Announcement (August 23, 2011)

Fukushima Daiich Nuclear Power Station - Unit 3 Diversification of Method of Water Injection to Nuclear Reactor by Adding Core Spray System Line

August 23, 2011
Tokyo Electric Power Company

To bring the reactors a state of "cold shutdown" more efficiently, we will implement an additional water injection method utilizing Core Spray System (CS) for Unit 3 in addition to Feed Water System (FDW) that is currently in operation.

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Fukushima Daiichi Nuclear Power Station - Unit 3
Diversification of A Method of Water Injection to Nuclear Reactor by Adding Core Spray System Line

August 23, 2011

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東京電力 TEPCO

Objective of Diversification of Core Spray System

Target of Step 2

Reduction of Radiation Dose by Controlling Radioactive Material Release

<Goal>

- **To Bring a State of "Cold Shutdown" by Continuing Circulating Injection Cooling and Monitoring Pressure Vessel Temperature**

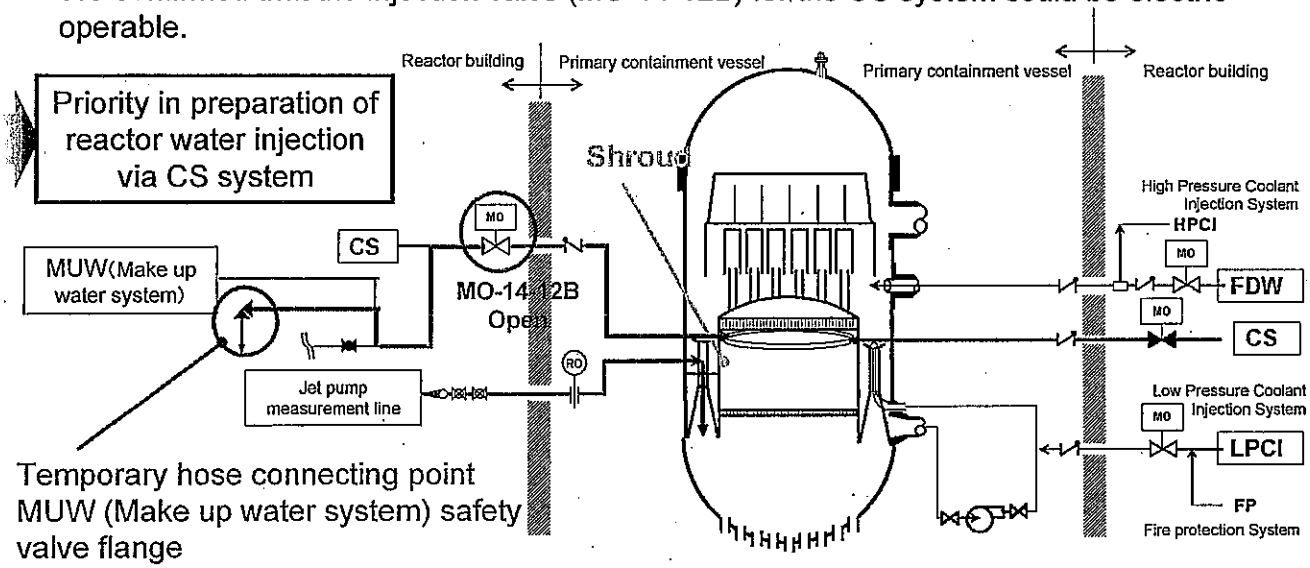
Water Injection by Core Spray System (CS) with High Cooling Efficiency in Addition to Feed Water System (FDW) of Unit 3 Currently in Operation

Use of CS System

- **Site Survey (Measurement of Radioactive Dose and Injecting Point etcetera) by Robot and Man on July 22 & 26**
- **Confirmation of Electric Operable Switching etcetera of Injection Valve (MO-14-12B) of CS System on August 3 & 9**

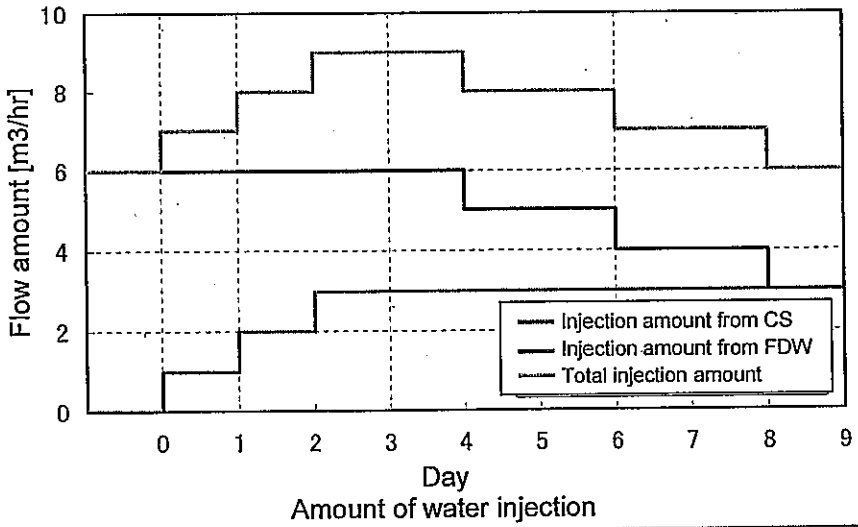
Selected Reactor Injection Line (CS Line)

- Based on the site survey, we selected the CS system with efficient cooling potential and the jet pump measurement line which measures flow of the jet pump.
- We confirmed that the injection valve (MO-14-12B) for the CS system could be electric operable.



Flow Adjustment after Addition of CS Line (FDW→FDW+CS)

- The flow of FDW is kept at 6m³/h and the flow of CS is increased gradually from 1m³/h to 2m³/h and to 3m³/h. Each flow will be kept for 1 day and monitor RPV temperature.
- After the above procedure, the flow of CS is kept at 3m³/h and the flow of FDW is reduced gradually from 6m³/h to 5m³/h, to 4m³/h and to 3m³/h. Each flow will be kept for 2 days and monitor RPV temperature.

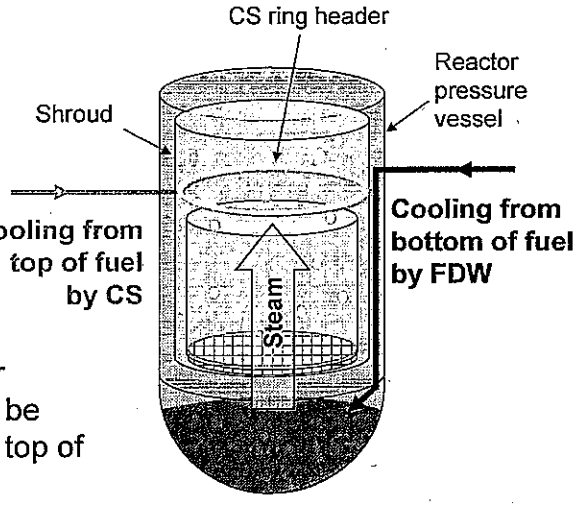


Amount of water injection

Expected Effects, Verification Method and Schedule

■ Expected Effects

- Temperatures of inside fuel and core internals will be reduced due to change from steam cooling to direct cooling by coolant water.
- The aforementioned temperature reductions will contribute to reduction of degree of superheat and top of reactor pressure vessel.



■ Verification Method

- The effects on temperature reduction of reactor pressure vessel by water injection from CS will be verified by confirming temperature reduction at top of reactor pressure vessel.

■ Schedule

- Test of removal of safety valve and installation of fixtures will be conducted at Unit 5 on August 22.
- Works (removal of safety valve, hose laying and connection and On-Off operation of MUW) will be conducted on August 25.
- The CS system will be commissioned on August 26.