

Behavior of Plants after the Accident

November 30, 2011

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This material includes undisclosed information which is not mentioned in "Plant Parameter"

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Behavior of temperatures and pressures at Unit 1 (Whole behavior)

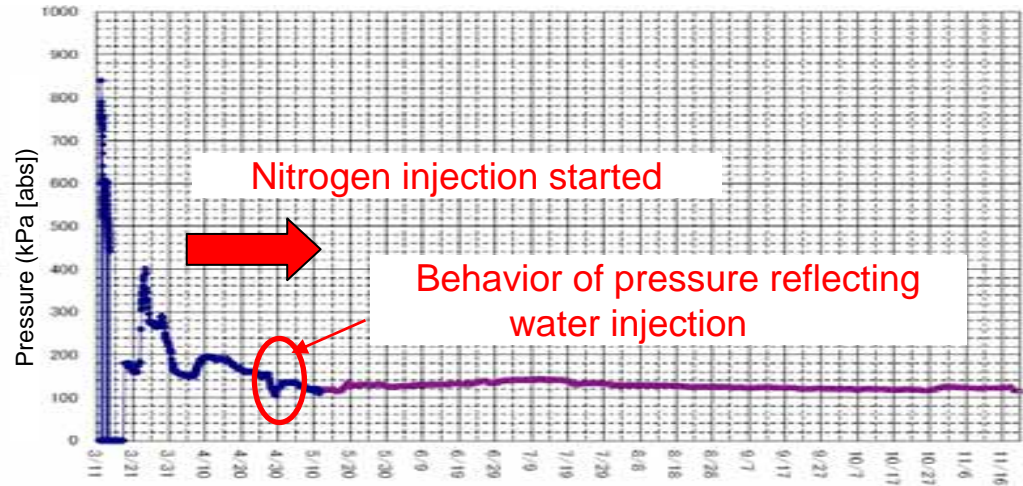
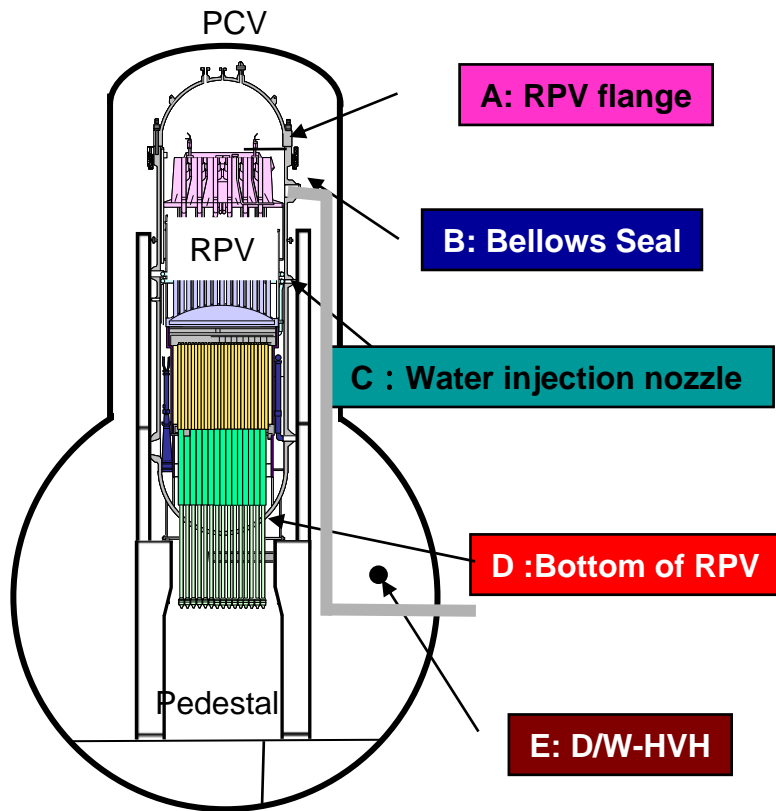


Figure-1 Behavior of D/W pressures after the accident

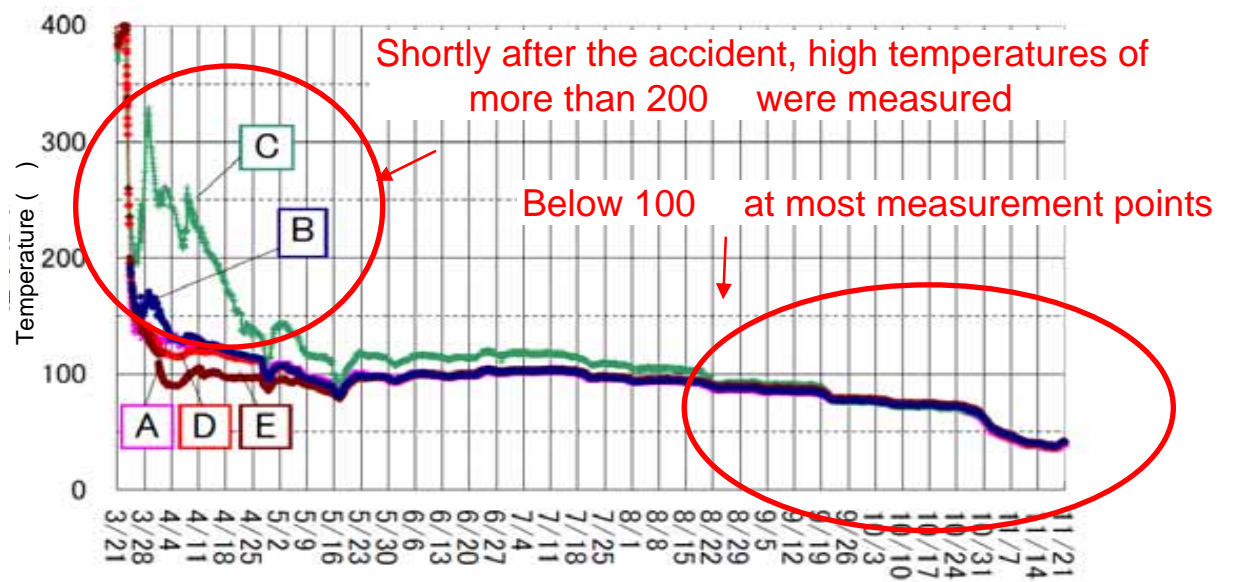


Figure-2 Behavior of temperatures after the accident

Behavior of temperature at Unit 1 (Water temperature of CRD housing and Suppression pool)

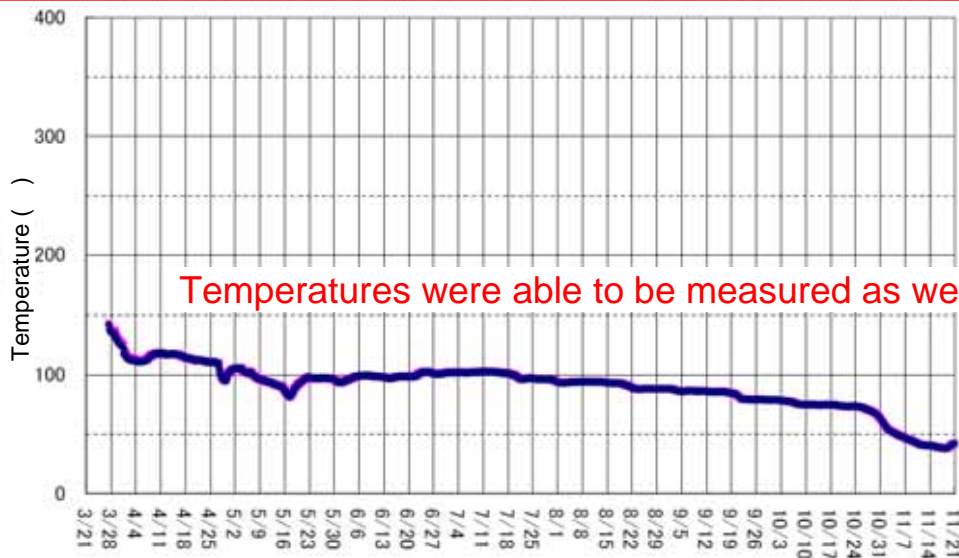


Figure-3 Behavior of temperature at CRD housing

Record of changes of the water injection volume

10/28	3.8	4.5m ³ /h
10/29	4.5	5.5m ³ /h
10/30	5.5	6.5m ³ /h
10/31	6.5	7.5m ³ /h
11/18	7.5	5.5m ³ /h

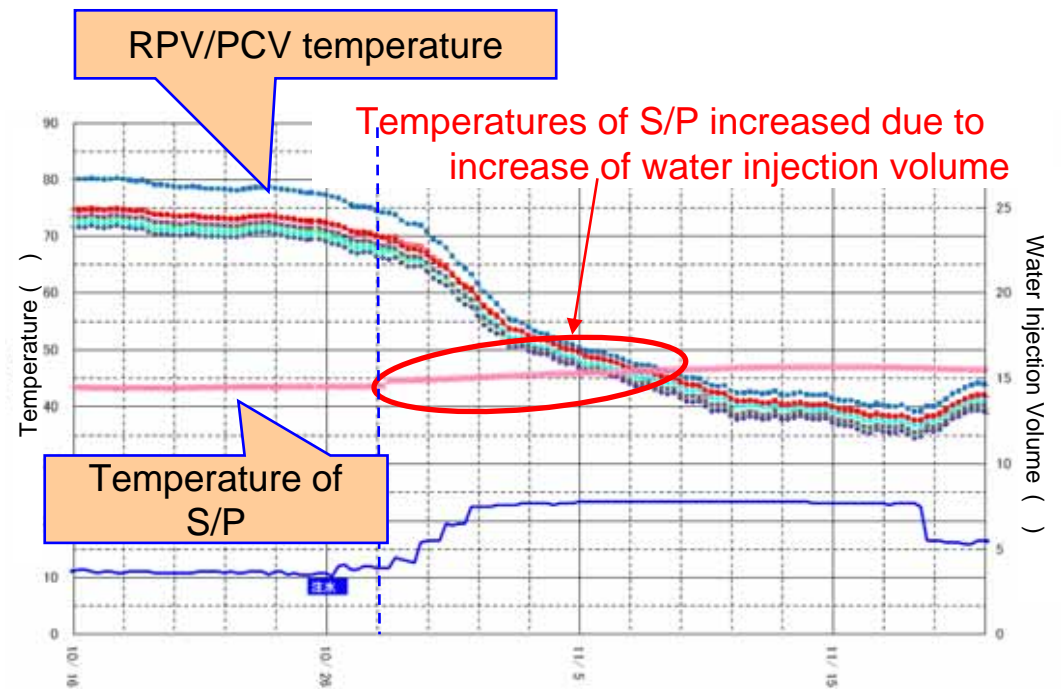


Figure-4 Behavior of temperatures after increase of water injection volume on 10/28

Knowledge acquired from behavior of temperature and pressure at Unit 1

- Knowledge acquired from behavior from March to May
 - When temperature of each point began to be able to be measured, temperatures of RPV exceeded 400 °C at several points.
 - At some facilities such as CRD housing at the bottom of RPV, temperatures were able to be measured.
 - Steel temperature of RPV remained at nearly 100 °C ~ 120 °C and temperature at several measurement points reflected changes of water injection volume
 - Temperatures were remained relatively high at several points of upper part of RPV.
- Knowledge acquired from behavior from May to September
 - Difference in temperatures at upper part of RPV and at the bottom of the RPV decreased.
 - As of August, temperature at the bottom of RPV became lower than saturation temperature, and trend of lowering of temperature continued.
- Knowledge acquired from behavior after October
 - From late October, as water injection volume increased, temperature of each part of RPV/PCV decreased rapidly. On the other hand, after increase of water injection volume, temperature of S/C pool increased and exceeded that of each part of RPV/PCV.

Behavior of temperatures and pressures at Unit 2 (Whole behavior)

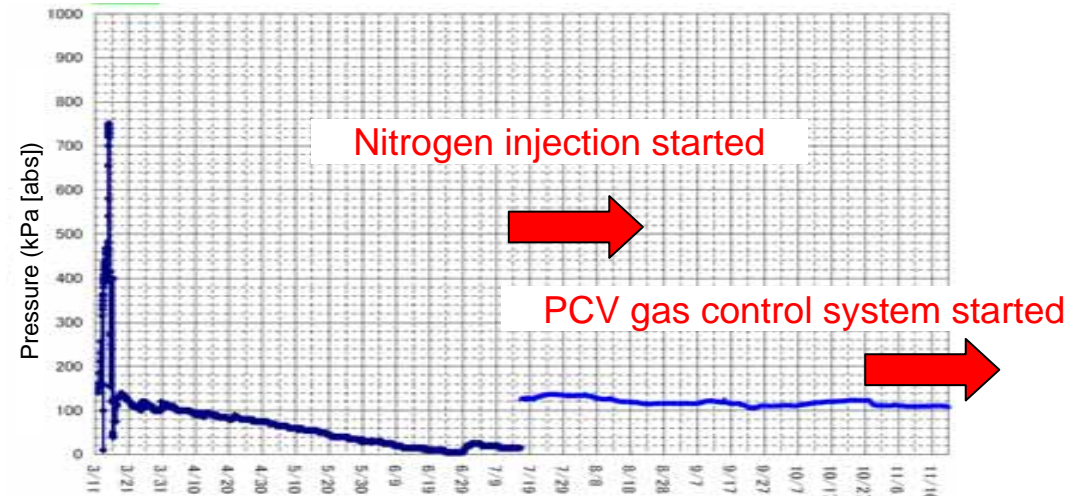
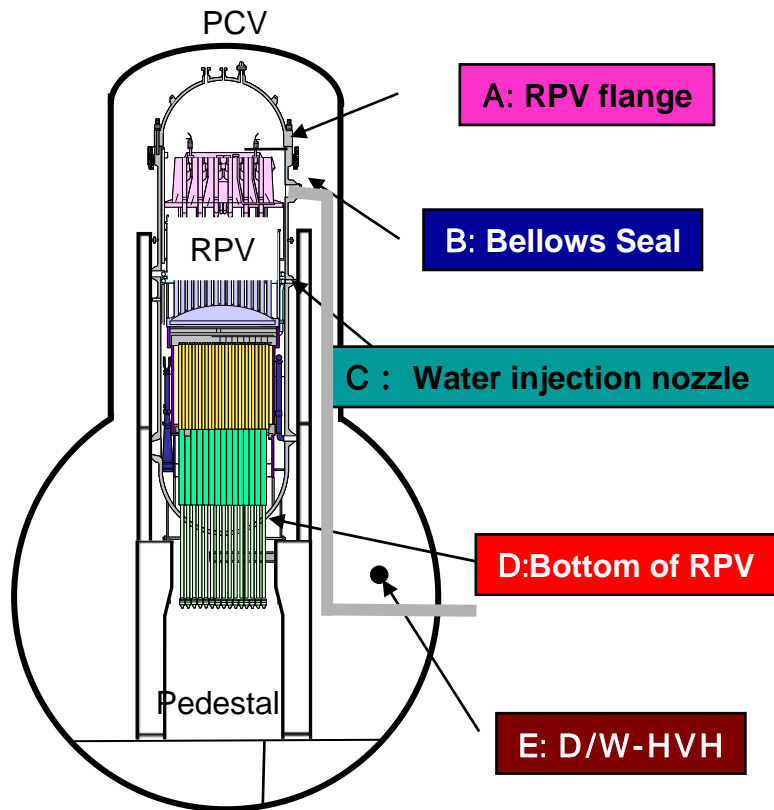


Figure-5 Behavior of D/W pressures after the accident

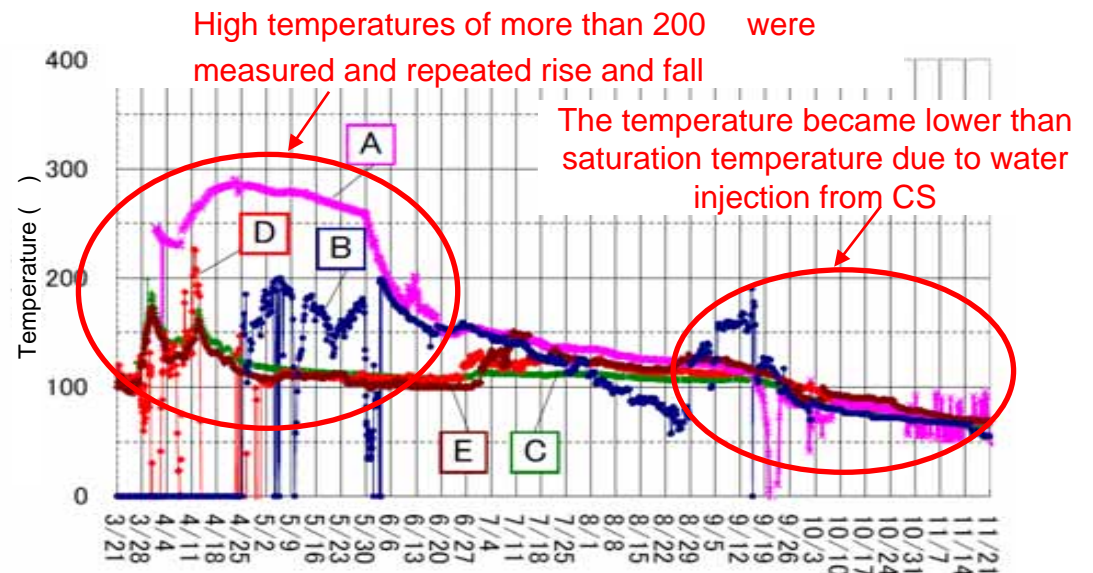


Figure-6 Behavior of temperatures after the accident

Behavior of temperatures at Unit 2 (Temperature of CRD housing and SRV)

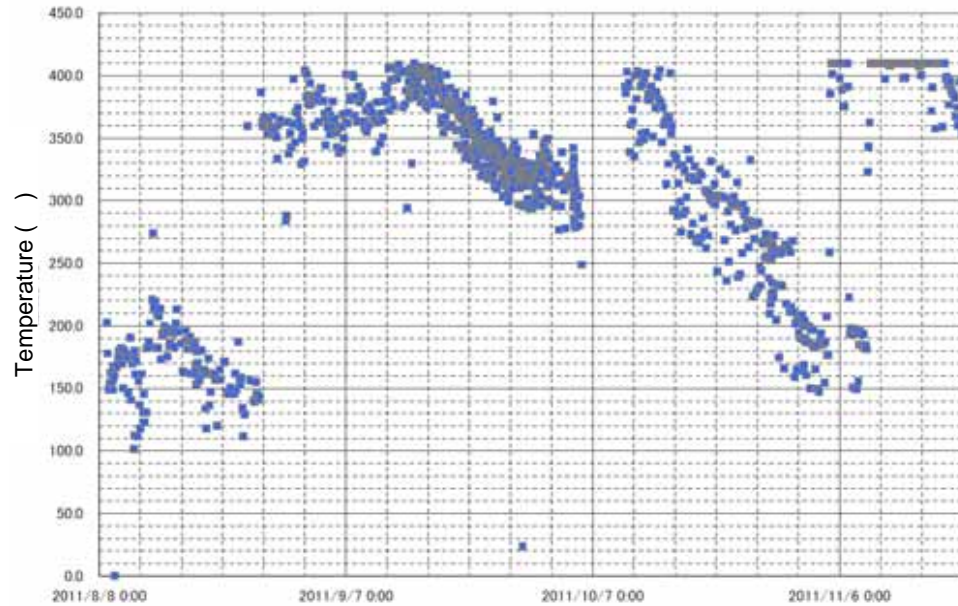


Figure-7 Behavior of temperature at CRD housing

() The temperature out of measure range were not plotted in this graph.

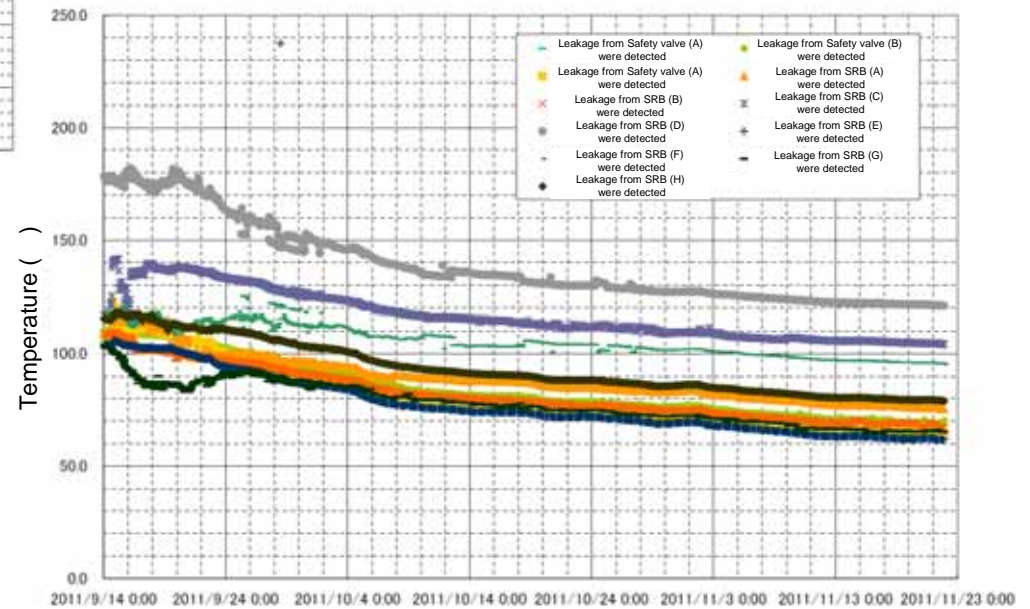


Figure-8 Behavior of temperature when leakage from safety valve and SRV were detected

Knowledge acquired from behavior of temperature and pressure at Unit 2

- Knowledge acquired from behavior from March to May
 - Temperature at the bottom of RPV remained at nearly 100 ~ 120 °C.
 - Temperature at several measurement points reflected changes of water injection volume
 - Temperatures were remained relatively high at upper part of RPV.
- Knowledge acquired from behavior from May to September
 - Temperature at bottom of RPV indicated around the saturation temperature after water injection from reactor feed water system.
 - Temperatures were remained relatively high at upper and middle part of RPV.
- Knowledge acquired from behavior after October
 - Measured temperature at upper part of RPV decreased due to water injection from core spray system that passed core part directly. After we increased the water injection volume, the temperature became lower than saturation temperature.
 - Ambient temperature of PCV was lower than saturation temperature. Yet, temperatures were remained high (higher than saturation temperature) at several points (CRD housing and SRV).

Behavior of temperatures and pressures at Unit 3

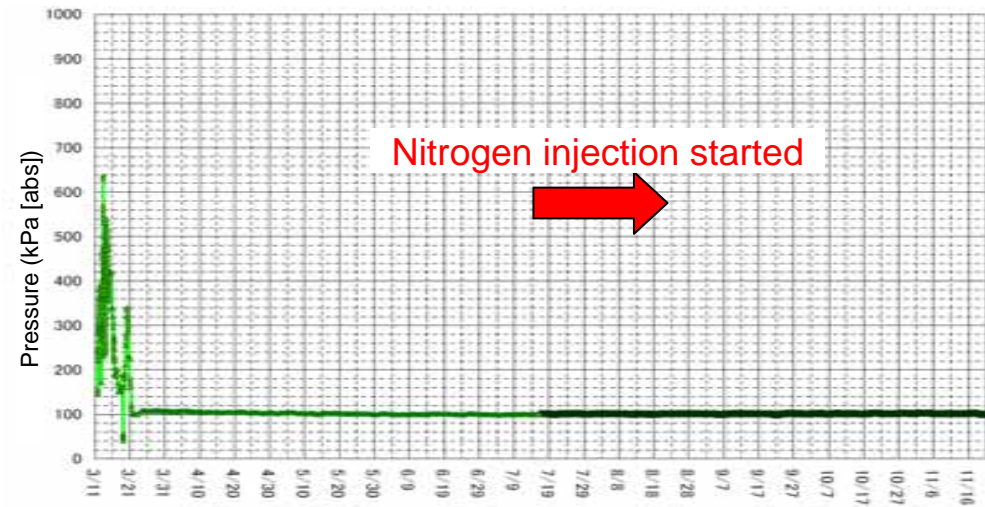
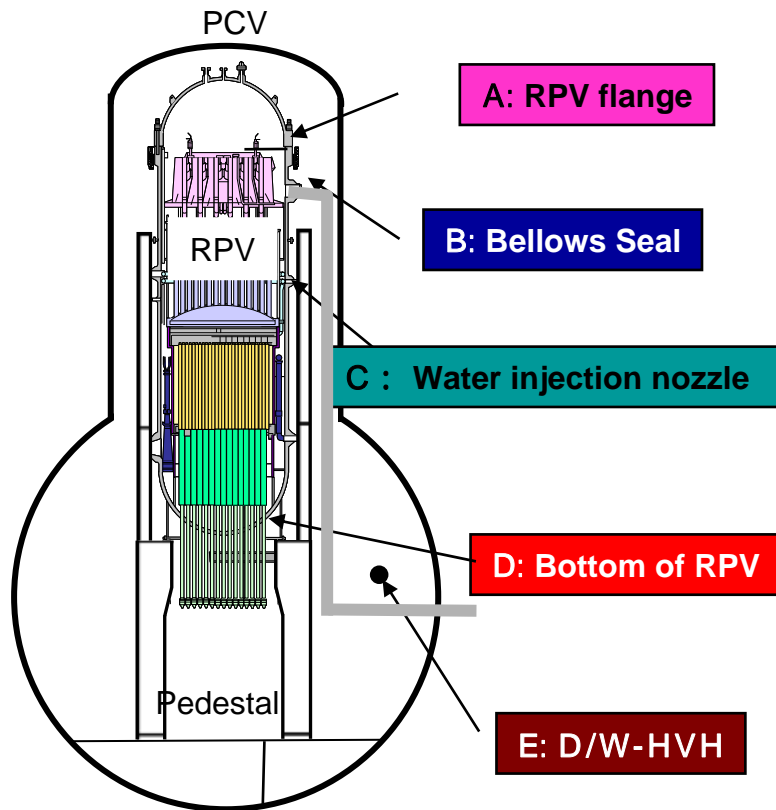


Figure-9 Behavior of D/W pressures after the accident

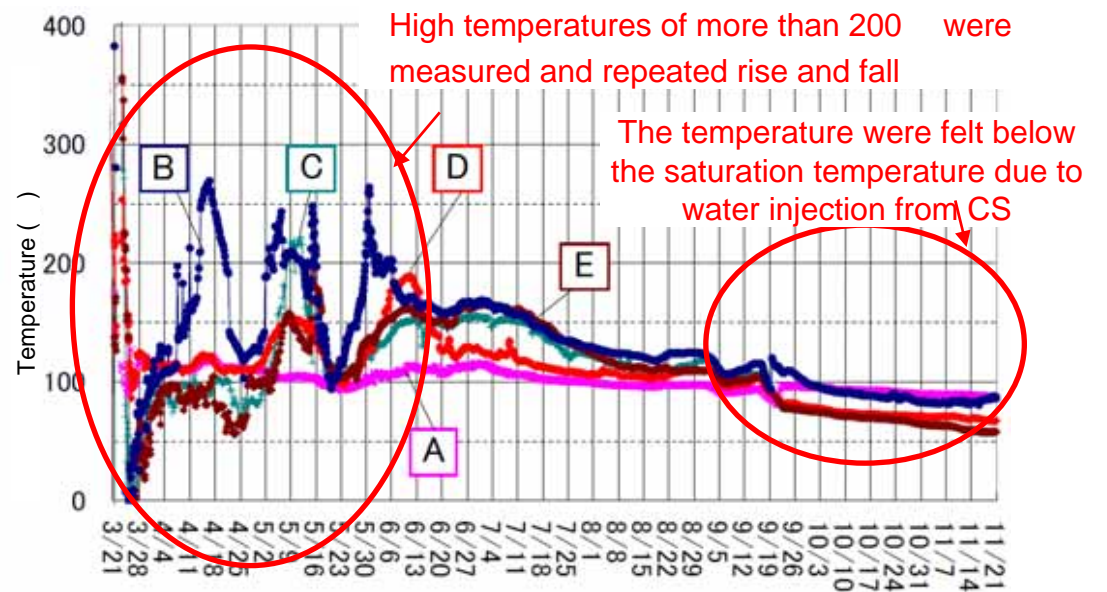


Figure-10 Behavior of temperatures after the accident

Behavior of temperatures and pressures at Unit 3 (Temperature of S/P and bellows seal)

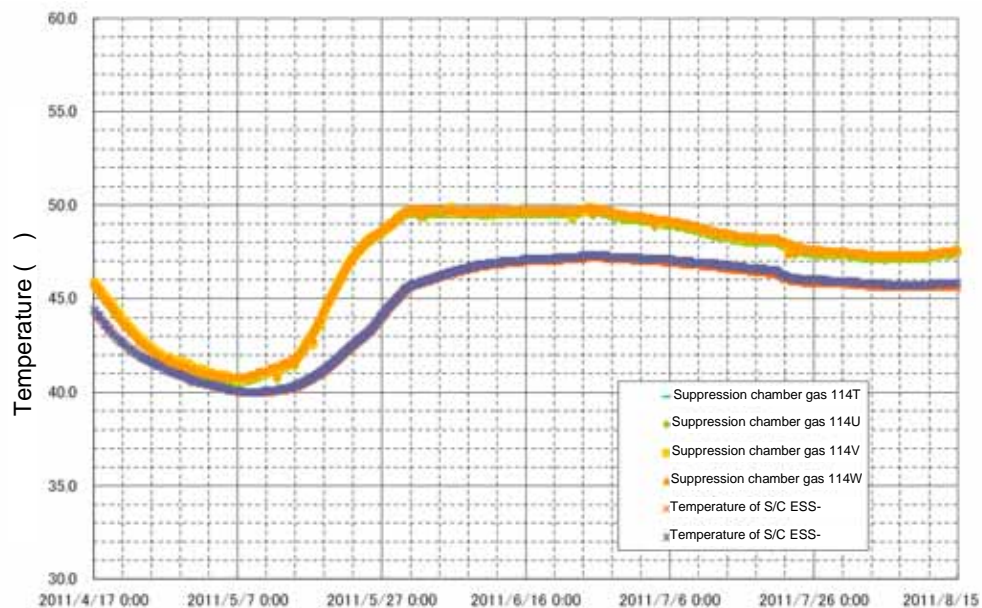


Figure-11 Behavior of temperature of SP gas and SC water

Record of changes of the water injection volume

5/12	9	12m ³ /h
5/13	12	15m ³ /h
5/17	15	18m ³ /h
5/20	18	21m ³ /h
5/23	21	18m ³ /h

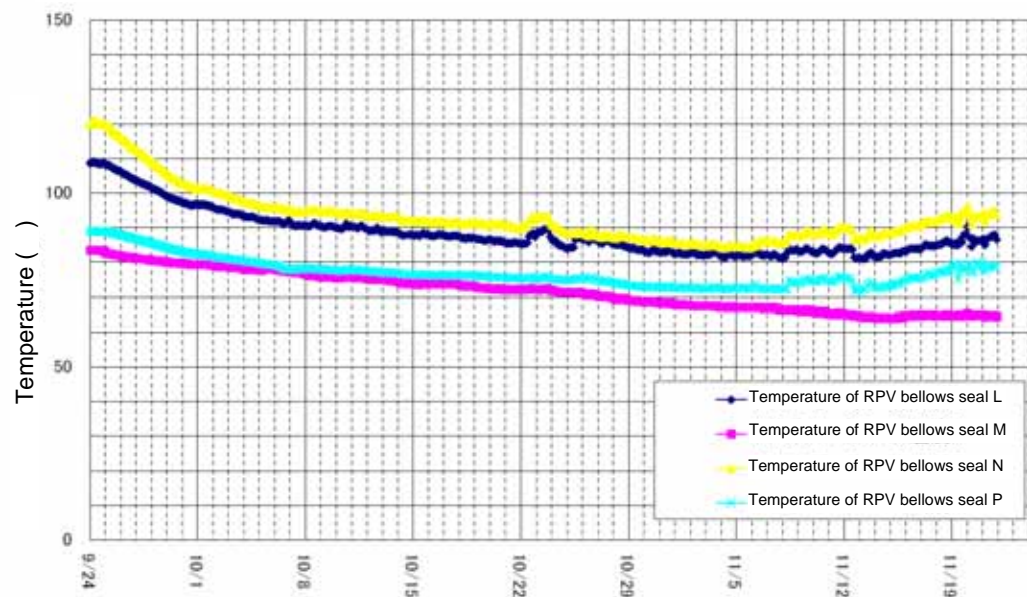


Figure-12 Behavior of temperature of RPV bellows seal

Knowledge acquired from behavior of temperature and pressure at Unit 3

- Knowledge acquired from behavior from March to May
 - Steel temperature of RPV remained at nearly 100 ~ 120 .
 - Temperature at several measurement points reflected changes of water injection volume.
 - Temperature at several measurement points increased from May.
- Knowledge acquired from behavior from May to September
 - Overheat of whole RPV was continued even though reactor feed water system had operated.
 - Temperature of S/P water and S/C gas were increased due to increase of water injection volume.
- Knowledge acquired from behavior after October
 - Measured temperature at upper part of RPV decreased due to water injection from core spray system that passed core part directly.
 - The temperature became lower than 100 in late September by increasing the water injection.
 - Ambient temperature of PCV had been lower than saturation temperature. Yet, the thermometer infrequently indicated high (higher than saturation temperature) at several points (bellows seal of RPV and SRV) after the temperature of RPV became lower than 100 .