

Summary of Progress Status of “Roadmap towards Restoration from the Accident at Fukushima Daiichi Nuclear Power Station, TEPCO”

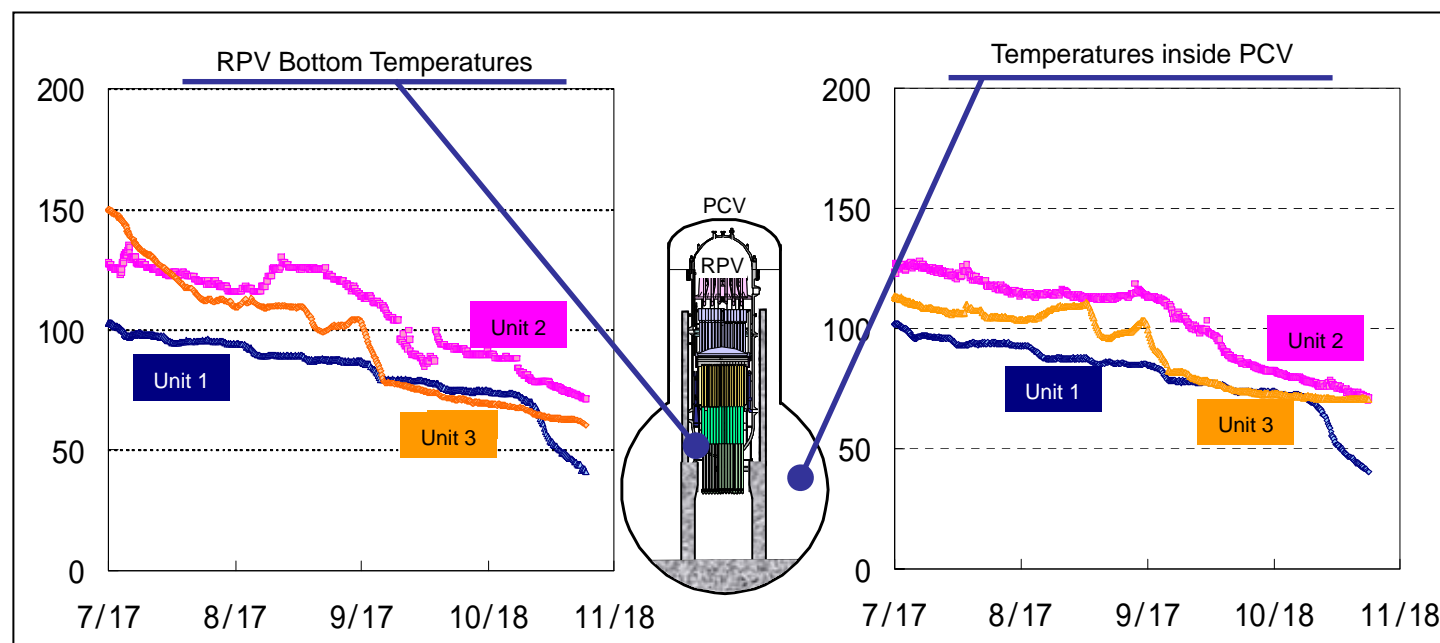
1. Basic policy (no change)

By bringing the reactors and the spent fuel pools to a stable cooling condition and mitigating the release of radioactive materials, we will make every effort to enable evacuees to return to their homes and for all citizens to be able to secure a sound life.

2. Targets and achievement date, etc.

[Step 2: Release of radioactive materials is under control and radiation doses are being significantly held down]

- Aim to achieve within this year. As for [Issue (2) Spent fuel pools], [Issue (3) Accumulated water], [Issue (4) Groundwater], [Issue (5) Atmosphere/Soil], [Issue (6) Measurement, Reduction and Disclosure] and [Issue (7) Tsunami, Reinforcement, etc.], the Step 2 targets have already been achieved.
- While keeping the total volume of accumulated water to a level that is able to withstand heavy rains and long-term processing facility outages, the circulating water cooling has been ongoing.
- RPV bottom temperature was 37 °C for Unit 1, 69 °C for Unit 2 and 69 °C for Unit 3 (as of Nov. 16), having stabilized below 100 °C.
- The temperature inside the PCVs was 39 °C for Unit 1, 70 °C for Unit 2 and 59 °C for Unit 3 (as of Nov. 16), having stabilized below 100 °C as well as the RPV bottom temperatures. Hence if damaged fuels have leaked into the PCVs, steam generation would be suppressed due to sufficient cooling, thus the release of radioactive materials from the PCVs has been kept under control.
- The current release rate of radioactive materials (Cesium) from the PCVs is estimated to be approx. 0.06 billion Bq/h. The radiation exposure at the site boundaries due to this release is assessed at 0.1 mSv / year at the maximum that is below the target of 1 mSv / year.
- Under careful evaluation to ensure the adequacy of the mid term security of the circulating water cooling system. Step 2 will be accomplished after confirming the reach of a “cold shutdown condition”.

**3. Summary of the past one month and future plans (major changes)****[Issue (4) Groundwater]: Began the water shielding wall construction, and achieved this Step 2 target**

- Began construction work of the water shielding wall (Oct. 28). Geological investigations such as land survey or boring are underway.

[Issue (5) Atmosphere/Soil]: Completed the Unit 1 reactor building cover, and achieved this Step 2 target

- The Unit 1 reactor building cover has been completed (Oct. 28).
- Debris removal at the upper part of Units 3 and 4 has been ongoing.
- The PCV gas control system in Unit 2 has begun operating (Oct. 28).
 - Xenon (noble gas) was detected. However, an assessment determined that it was generated due to NOT a critical reaction, but due to spontaneous fission.
 - The concentration of hydrogen gas in the PCV is also being monitored, and being controlled via the regulation of the nitrogen gas injection volume.
- Installation work of the PCV gas control system in Units 1 and 3 has begun (Unit 1- Oct.10, Unit 3- Sep 30).

[Issue (6) Measurement, Reduction and Disclosure]: Estimated the amount of radioactive materials currently being released from the PCVs

- Estimated the current release rate (Cesium) from the PCVs of Units 1-3 based on the airborne radioactivity concentration (dust concentration) at the upper parts of the reactor buildings, etc.
 - The current total release rate from Units 1-3 based on the assessment this time is estimated to be approx. 0.06 billion Bq/h at the maximum, which is 1/13,000,000 of the release rate at the time of the accident.
 - The radiation exposure per year at the site boundaries is assessed at approx. 0.1 mSv / year at the maximum based on the aforementioned release rate (The target is 1 mSv / year, excluding the effect of the radioactive materials already released up until now).
- Detailed monitoring has begun at the area where the government shall implement decontamination based on the “Act on Special Measures concerning the Handling of Environment Pollution by Radioactive Materials” (Nov. 7).
- “Decontamination model project at the Restricted Area or the Deliberate Evacuation Area, etc.” has begun (Nov. 8).
- Basic Policy based on “Act on Special Measures concerning the Handling of Environment Pollution by Radioactive Materials” was decided in cabinet (Nov. 11).

[Action plan for mid and long-term issues] Directed to formulate mid and long-term roadmap

- NISA released the “the concept of securing the mid-term safety” (Oct. 3.)
 - TEPCO reported on the operating plan as well as the safety assessment results regarding the circulating water cooling system (Oct. 17, Nov. 9). Other systems, etc. shall be reported on as well in a rapid manner.
 - NISA is carefully reviewing that the mid-term safety is secured.
- Mr. Edano, The Minister of Economy, Trade and Industry, together with Mr. Hosono, The Minister for the Restoration from and Prevention of Nuclear Accident, directed TEPCO, ANRE and NISA to formulate “the mid and long-term roadmap towards the decommissioning of Units 1-4 at TEPCO’s Fukushima Daiichi Nuclear Power Station” (Nov.9).