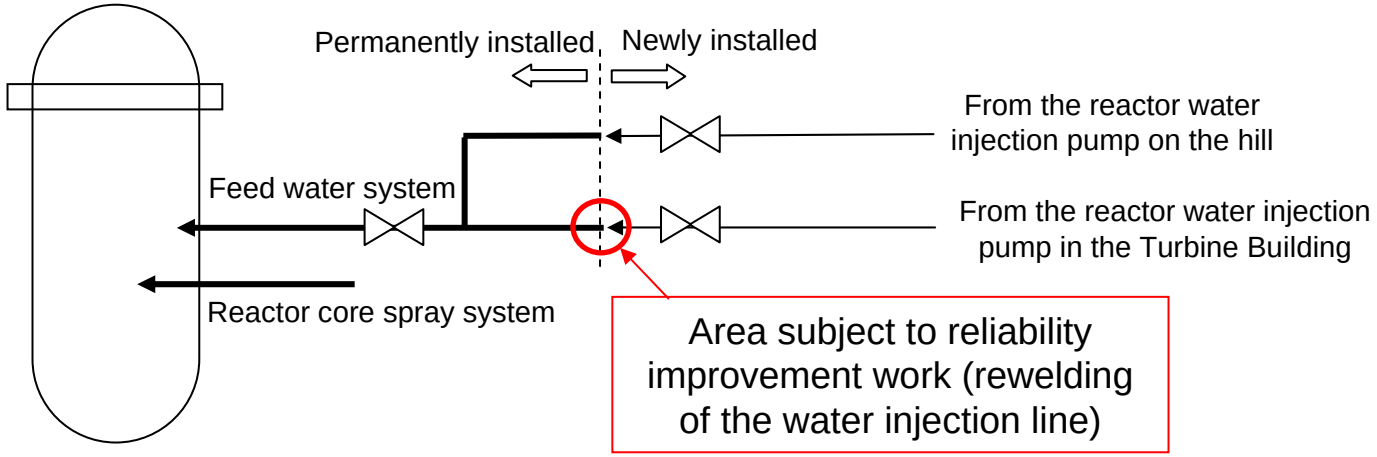
Reliability Improvement of the Feed Water System for Reactor Injection at Units 1-3 at Fukushima Daiichi Nuclear Power Station

- Reliability improvement work will be implemented for the feed water system currently used for reactor injection to accommodate long-term use considering that the system was installed partially in a simplified fashion with restrictions due to the high radiation dose right after the accident.
  - Reliability improvement work for Units 2 and 3 is planned to be implemented from early to mid March. (The implementation timing for Unit 1 is currently being discussed.)
- As the reliability improvement work at Units 2 and 3 requires the water injection from the feed water system to be suspended (All amount will need to be injected by the reactor core spray system), reactor water injection utilizing only the reactor core spray system will be performed for about 2 days before starting the reliability improvement work in order to confirm that there is no significant impact on the reactor cooling.
  - Unit 2: February 20-22 (Planned), Unit 3: February 25-27(Planned)
- Reliability improvement work at Unit 1 will not require the feed water system to be suspended. However, the same may be done depending on the detailed implementation method to be determined.



Overview of the area subject to reliability improvement work at Units 2 and 3

Items to be Monitored during the Suspension of the Feed Water System of the Reactor Water Injection System

Items subject to intensive monitoring	Frequency	Criteria
RPV bottom temperature	Every hour	Must be stable at 65℃*1 or less.
Reactor injection water amount	Every hour	Necessary water injection amount must be secured.
PCV gas control system dust monitor	Every 6 hours	Significant increase tendency must not continue.

*1 The monitoring point is set at 65℃ with a sufficient margin to the maximum allowed temperature (80℃).

- Items subject to intensive monitoring
  - RPV bottom temperature is subject to intensive monitoring considering that the total amount of water injected into the PCV still remains the same (as it is merely a change in the water allocation between the reactor core spray system and the feed water system).
  - The dust monitor is monitored for the purpose of checking for an abnormal increase in the release of radioactive materials.
- Temperature evaluation based on the results of the preliminary check (2 days)
  - If the RPV bottom temperature is estimated to exceed 65℃ during the reliability improvement work (7 days) based on the PCV/RPV ambient temperature increase rate, etc. obtained at the preliminary check (2 days), temperature evaluation will be performed separately.
- Termination of the preliminary check (2 days)
  - In the case that abnormality is found with reactor cooling during the preliminary check (2 days), the preliminary check will be terminated and the allocation of injection water amount will be changed back to normal.
- Measures to be taken in the case of abnormality found during the reliability improvement work (7 days)
  - Increase the amount of water injection from the reactor core spray system.