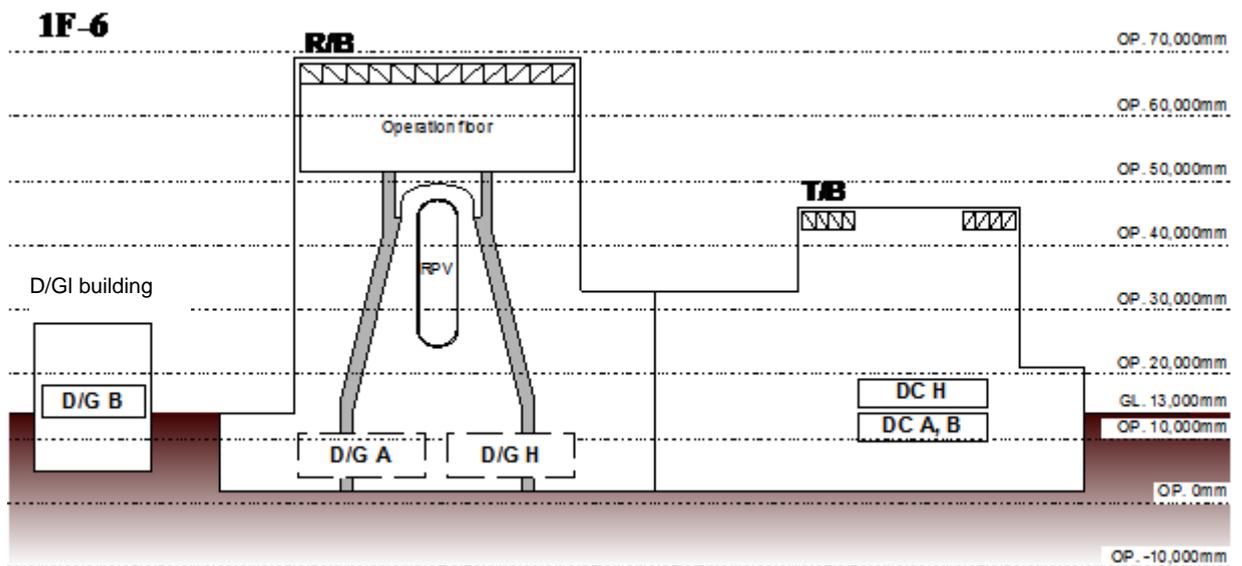


Fig. 2-6 Building Cross-section for Unit 6, Fukushima Dai-ichi NPS

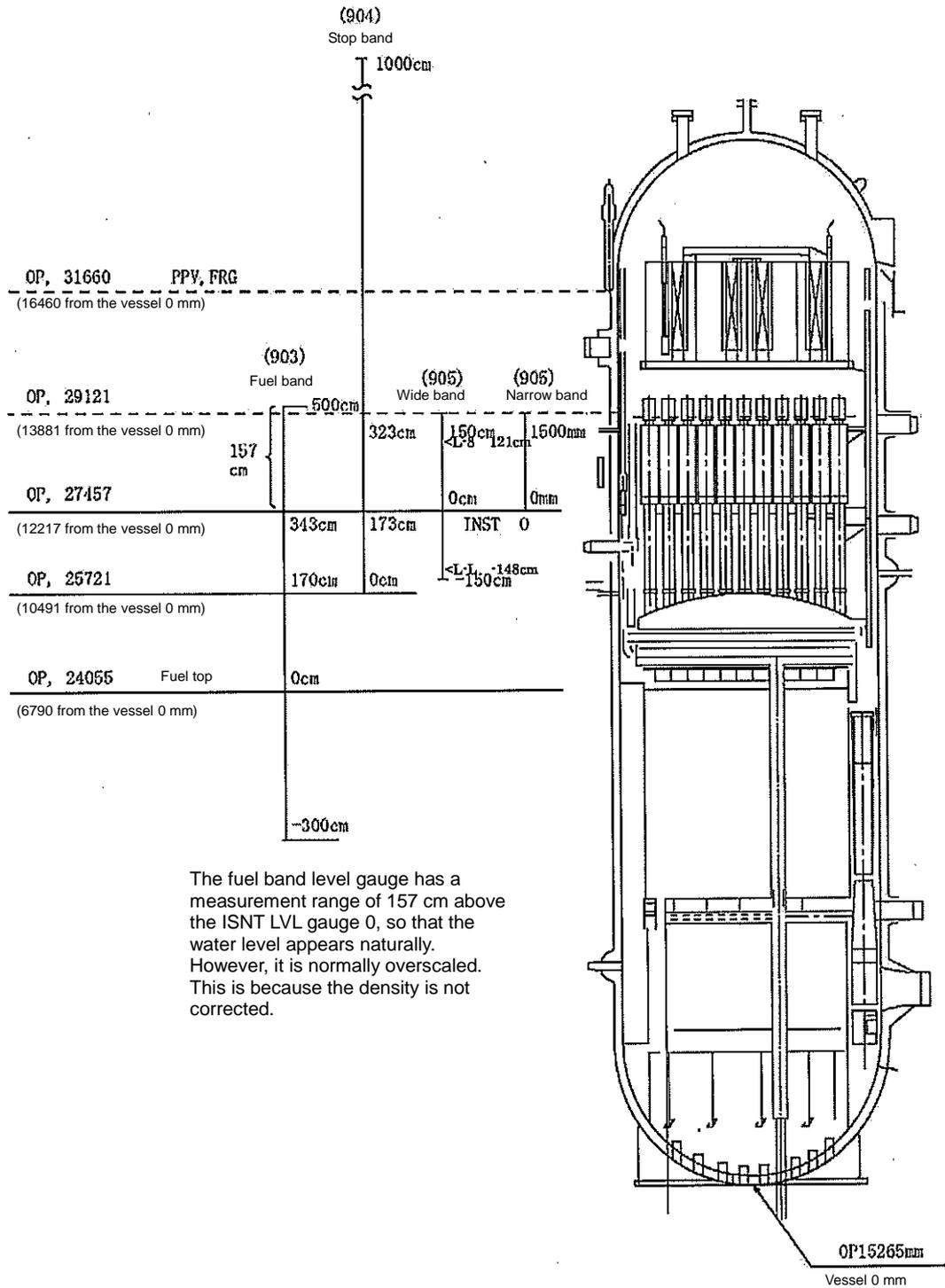


Fig. 3-1 Range of reactor water instrumentations (Unit 1, Fukushima Dai-ichi)

Source: “Analysis of Operating Records and Accident Records for Fukushima Daiichi NPS at the Time of the Tohoku-Pacific Ocean Earthquake and an Evaluation of its Effects” (May 23, 2011, TEPCO)

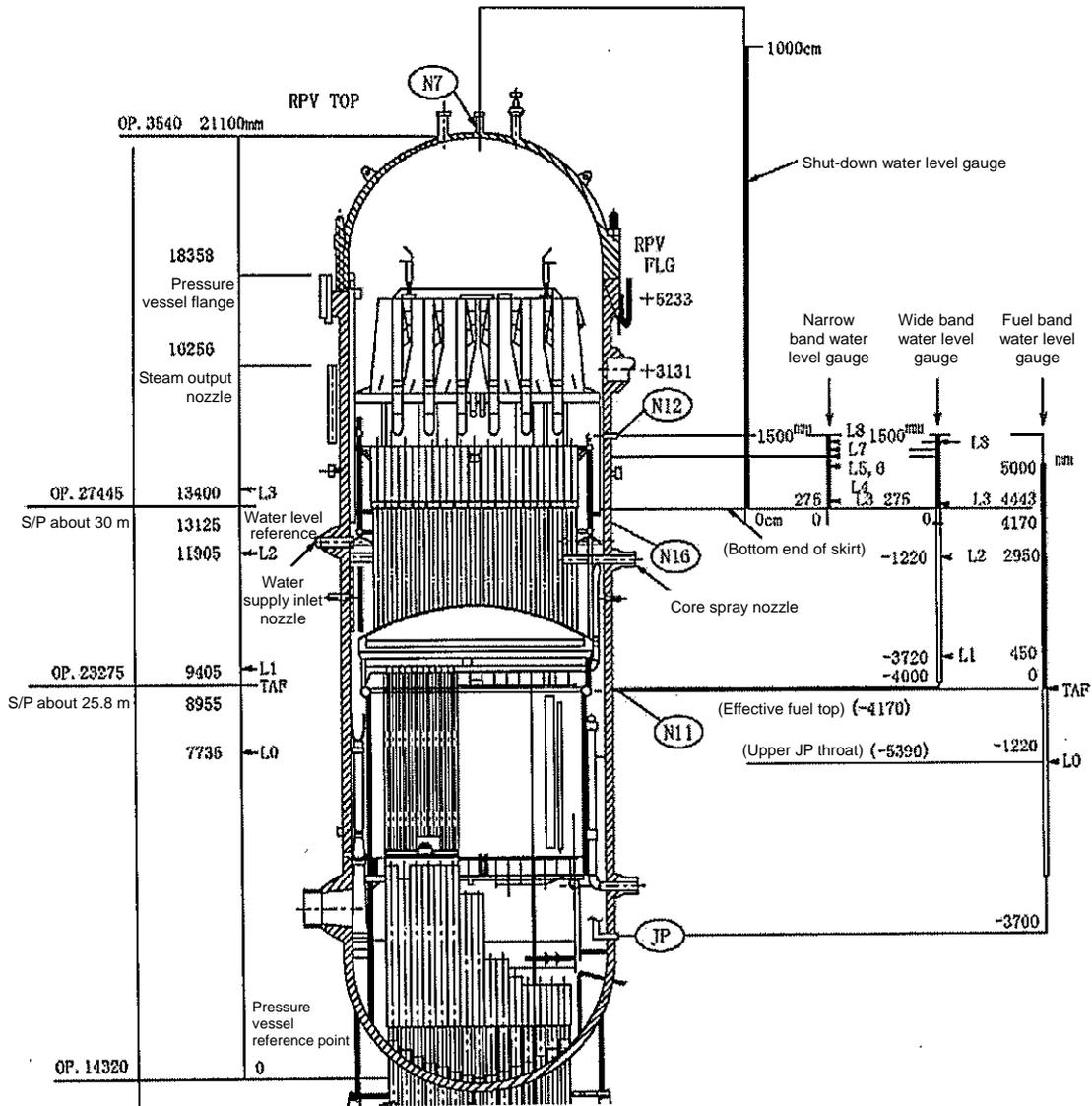


Fig. 3-2 Range of reactor water instrumentations (Unit 2, Fukushima Dai-ichi)

Source: “Analysis of Operating Records and Accident Records for Fukushima Daiichi NPS at the Time of the Tohoku-Pacific Ocean Earthquake and an Evaluation of its Effects” (May 23, 2011, TEPCO)

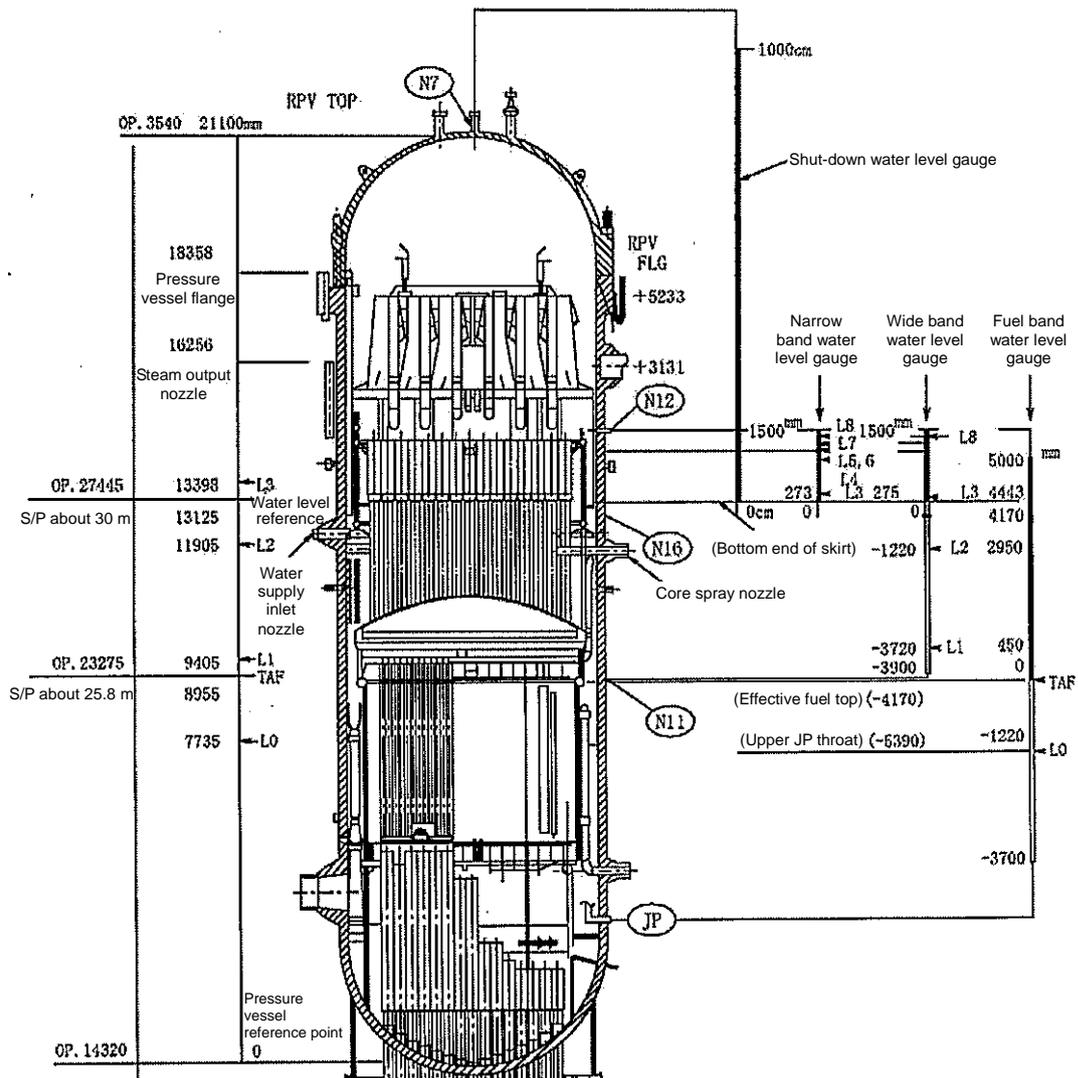


Fig. 3-3 Range of reactor water instrumentations (Unit 3, Fukushima Dai-ichi)

Source: “Analysis of Operating Records and Accident Records for Fukushima Daiichi NPS at the Time of the Tohoku-Pacific Ocean Earthquake and an Evaluation of its Effects” (May 23, 2011, TEPCO)

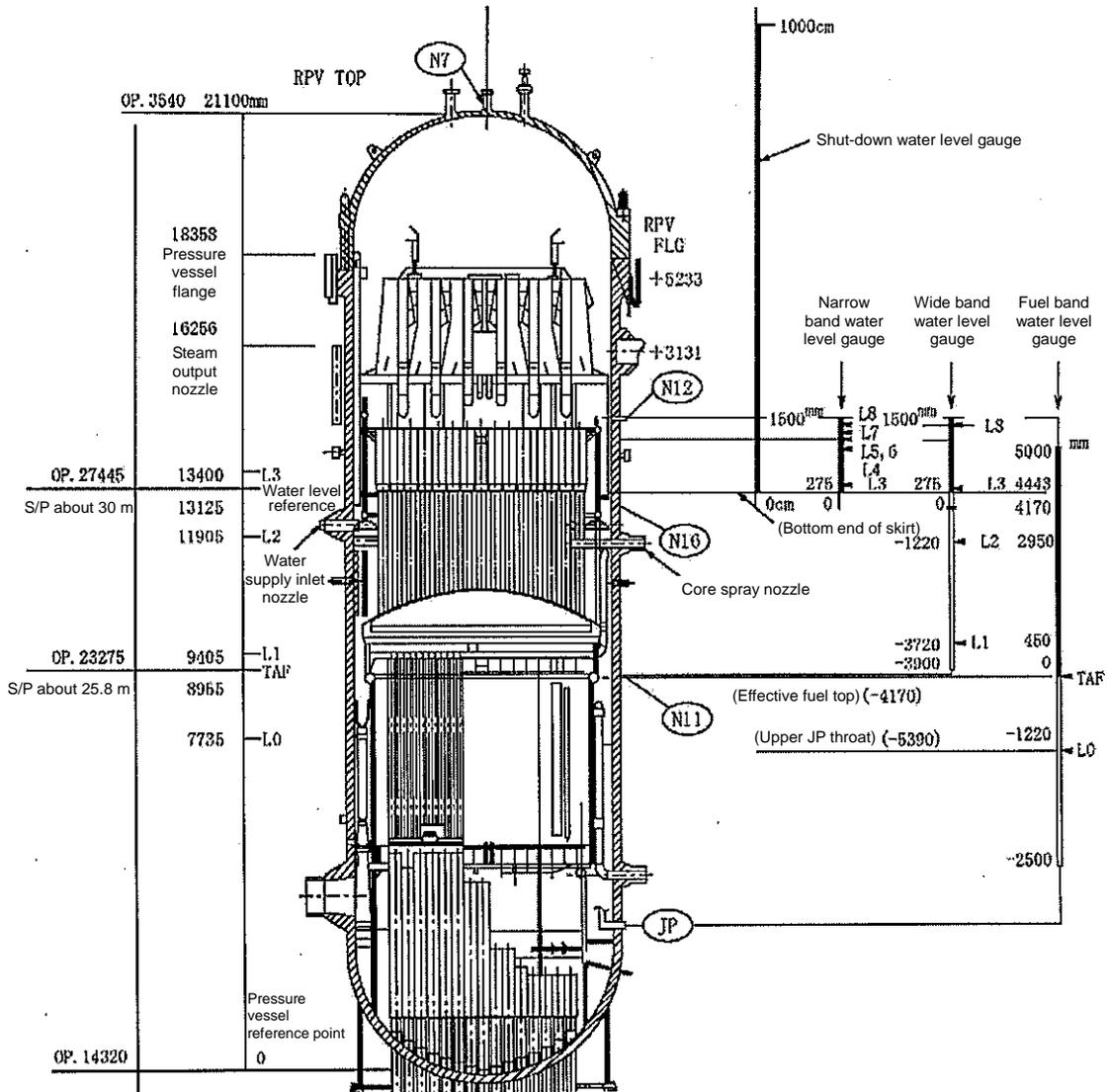


Fig. 3-4 Range of reactor water instrumentations (Unit 4, Fukushima Dai-ichi)

Source: “Analysis of Operating Records and Accident Records for Fukushima Daiichi NPS at the Time of the Tohoku-Pacific Ocean Earthquake and an Evaluation of its Effects” (May 23, 2011, TEPCO)

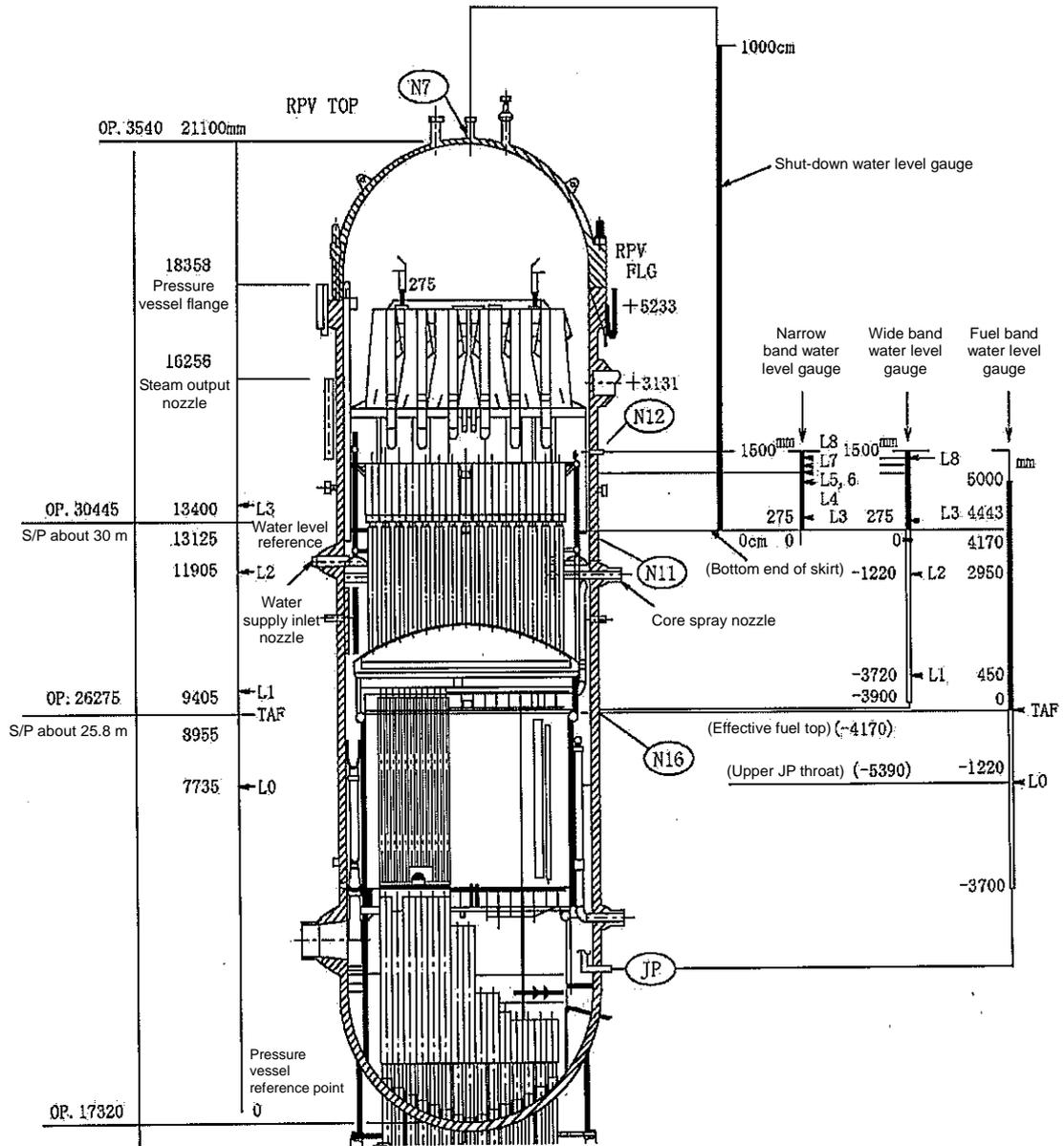


Fig. 3-5 Range of reactor water instrumentations (Unit 5, Fukushima Dai-ichi)

Source: “Analysis of Operating Records and Accident Records for Fukushima Daiichi NPS at the Time of the Tohoku-Pacific Ocean Earthquake and an Evaluation of its Effects” (May 23, 2011, TEPCO)

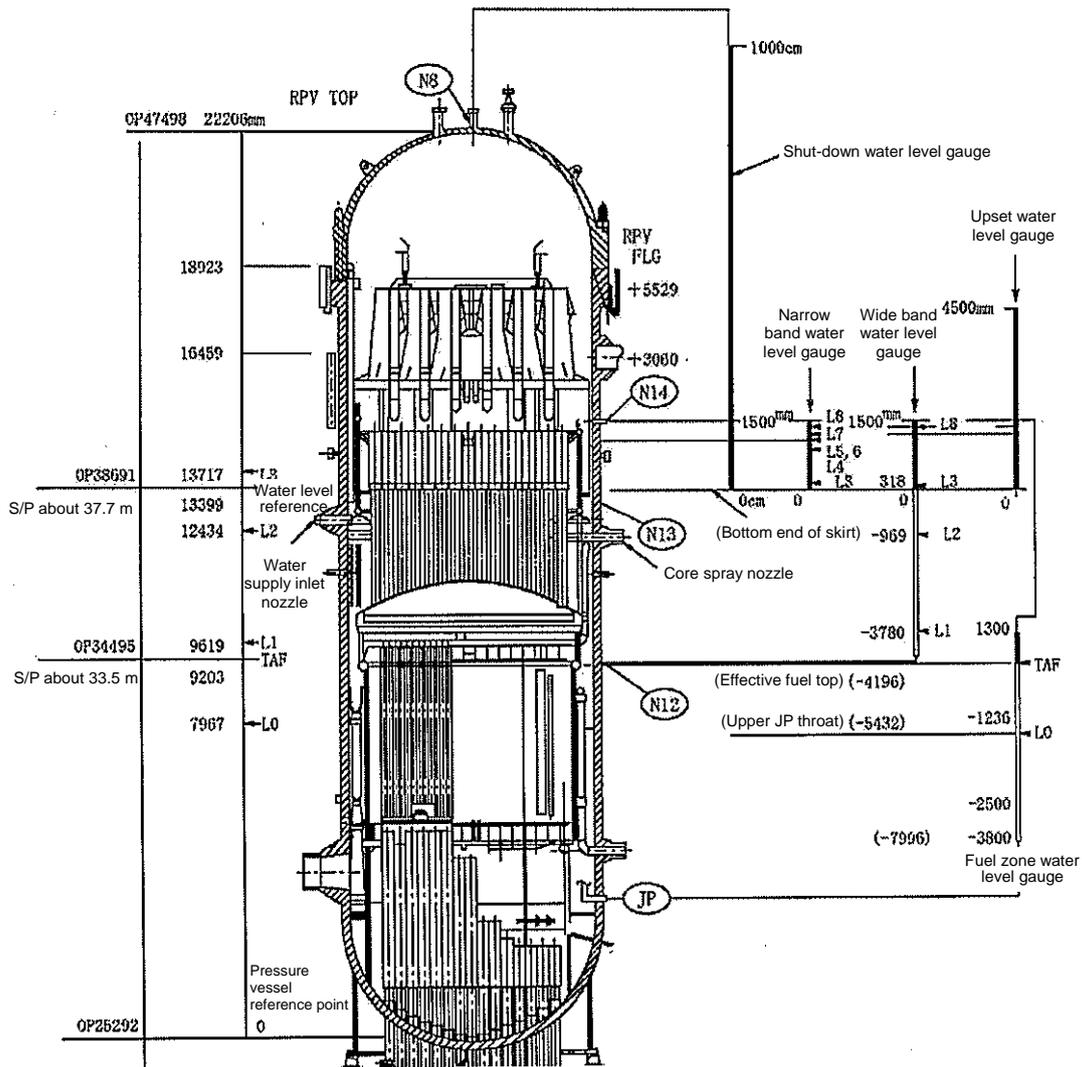


Fig. 3-6 Range of reactor water instrumentations (Unit 6, Fukushima Dai-ichi)

Source: “Analysis of Operating Records and Accident Records for Fukushima Daiichi NPS at the Time of the Tohoku-Pacific Ocean Earthquake and an Evaluation of its Effects” (May 23, 2011, TEPCO)

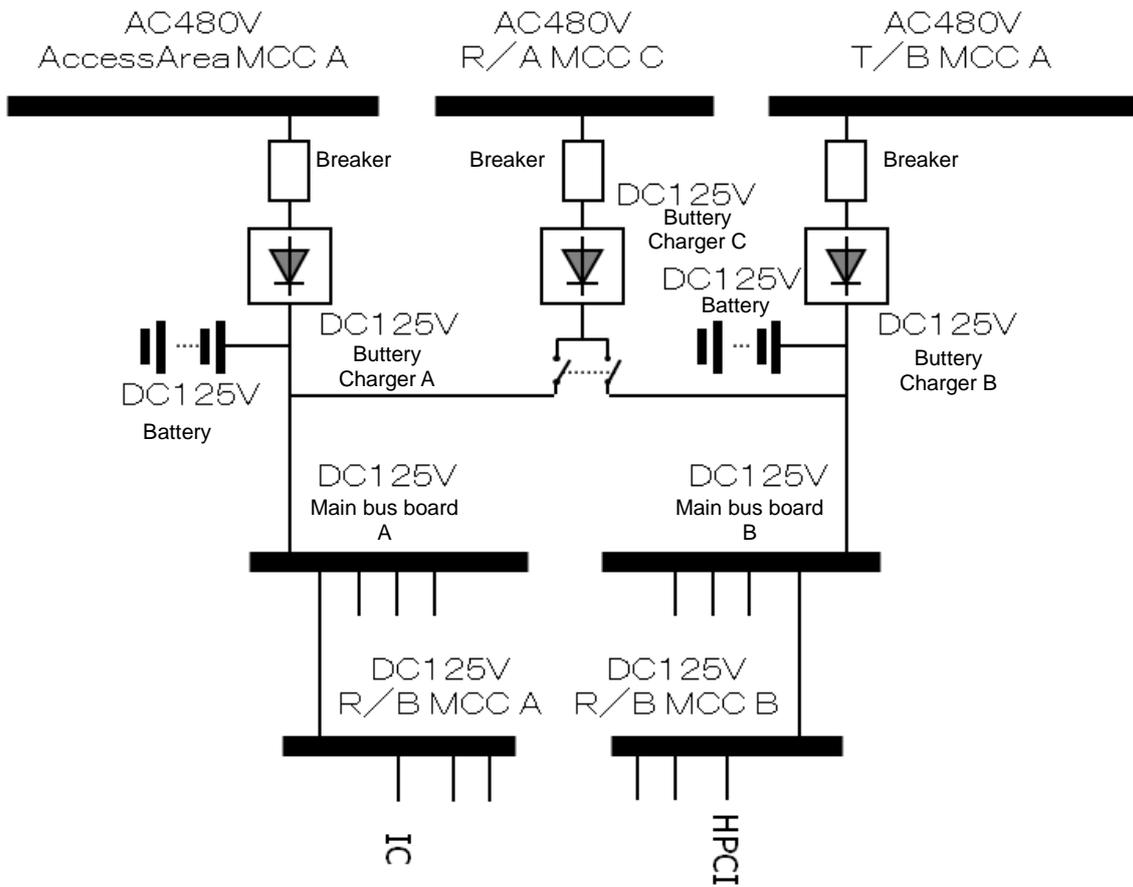


Fig. 4-1 DC power supply system (Unit 1)

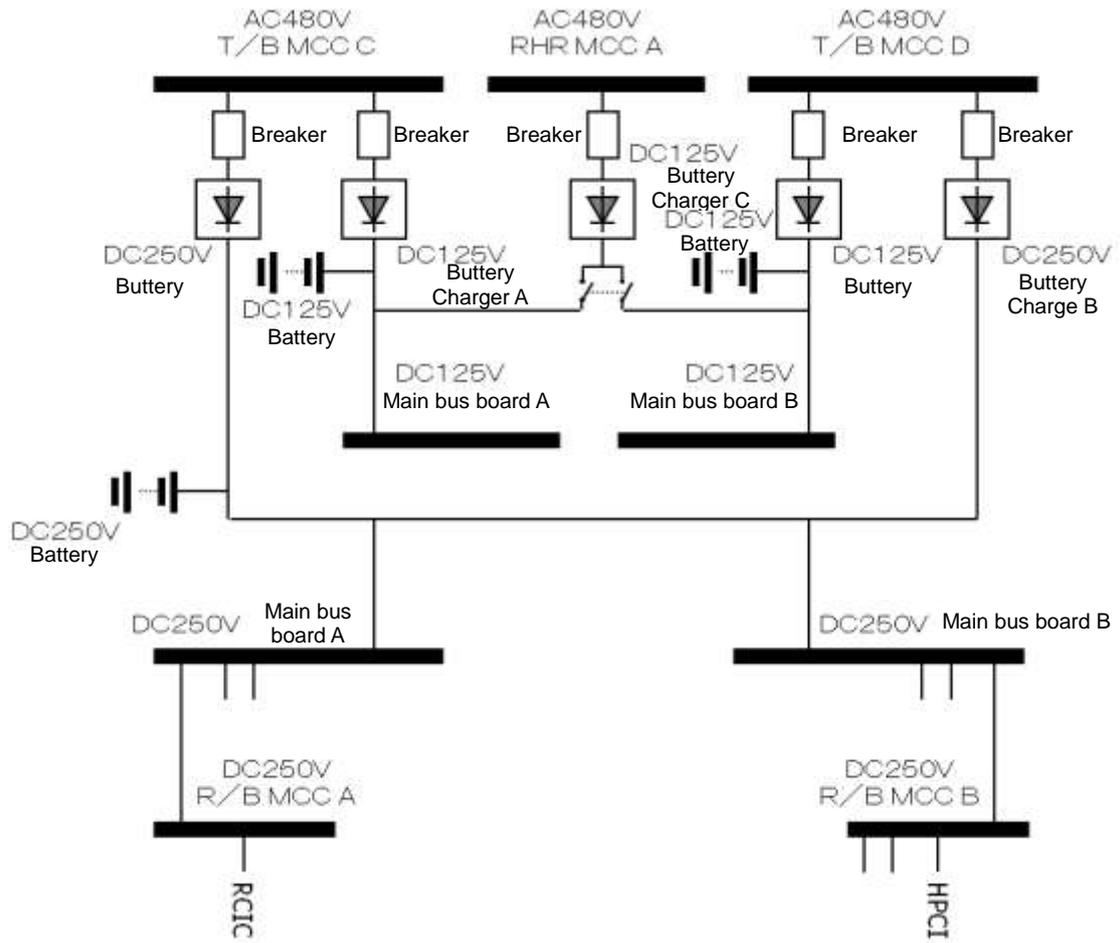


Fig. 4-2 DC power supply system (Units 2 & 3)

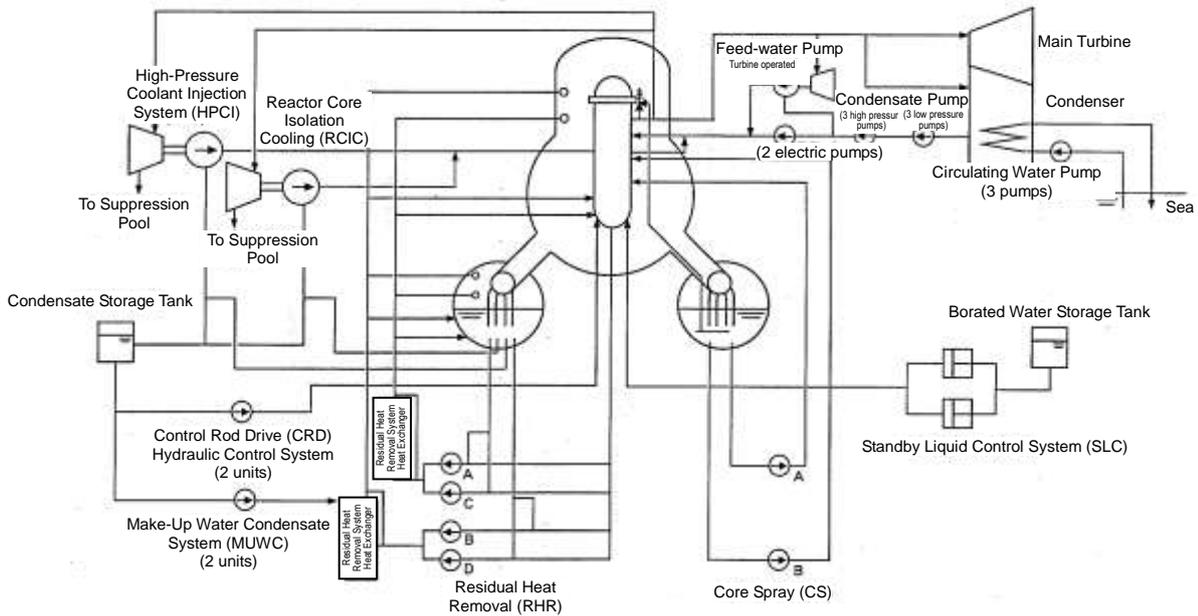


Fig. 5-1 System configuration for Units 4 and 5, Fukushima Dai-ichi NPS

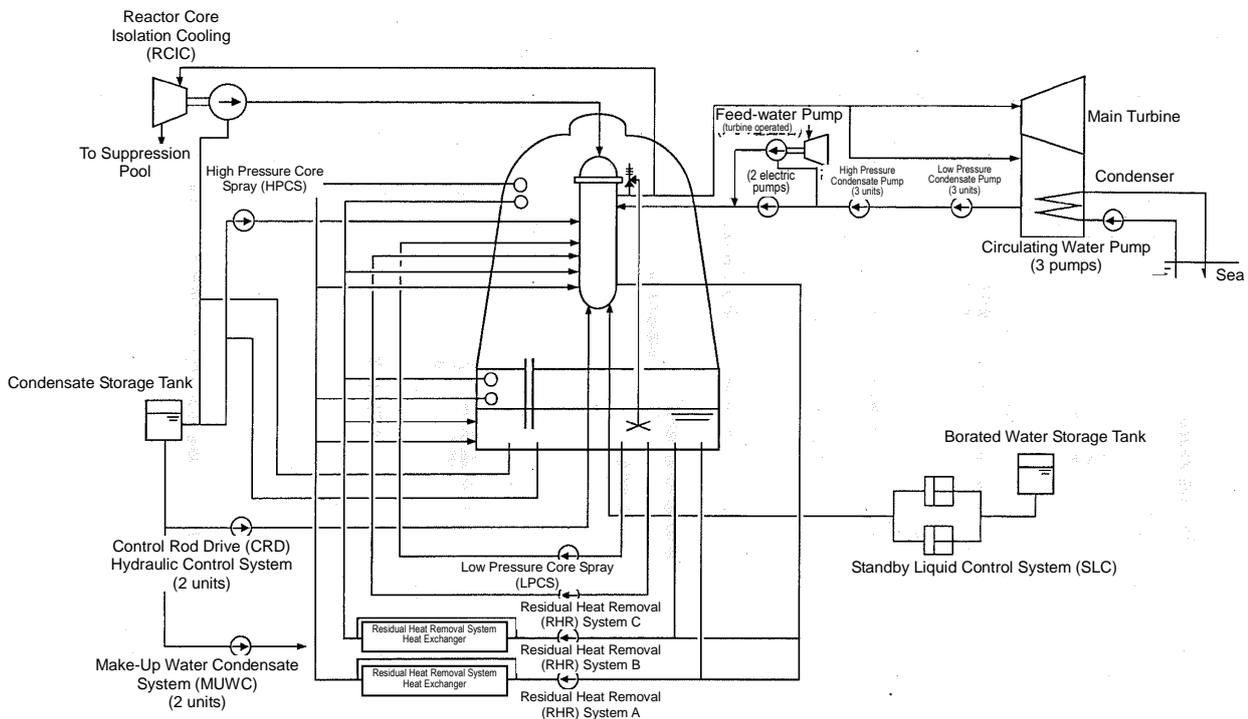


Fig. 5-2 System configuration for Unit 6, Fukushima Dai-ichi NPS, and Units 1 to 4, Fukushima Dai-ni NPS

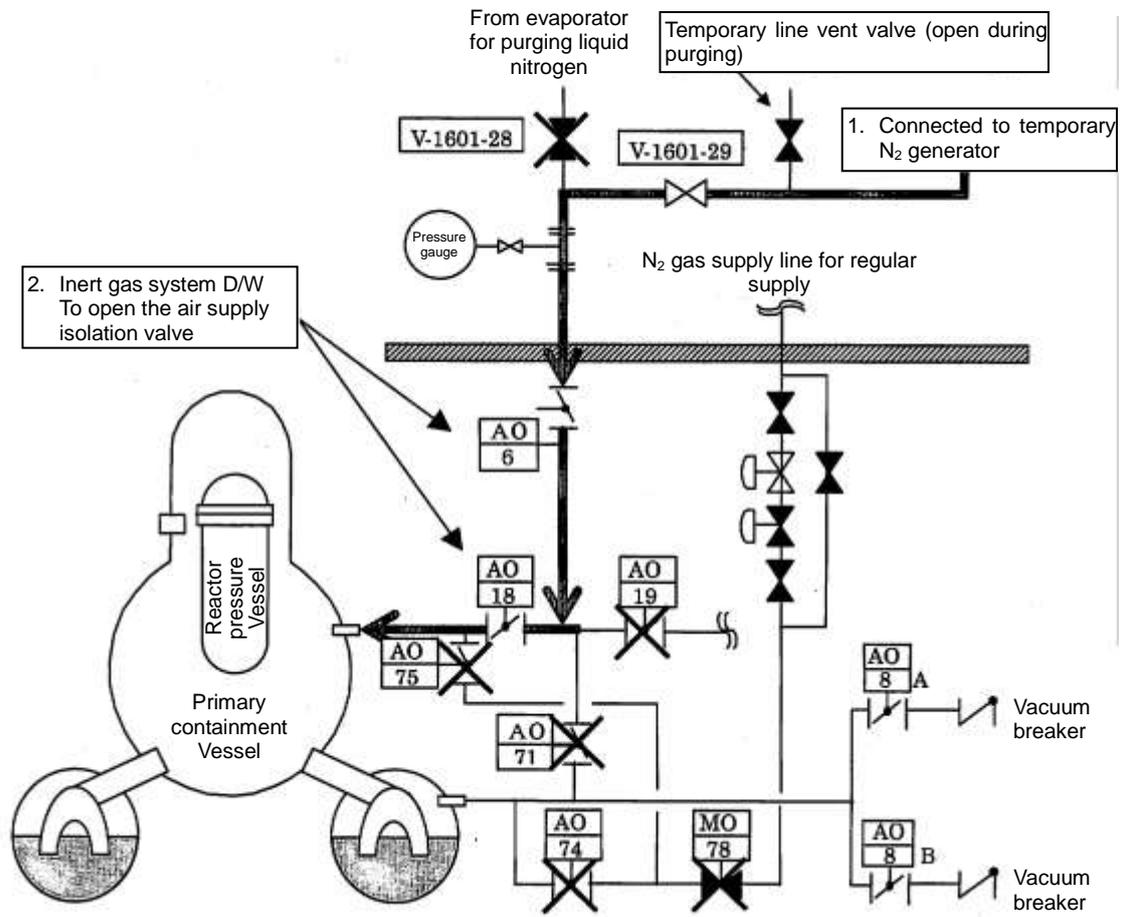


Fig. 6 System outline diagram: Nitrogen gas injection into the PCV

Table 1-1 Status of equipment, etc. for 1F-1 Emergency Core Cooling System (ECCS System)

|                     |                        | Location of installation           | Seismic class             | Status at seismic scram   | Status during period from seismic scram to immediately before attack of tsunami | After attack of tsunami | Remarks |   |  |
|---------------------|------------------------|------------------------------------|---------------------------|---------------------------|---|-------------------------|---------|---|--|
| Cooling function    | ECCS system            | CS (A)                             | R/B basement (OP. -1230)  | A                         | ○   | ○ Note 1                | ×       | Both the power supply and seawater system (CCSW) were lost after the tsunami.   |  |
|                     |                        | CS (C)                             | R/B basement (OP. -1230)  | A                         | ○   | ○ Note 1                | ×       | Both the power supply and seawater system (CCSW) were lost after the tsunami.   |  |
|                     |                        | CCS (A)                            | R/B basement (OP. -1230)  | A                         | ○   | ⊙                       | ×       | The operation was confirmed by manual activation (S/P cooling) before the tsunami; both the power supply and seawater system (CCSW) were lost after the tsunami.  |  |
|                     |                        | CCS (B)                            | R/B basement (OP. -1230)  | A                         | ○   | ⊙                       | ×       | The operation was confirmed by manual activation (S/P cooling) before the tsunami; both the power supply and seawater system (CCSW) were lost after the tsunami.  |  |
|                     |                        | CCSW (A)                           | Outdoors (OP. 4000)       | A                         | ○   | ⊙                       | ×       | The operation was confirmed by manual activation (S/P cooling) before the tsunami; the main body was submerged and the power supply was lost after the tsunami.   |  |
|                     |                        | CCSW (B)                           | Outdoors (OP. 4000)       | A                         | ○   | ⊙                       | ×       | The operation was confirmed by manual activation (S/P cooling) before the tsunami; the main body was submerged and the power supply was lost after the tsunami.   |  |
|                     |                        | CS (B)                             | R/B basement (OP. -1230)  | A                         | ○   | ○ Note 1                | ×       | Both the power supply and seawater system (CCSW) were lost after the tsunami.   |  |
|                     |                        | CS (D)                             | R/B basement (OP. -1230)  | A                         | ○   | ○ Note 1                | ×       | Both the power supply and seawater system (CCSW) were lost after the tsunami.   |  |
|                     |                        | CCS (C)                            | R/B basement (OP. -1230)  | A                         | ○   | ⊙                       | ×       | The operation was confirmed by manual activation (S/P cooling) before the tsunami; both the power supply and seawater system (CCSW) were lost after the tsunami.  |  |
|                     |                        | CCS (D)                            | R/B basement (OP. -1230)  | A                         | ○   | ⊙                       | ×       | The operation was confirmed by manual activation (S/P cooling) before the tsunami; both the power supply and seawater system (CCSW) were lost after the tsunami.  |  |
|                     |                        | CCSW (C)                           | Outdoors (OP. 4000)       | A                         | ○   | ⊙                       | ×       | The operation was confirmed by manual activation (S/P cooling) before the tsunami; the main body was submerged and the power supply was lost after the tsunami.   |  |
|                     |                        | CCSW (D)                           | Outdoors (OP. 4000)       | A                         | ○   | ⊙                       | ×       | The operation was confirmed by manual activation (S/P cooling) before the tsunami; the main body was submerged and the power supply was lost after the tsunami.   |  |
|                     |                        | HPCI                               | R/B basement (OP. -1230)  | A                         | ○   | ○ Note 1                | ×       | The power supply was lost after the tsunami (oil pump).   |  |
|                     |                        | IC (A)                             | R/B 4th floor (OP. 31000) | A                         | ○   | ⊙                       | -       | The operation was confirmed by automatic activation (high reactor pressure) before the tsunami; the status of the valve could not be confirmed because the power supply was lost after the tsunami.                       |  |
|                     |                        | IC (B)                             | R/B 4th floor (OP. 31000) | A                         | ○   | ⊙                       | -       | The operation was confirmed by automatic activation (high reactor pressure) before the tsunami; the status of the valve could not be confirmed because the power supply was lost after the tsunami.                       |  |
| Cooling function    | Injection into reactor | MUWC (Alternative water injection) | T/B basement (OP. 3200)   | B                         | ⊙   | ⊙                       | ×       | The power supply was lost after the tsunami.  |  |
|                     |                        | Cooling pool                       | SFP cooling (FPC system)  | R/B 3rd floor (OP. 25900) | B   | ⊙                       | △       | ×   | The power supply was lost after the earthquake; the seawater system (SW) was lost after the tsunami. |
|                     |                        |                                    | SFP cooling (SHC system)  | R/B 1st floor (OP. 10200) | A   | ○                       | ○       | ×   | The power supply and the seawater system (SW) were lost after the tsunami.                           |
| Containing function | Containment facility   | Reactor building                   |                           | A                         | ⊙   | ⊙                       | ×       | Negative pressure was maintained by the operation of the regular air-conditioning system until the scram and by the operation of the SGTS after the scram until the tsunami attack. The R/B was damaged due to explosion. |  |
|                     |                        | Reactor containment                |                           | A                         | ○   | ○                       | ×       | The reactor containment pressure showed no indication of damage before the tsunami attack.  |  |

(Legends) ⊙: Operating ○: Standby △: Stop due to loss of regular power supply ×: Function loss or removal from standby

Note 1: Unit 5, where a relatively large tremor was observed at the main shock, used the residual heat removal system on March 19 after the earthquake occurred. Major damage on each system and facility was also not found by patrols by the shift personnel. In addition, the maximum acceleration in the observation records lately obtained in the basement of the reactor building, where those apparatuses were installed, was sufficiently less than the acceleration at which it had been confirmed that the dynamic functionality of the apparatuses had been maintained.

Accordingly, each function was assumed to be generally ensured.  
\* JEAC4601-2008 Rules of 'Seismic Design Technology for NPS'

Source: "Analysis of Operating Records and Accident Records for Fukushima Daiichi NPS at the Time of the Tohoku-Pacific Ocean Earthquake and an Evaluation of its Effects" (May 23, 2011, TEPCO)

Table 1-2 Status of equipment, etc. for 1F-2 Emergency Core Cooling System (ECCS System)

|                     |                          | Location of installation           | Seismic class            | Status at seismic scram | Status during period from seismic scram to immediately before attack of tsunami | After attack of tsunami | Remark   |  |
|---------------------|--------------------------|------------------------------------|--------------------------|-------------------------|---|-------------------------|--|--|
| Cooling function    | ECCS system              | RHR (A)                            | R/B basement (OP. -1030) | A                       | ○   | ⊙                       | ×  | The operation was confirmed by manual activation (S/P cooling) before the tsunami; both the power supply and seawater system (CCSW) were lost after the tsunami. |
|                     |                          | RHR (B)                            | R/B basement (OP. -1030) | A                       | ○   | ○<br>Note 1             | ×  | Both the power supply and seawater system (CCSW) were lost after the tsunami.  |
|                     |                          | RHR (C)                            | R/B basement (OP. -1030) | A                       | ○   | ⊙                       | ×  | The operation was confirmed by manual activation (S/P cooling) before the tsunami; both the power supply and seawater system (CCSW) were lost after the tsunami. |
|                     |                          | RHR (D)                            | R/B basement (OP. -1030) | A                       | ○   | ○<br>Note 1             | ×  | Both the power supply and seawater system (CCSW) were lost after the tsunami.  |
|                     |                          | RHRS (A)                           | Outdoors (OP. 4000)      | A                       | ○   | ⊙                       | ×  | The operation was confirmed by manual activation (S/P cooling) before the tsunami; the main body was submerged and the power supply was lost at the tsunami.     |
|                     |                          | RHRS (B)                           | Outdoors (OP. 4000)      | A                       | ○   | ○<br>Note 1             | ×  | The main body was submerged into seawater and the power supply was lost at the tsunami attack.   |
|                     |                          | RHRS (C)                           | Outdoors (OP. 4000)      | A                       | ○   | ⊙                       | ×  | The operation was confirmed by manual activation (S/P cooling) before the tsunami; the main body was submerged and the power supply was lost at the tsunami.     |
|                     |                          | RHRS (D)                           | Outdoors (OP. 4000)      | A                       | ○   | ○<br>Note 1             | ×  | The main body was submerged into seawater and the power supply was lost at the tsunami attack.   |
|                     |                          | CS (A)                             | R/B basement (OP. -1000) | A                       | ○   | ○<br>Note 1             | ×  | Both the power supply and seawater system (CCSW) were lost after the tsunami.  |
|                     |                          | CS (B)                             | R/B basement (OP. -1000) | A                       | ○   | ○<br>Note 1             | ×  | Both the power supply and seawater system (CCSW) were lost after the tsunami.  |
|                     | HPCI                     | R/B basement (OP. -2060)           | A                        | ○                       | ○<br>Note 1   | ×                       | The power supply was lost after the tsunami (auxiliary oil pump).                                    |  |
|                     | Injection into reactor   | RCIC                               | R/B basement (OP. -2060) | A                       | ○   | ⊙                       | ⊙  | The system was manually activated after the earthquake and the tsunami. After a while, high pressure steam was lost.   |
|                     |                          | MUWC (Alternative water injection) | T/B basement (OP. 1900)  | B                       | ⊙   | ⊙                       | ×  | The power supply was lost after the tsunami.   |
| Cooling pool        | SFP cooling (FPC system) | R/B 3rd floor (OP. 26900)          | B                        | ⊙                       | △   | ×                       | The power supply was lost after the earthquake; the seawater system (SW) was lost after the tsunami. |  |
|                     | SFP cooling (RHR system) | R/B basement (OP. -1030)           | A                        | ○                       | ○<br>Note 1   | ×                       | Both the power supply and the seawater system were lost after the tsunami.                           |  |
| Containing function | Containing facility      | Reactor building                   |                          | A                       | ○   | ○<br>Note 1             | ×  | The blowout panel was opened.  |
|                     |                          | Reactor containment                |                          | A                       | ○   | ○                       | ×  | The reactor containment pressure showed no indication of damage before the tsunami attack.   |

(Legends) ⊙: Operating ○: Standby △: Stop due to loss of regular power supply ×: Function loss or removal from standby

Note 1: Unit 5, where a relatively large tremor was observed at the main shock, used the residual heat removal system on March 19 after the earthquake occurred. Major damage on each system and facility was also not found by patrols by the shift personnel. In addition, the maximum acceleration in the observation records lately obtained in the basement of the reactor building, where those apparatuses were installed, was sufficiently less than the acceleration at which it had been confirmed that the dynamic functionality of the apparatuses had been maintained.

Accordingly, each function was assumed to be generally ensured.

\* JEAC4601-2008 Rules of 'Seismic Design Technology for NPS'

Source: "Analysis of Operating Records and Accident Records for Fukushima Daiichi NPS at the Time of the Tohoku-Pacific Ocean Earthquake and an Evaluation of its Effects" (May 23, 2011, TEPCO)

Table 1-3 Status of equipment, etc. for 1F-3 Emergency Core Cooling System (ECCS System)

|  |                          | Location of installation           | Seismic class            | Status at seismic scram | Status during period from seismic scram to immediately before attack of tsunami | After attack of tsunami | Remarks  |   |
|--|--------------------------|------------------------------------|--------------------------|-------------------------|---|-------------------------|--|---|
| Cooling function                             | ECCS system              | RHR (A)                            | R/B basement (OP. -1030) | A                       | ○   | ○<br>Note 1             | ×  | Both the power supply and seawater system (CCSW) were lost after the tsunami.   |
|  |                          | RHR (B)                            | R/B basement (OP. -1030) | A                       | ○   | ○<br>Note 1             | ×  | Both the power supply and seawater system (CCSW) were lost after the tsunami.   |
|  |                          | RHR (C)                            | R/B basement (OP. -1030) | A                       | ○   | ○<br>Note 1             | ×  | Both the power supply and seawater system (CCSW) were lost after the tsunami.   |
|  |                          | RHR (D)                            | R/B basement (OP. -1030) | A                       | ○   | ○<br>Note 1             | ×  | Both the power supply and seawater system (CCSW) were lost after the tsunami.   |
|  |                          | RHRS (A)                           | Outdoors (OP. 4000)      | A                       | ○   | ○<br>Note 1             | ×  | The main body was submerged into seawater due to the tsunami, and the power supply was lost at the tsunami attack.                                |
|  |                          | RHRS (B)                           | Outdoors (OP. 4000)      | A                       | ○   | ○<br>Note 1             | ×  | The main body was submerged into seawater, and the power supply was lost at the tsunami attack.   |
|  |                          | RHRS (C)                           | Outdoors (OP. 4000)      | A                       | ○   | ○<br>Note 1             | ×  | The main body was submerged into seawater, and the power supply was lost at the tsunami attack.   |
|  |                          | RHRS (D)                           | Outdoors (OP. 4000)      | A                       | ○   | ○<br>Note 1             | ×  | The main body was submerged into seawater, and the power supply was lost at the tsunami attack.   |
|  |                          | CS (A)                             | R/B basement (OP. -1000) | A                       | ○   | ○<br>Note 1             | ×  | Both the power supply and seawater system (CCSW) were lost after the tsunami.   |
|  |                          | CS (B)                             | R/B basement (OP. -1000) | A                       | ○   | ○<br>Note 1             | ×  | Both the power supply and seawater system (CCSW) were lost after the tsunami.   |
|  |                          | HPCI                               | R/B basement (OP. -2060) | A                       | ○   | ○                       | ⊙  | The system was automatically activated when the reactor water level decreased after the tsunami. After a while, the high pressure steam was lost. |
|  | Injection into reactor   | RCIC                               | R/B basement (OP. -2060) | A                       | ○   | ○                       | ⊙  | The system was activated after the tsunami, and after a while, tripped to fall into a condition where it was impossible to reactivate it.         |
|  |                          | MUWC (Alternative water injection) | T/B basement (OP. 2420)  | B                       | ⊙   | ⊙                       | ×  | The power supply was lost after the tsunami.  |
| Cooling pool                                 | SFP cooling (FPC system) | R/B 3rd floor (OP. 26900)          | B                        | ⊙                       | △   | ×                       | The power supply was lost after the earthquake; the seawater system (SW) was lost after the tsunami. |   |
|  | SFP cooling (RHR system) | R/B basement (OP. -1030)           | A                        | ○                       | ○<br>Note 1   | ×                       | Both the power supply and the seawater system were lost after the tsunami.                           |   |
| Containment function<br>Containment facility | Reactor building         |                                    | A                        | ○                       | ○<br>Note 1   | ×                       | The building was damaged due to explosion.   |   |
|  | Reactor containment      |                                    | A                        | ○                       | ○   | ×                       | The reactor containment pressure showed no indication of damage before the tsunami attack.           |   |

(Legends) ⊙: Operating ○: Standby △: Stop due to loss of regular power supply ×: Function loss or removal from standby

Note 1: Unit 5, where a relatively large tremor was observed at the main shock, used the residual heat removal system on March 19 after the earthquake occurred. Major damage on each system and facility was also not found by patrols by the shift personnel. In addition, the maximum acceleration in the observation records lately obtained in the basement of the reactor building, where those apparatuses were installed, was sufficiently less than the acceleration at which it had been confirmed that the dynamic functionality of the apparatuses had been maintained.

Accordingly, each function was assumed to be generally ensured.

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Source: "Analysis of Operating Records and Accident Records for Fukushima Daiichi NPS at the Time of the Tohoku-Pacific Ocean Earthquake and an Evaluation of its Effects" (May 23, 2011, TEPCO)

Table 1-4 Status of equipment, etc. for 1F-4 Emergency Core Cooling System (ECCS System)

|                     |                          | Location of installation           | Seismic class            | Status at seismic scram | Status during period from seismic scram to immediately before attack of tsunami | After attack of tsunami | Remarks  |  |
|---------------------|--------------------------|------------------------------------|--------------------------|-------------------------|---|-------------------------|--|--|
| Cooling function    | ECCS system              | RHR (A)                            | R/B basement (OP. -1110) | A                       | -   | -                       | -  |  |
|                     |                          | RHR (B)                            | R/B basement (OP. -1110) | A                       | ○   | ○<br>Note 1             | ×  | Both the power supply and seawater system (CCSW) were lost after the tsunami.  |
|                     |                          | RHR (C)                            | R/B basement (OP. -1110) | A                       | -   | -                       | -  |  |
|                     |                          | RHR (D)                            | R/B basement (OP. -1110) | A                       | ⊙<br>(SFP cooling)  | ○<br>Note 1             | ×  | The system was stopped due to blackout at the earthquake. The manipulation on the site was necessary before activation, but the tsunami arrived before activation. Both the power supply and the seawater system (RHRS B/D) were lost after the tsunami. |
|                     |                          | RHRS (A)                           | Outdoors (OP. 4000)      | A                       | -   | -                       | -  |  |
|                     |                          | RHRS (B)                           | Outdoors (OP. 4000)      | A                       | ⊙<br>(SFP cooling)  | ○<br>Note 1             | ×  | The system was stopped due to blackout at the earthquake. The manipulation on the site was necessary before activation, but the tsunami arrived before activation. Both the power supply and the seawater system (RHRS B/D) were lost after the tsunami. |
|                     |                          | RHRS (C)                           | Outdoors (OP. 4000)      | A                       | -   | -                       | ×  |  |
|                     |                          | RHRS (D)                           | Outdoors (OP. 4000)      | A                       | ⊙<br>(SFP cooling)  | ○<br>Note 1             | ×  | The system was stopped due to blackout at the earthquake. The manipulation on the site was necessary before activation, but the tsunami arrived before activation. Both the power supply and the seawater system (RHRS B/D) were lost after the tsunami. |
|                     |                          | CS (A)                             | R/B basement (OP. -1110) | A                       | -   | -                       | -  |  |
|                     |                          | CS (B)                             | R/B basement (OP. -1110) | A                       | -   | -                       | -  |  |
|                     |                          | HPCI                               | R/B basement (OP. -2060) | A                       | -   | -                       | -  |  |
|                     | Injection into reactor   | RCIC                               | R/B basement (OP. -2060) | A                       | -   | -                       | -  |  |
|                     |                          | MUWC (Alternative water injection) | T/B basement (OP. 1900)  | B                       | ⊙   | ⊙                       | ×  | The power supply was lost after the tsunami.   |
| Cooling pool        | SFP cooling (FPC system) | R/B 3rd floor (OP. 26900)          | B                        | ⊙                       | △   | ×                       | One system was under inspection, and the other was in operation before the earthquake and stopped because the regular power supply was cut after the earthquake.   |  |
|                     | SFP cooling (RHR system) | R/B basement (OP. -1110)           | A                        | ⊙                       | ○<br>Note 1   | ×                       | The system was stopped due to blackout at the earthquake. The manipulation on the site was necessary before activation, but the tsunami arrived before activation. Both the power supply and the seawater system (RHRS B/D) were lost after the tsunami. |  |
| Containing function | Containment facility     | Reactor building                   |                          | A                       | ○   | ○<br>Note 1             | ×  | The building was damaged due to explosion.   |
|                     |                          | Reactor containment                |                          | A                       | -   | -                       | -  | The reactor containment was under periodical inspection, so that all the fuel was removed, the MSIV was closed, and the well was filled with water.  |

(Legends) ⊙: Operating ○: Standby △: Stop due to loss of regular power supply  
 ×: Function loss or removal from standby -: Stopped for periodical inspection (no function required)

Note 1: Unit 5, where a relatively large tremor was observed at the main shock, used the residual heat removal system on March 19 after the earthquake occurred. Major damage on each system and facility was also not found by patrols by the shift personnel. In addition, the maximum acceleration in the observation records lately obtained in the basement of the reactor building, where those apparatuses were installed, was sufficiently less than the acceleration at which it had been confirmed that the dynamic functionality of the apparatuses had been maintained.

Accordingly, each function was assumed to be generally ensured.  
 \* JEAC4601-2008 Rules of 'Seismic Design Technology for NPS'

Source: "Analysis of Operating Records and Accident Records for Fukushima Daiichi NPS at the Time of the Tohoku-Pacific Ocean Earthquake and an Evaluation of its Effects" (May 23, 2011, TEPCO)

Table 1-5 Status of equipment, etc. for 1F-5 Emergency Core Cooling System (ECCS System)

|                     |                          | Location of installation           | Seismic class           | Status at seismic scram | Status during period from seismic scram to immediately before attack of tsunami | After attack of tsunami | Remarks  |  |
|---------------------|--------------------------|------------------------------------|-------------------------|-------------------------|---|-------------------------|--|--|
| Cooling function    | ECCS system              | RHR (A)                            | R/B basement (OP. -940) | A                       | ○   | ○<br>Note 1             | ○  | Both the power supply and seawater system (CCSW) were lost after the tsunami.  |
|                     |                          | RHR (B)                            | R/B basement (OP. -940) | A                       | ○   | ○<br>Note 1             | ○  | Both the power supply and seawater system (CCSW) were lost after the tsunami.  |
|                     |                          | RHR (C)                            | R/B basement (OP. -940) | A                       | ○   | ○                       | ⊙  | Both the power supply and the seawater system (RHRS A/C) were lost after the tsunami. A temporary submerged pump was installed on March 19 (recovery of power supply), has been in operation since then, and is now operating in the SHC and the emergency heat load mode alternately. |
|                     |                          | RHR (D)                            | R/B basement (OP. -940) | A                       | ○   | ○<br>Note 1             | ○  | Both the power supply and seawater system (CCSW) were lost after the tsunami.  |
|                     |                          | RHRS (A)                           | Outdoors (OP. 4000)     | A                       | ○   | ○<br>Note 1             | ×  | The main body was submerged into seawater, and the power supply was lost after the tsunami.  |
|                     |                          | RHRS (B)                           | Outdoors (OP. 4000)     | A                       | ○   | ○<br>Note 1             | ×  | The main body was submerged into seawater, and the power supply was lost after the tsunami.  |
|                     |                          | RHRS (C)                           | Outdoors (OP. 4000)     | A                       | ○   | ○                       | ⊙  | The main body was submerged into seawater, and the power supply was lost after the tsunami. A temporary submerged pump was installed on March 18 and can be used by receiving power from temporary power source (one unit for RHRS A/C).   |
|                     |                          | RHRS (D)                           | Outdoors (OP. 4000)     | A                       | ○   | ○<br>Note 1             | ×  | The main body was submerged into seawater, and the power supply was lost at the tsunami.   |
|                     |                          | CS (A)                             | R/B basement (OP. -940) | A                       | ○   | ○<br>Note 1             | ○  | Both the power supply and seawater system (CCSW) were lost after the tsunami.  |
|                     |                          | CS (B)                             | R/B basement (OP. -940) | A                       | ○   | ○<br>Note 1             | ○  | Both the power supply and seawater system (CCSW) were lost after the tsunami.  |
|                     | HPCI                     | R/B basement (OP. -940)            | A                       | -                       | -   | -                       | Stopped for periodical inspection  |  |
|                     | Injection into reactor   | RCIC                               | R/B basement (OP. -940) | A                       | -   | -                       | -  | Stopped for periodical inspection  |
|                     |                          | MUWC (Alternative water injection) | T/B basement (OP. 4900) | B                       | ⊙   | ⊙                       | ⊙  | The system was operating after the earthquake, and the power was lost after the tsunami.   |
| Cooling pool        | SFP cooling (FPC system) | R/B 3rd floor (OP. 32700)          | B                       | ⊙                       | △   | ○                       | The system was stopped because the regular power source was cut after the earthquake. The seawater system (SW) was lost after the tsunami.   |  |
|                     | SFP cooling (RHR system) | R/B basement (OP. -940)            | A                       | ○                       | ○   | ⊙                       | Both the power supply and the seawater system (RHRS A/C) were lost after the tsunami. A temporary submerged pump was installed on March 19 (recovery of power supply), has been in operation since then, and is now operating in the SHC and the emergency heat load mode alternately. |  |
| Containing function | Containment facility     | Reactor building                   |                         | A                       | ○   | ○<br>Note 1             | ×  | Holes were made on the roof top on March 18 after the tsunami (prevention of hydrogen accumulation: preventive maintenance).   |
|                     |                          | Reactor containment                |                         | A                       | ○   | ○                       | ○  | The reactor containment pressure showed no indication of damage.   |

(Legends) ⊙: Operating ○: Standby △: Stop due to loss of regular power supply  
×: Function loss or removal from standby -: Stopped for periodical inspection (no function required)

Note 1: Unit 5, where a relatively large tremor was observed at the main shock, used the residual heat removal system on March 19 after the earthquake occurred. Major damage on each system and facility was also not found by patrols by the shift personnel. In addition, the maximum acceleration in the observation records lately obtained in the basement of the reactor building, where those apparatuses were installed, was sufficiently less than the acceleration at which it had been confirmed that the dynamic functionality of the apparatuses had been maintained.

Accordingly, each function was assumed to be generally ensured.  
\* JEAC4601-2008 Rules of 'Seismic Design Technology for NPS'

Source: "Analysis of Operating Records and Accident Records for Fukushima Daiichi NPS at the Time of the Tohoku-Pacific Ocean Earthquake and an Evaluation of its Effects" (May 23, 2011, TEPCO)

Table 1-6 Status of equipment, etc. for 1F-6 Emergency Core Cooling System (ECCS System)

|                      |                        | Location of installation           | Seismic class                      | Status at seismic scram | Status during period from seismic scram to immediately before attack of tsunami | After attack of tsunami | Remarks |  |
|----------------------|------------------------|------------------------------------|------------------------------------|-------------------------|---|-------------------------|---------|--|
| Cooling function     | ECCS system            | RHR (A)                            | R/B basement 2nd floor (OP. -1000) | A                       | ○   | ○<br>Note 1             | ○       | Both the power supply and seawater system (CCSW) were lost after the tsunami.  |
|                      |                        | RHR (B)                            | R/B basement 2nd floor (OP. -1000) | A                       | ⊙<br>SHC operation  | ○                       | ⊙       | Both the power supply and the seawater system (RHRS A/C) were lost after the tsunami. A temporary submerged pump was installed on March 19 (recovery of power supply), has been in operation since then, and is now operating in the SHC and the emergency heat load mode alternately. |
|                      |                        | RHR (C)                            | R/B basement 2nd floor (OP. -1000) | A                       | ○   | ○<br>Note 1             | ○       | The seawater system (RHRS B/D) was lost after the tsunami. The installation of a temporary submerged pump made it possible for the system to operate.  |
|                      |                        | RHRS (A)                           | Outdoors (OP. 4000)                | A                       | ○   | ○<br>Note 1             | ×       | The main body was submerged into seawater, and the power supply was lost after the tsunami.  |
|                      |                        | RHRS (B)                           | Outdoors (OP. 4000)                | A                       | ⊙<br>SHC operation  | ○                       | ⊙       | The main body was submerged into seawater, and the power supply was lost after the tsunami. A temporary submerged pump was installed on March 18 and can be used by receiving power from temporary power source (one unit for RHRS A/C).   |
|                      |                        | RHRS (C)                           | Outdoors (OP. 4000)                | A                       | ○   | ○<br>Note 1             | ×       | The main body was submerged into seawater, and the power supply was lost after the tsunami.  |
|                      |                        | RHRS (D)                           | Outdoors (OP. 4000)                | A                       | ⊙<br>SHC operation  | ○                       | ⊙       | The main body was submerged into seawater, and the power supply was lost after the tsunami. A temporary submerged pump was installed on March 18 and can be used by receiving power from temporary power source (one unit for RHRS A/C).   |
|                      |                        | LPCS                               | R/B basement 2nd floor (OP. -1000) | A                       | ○   | ○<br>Note 1             | ○       | Both the power supply and seawater system (CCSW) were lost after the tsunami.  |
|                      |                        | HPCS                               | R/B basement 2nd floor (OP. -1000) | A                       | ○   | ○<br>Note 1             | ○       | Both the power supply and seawater system (CCSW) were lost after the tsunami.  |
|                      | Injection into reactor | RCIC                               | R/B basement 2nd floor (OP. -1000) | A                       | -   | -                       | -       | Stopped for periodical inspection  |
|                      |                        | MUWC (Alternative water injection) | T/B basement (OP. -3400)           | B                       | ⊙   | ⊙                       | ⊙       | B system is D/G. The system is operating by the activation of system B and the reception of power from the system D power supply.  |
|                      | Cooling pool           | SFP cooling (FPC system)           | R/B 4th floor (OP. 34000)          | B                       | ⊙   | △                       | ○       | The regular power supply was lost after the earthquake; the seawater system (SW) was lost after the tsunami.   |
|                      |                        | SFP cooling (RHR system)           | R/B basement 2nd floor (OP. -1000) | A                       | ○   | ○<br>Note 1             | ×       | A temporary submerged pump was installed on March 18 and can be used by receiving power from temporary power source (one unit for RHRS A/C).<br>* The pump is now operating in the SHC and the emergency heat load mode alternately.   |
| Containment function | Containment facility   | Reactor building                   |                                    | A                       | ○   | ○<br>Note 1             | ×       | Holes were made on the roof top on March 18 after the tsunami (prevention of hydrogen accumulation; preventive maintenance).   |
|                      |                        | Reactor containment                |                                    | A                       | ○   | ○                       | ○       | The reactor containment pressure showed no indication of damage.   |
| Other facilities     |                        |                                    |                                    |                         |   |                         |         |  |

(Legends) ⊙: Operating ○: Standby ×: Function loss or removal from standby -: Stopped for periodical inspection (no function required)

Note 1: Unit 5, where a relatively large tremor was observed at the main shock, used the residual heat removal system on March 19 after the earthquake occurred. Major damage on each system and facility was also not found by patrols by the shift personnel. In addition, the maximum acceleration in the observation records lately obtained in the basement of the reactor building, where those apparatuses were installed, was sufficiently less than the acceleration at which it had been confirmed that the dynamic functionality of the apparatuses had been maintained.  
Accordingly, each function was assumed to be generally ensured.  
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(May 23, 2011, TEPCO)