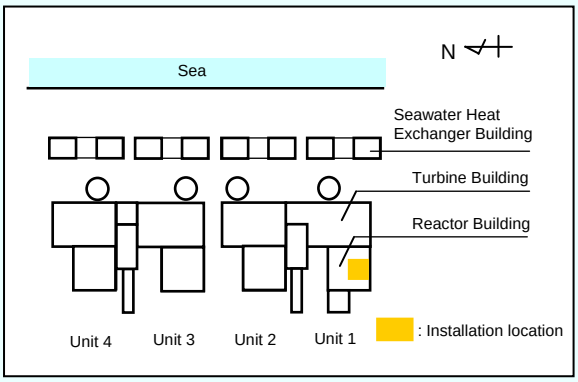
Permanent installation of the emergency diesel generator facilities (A) in Unit 1 Reactor Building Annex (February 13)

The emergency diesel generator facilities (A) damaged by the Tsunami (control panel, generator, diesel engine) in Unit 1 Reactor Building Annex was permanently installed on February 13 after function check was completed.



Trial operation (upper part of the diesel engine) [Permanent installation completed on February 1, 2013] (Photo taken on February 1, 2013)

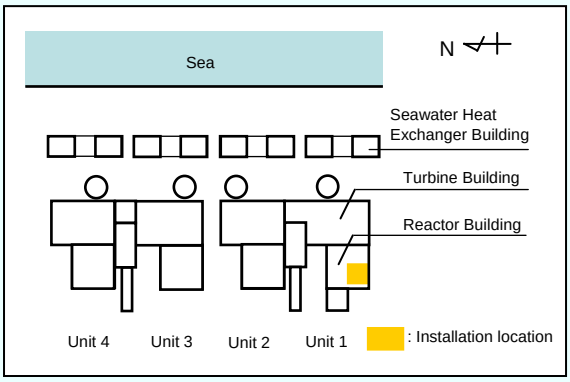
Trial operation (generator) [Permanent installation completed on February 13, 2013] (Photo taken on February 1, 2013)

Trial operation (lower part of the diesel engine) [Permanent installation completed on February 1, 2013] (Photo taken on February 1, 2013)

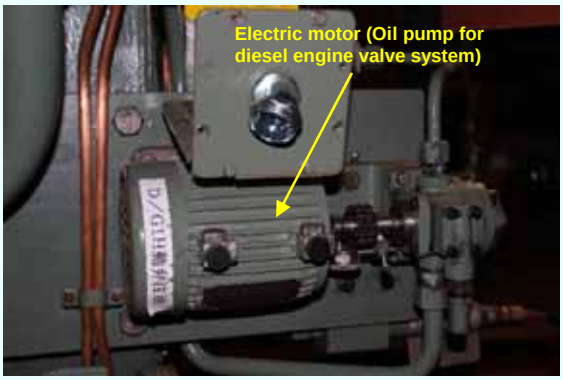
Trial operation (control panel) [Permanent installation completed on February 13, 2013] (Photo taken on February 1, 2013)

Carry-in and installation of the auxiliary facilities of the emergency diesel generator (H) in Unit 1 Reactor Building Annex (February 23)

The auxiliary facilities of the emergency diesel generator (H) damaged by the Tsunami (electric motors) in Unit 1 Reactor Building Annex were carried into the building and installed on February 23.



Electric motor (Fresh water heater pump*1) installation completed
(Photo taken on February 27, 2013)



Electric motor (Oil pump for diesel engine valve system*2) installation completed
(Photo taken on February 27, 2013)

Electric motor (Lubricating oil priming pump*3) installation [Completed on February 23, 2013]
(Photo taken on February 27, 2013)

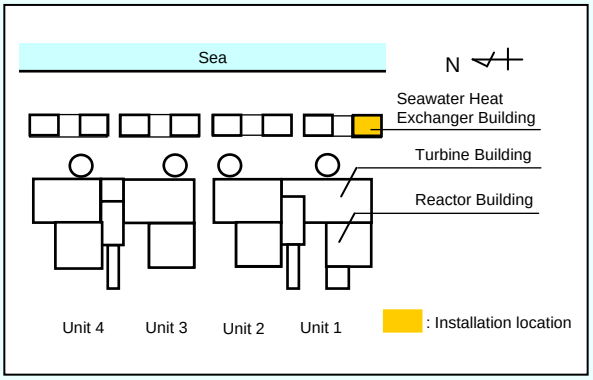
*1 Fresh water heater pump: Used for cooling the high temperature parts of the diesel engine such as the cylinder.

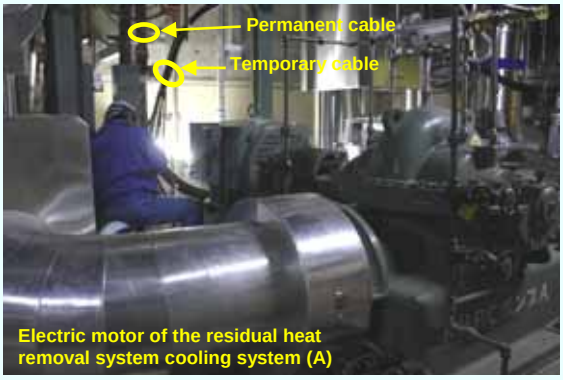
*2 Oil pump for diesel engine valve system: Used for feeding lubricating oil to the sliding portion of the diesel engine valve system (Suction/exhaust valves and the link mechanism to open and close these valves).

*3 Lubricating oil priming pump: Used for feeding lubricating oil to the piston, main bearing, generator bearing, etc. while the diesel engine is suspended (in stand-by state)

Permanent installation of the electric motors of the residual heat removal system cooling systems (A and C) in Unit 1 Seawater Heat Exchanger Building (February 12)

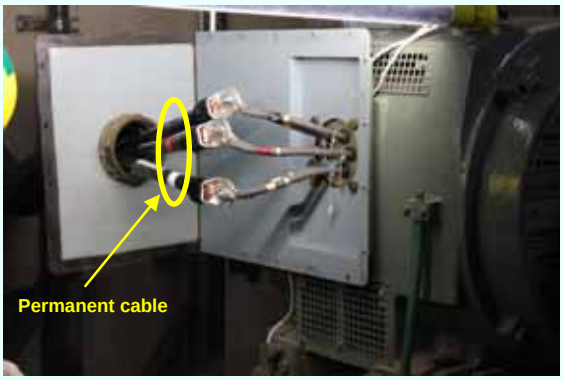
Since Unit 1 power panel (P/C 1C-2) damaged by the Tsunami was permanently installed, the power supply to the electric motors of the residual heat removal system cooling systems (A and C) was switched from temporary power supply to the permanent power panel on February 12. As the electric motors were confirmed to operate properly after switching the power supply, the permanent installation has been completed.





Temporary cable removal
(Photo taken on February 7, 2013)

Installation of the permanent cable terminals
(Photo taken on February 7, 2013)

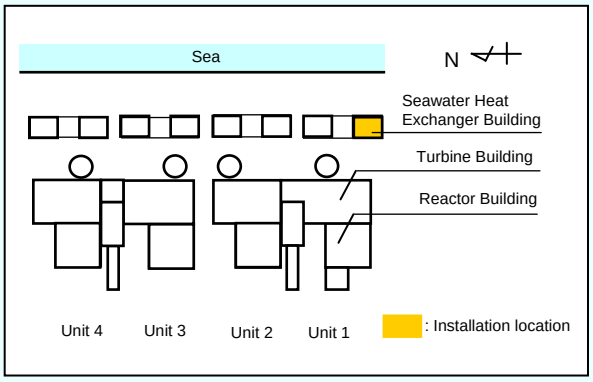


Switching to the permanent cable completed
(Photo taken on February 7, 2013)

Trial operation of the electric motor of the residual heat removal system cooling system pump (A) [Permanent installation (A&C) completed on February 12, 2013]
(Photo taken on February 7, 2013)

Permanent installation of the electric motors of the residual heat removal system cooling seawater systems (A and C) in Unit 1 Seawater Heat Exchanger Building (February 8)

Since Unit 1 power panel (P/C 1C-2) damaged by the Tsunami was permanently installed, the power supply to the electric motors of the residual heat removal system cooling seawater systems (A and C) was switched from temporary power supply to the permanent power panel on February 8. As the electric motors were confirmed to operate properly after switching the power supply, the permanent installation has been completed.



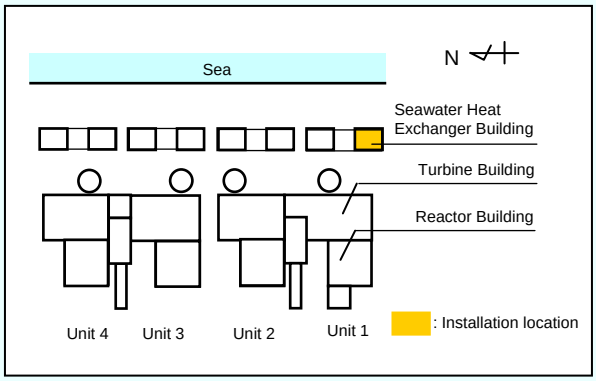
Before switching to the permanent cable
(Photo taken on February 8, 2013)

Switching to the permanent cable completed
(Photo taken on February 8, 2013)

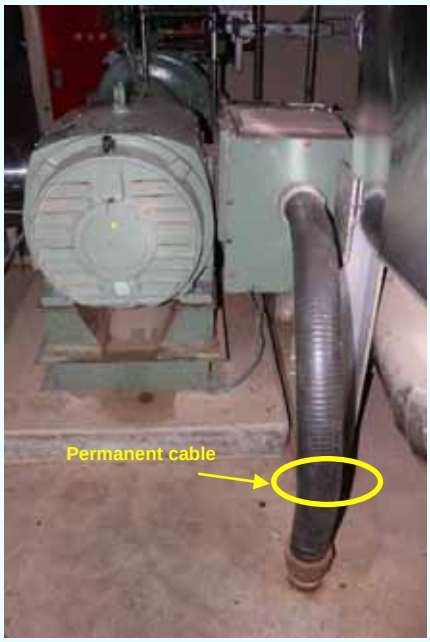
Trial operation of the electric motor of the residual heat removal system cooling seawater system pump (C)
[Permanent installation completed on February 8, 2013]
(Photo taken on February 8, 2013)

Permanent installation of the electric motor of the emergency diesel generator cooling system (A) in Unit 1 Seawater Heat Exchanger (February 5)

Since Unit 1 power panel (P/C 1C-2) damaged by the Tsunami was permanently installed, the power supply to the electric motor of the emergency diesel generator cooling system (A) was switched from temporary power supply to the permanent power panel on February 5. As the electric motor was confirmed to operate properly after switching the power supply, the permanent installation has been completed.



Before switching to the permanent cable
(Photo taken on February 5, 2013)

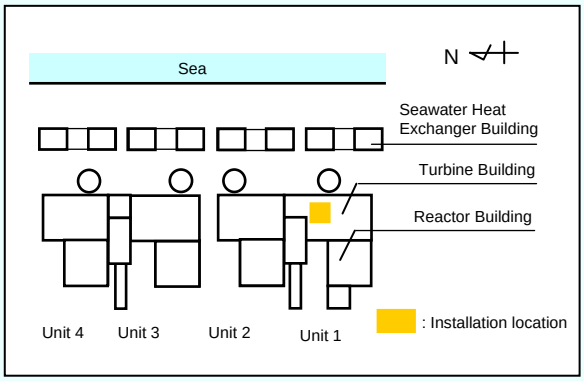


Switching to the permanent cable completed
(Photo taken on February 5, 2013)

Trial operation of the electric motor of the emergency diesel generator cooling system (A)
[Permanent installation completed on February 5, 2013]
(Photo taken on February 5, 2013)

Permanent installation of the electric motor of the make-up water condensate system (A) in Unit 1 Turbine Building (February 7)

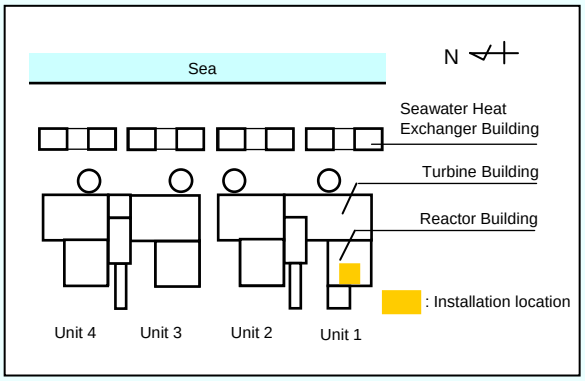
Since Unit 1 power panel (P/C 1C-1) damaged by the Tsunami was permanently installed, the power supply to the electric motor of Unit 1 make-up water condensate system (A) was switched from temporary power supply to the permanent power panel on February 7. As the electric motor was confirmed to operate properly after switching the power supply, the permanent installation has been completed.



Trial operation [Permanent installation completed on February 7, 2013]
(Photo taken on February 7, 2013)

Permanent installation of the electric motor of the low pressure reactor core spray system in Unit 1 Reactor Building (February 23)

After Unit 1 power panel (M/C 1C) damaged by the Tsunami was permanently installed, power supply was provided to the electric motor of Unit 1 low pressure reactor core spray system. As the electric motor was confirmed to operate properly as a result of trial operation, the permanent installation has been completed on February 23.



Trial operation [Permanent installation completed on February 23, 2013]
(Photo taken on February 23, 2013)

Permanent installation of Unit 1-2 discharge channel monitor (common facility) (February 18)

Unit 1-2 discharge channel monitor damaged by the Tsunami was replaced with a newly manufactured one. As the monitor was confirmed to operate properly as a result of function check, the permanent installation has been completed on February 18. (Previously announced on February 20, 2013)

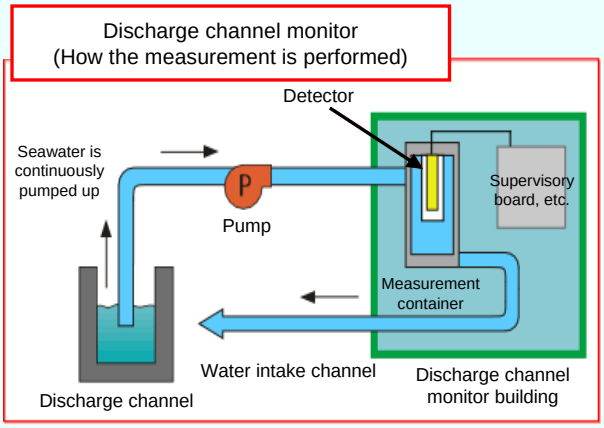
Overview of the discharge channel monitor

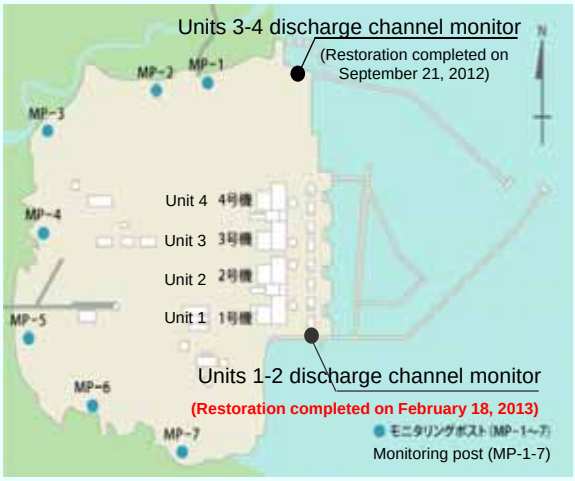
Function

The discharge channel is where the cooling water (seawater) used for transforming the steam generated in the reactor back to water, liquid waste (cleaning waste liquid, shower waste liquid, excessive plant water, etc.) and rainwater is discharged. The discharge channel monitor is installed at each discharge channel to measure the radiation dose of the liquid being discharged.

Radiation dose measurement

Seawater is continuously pumped up from the discharge channel and measured by the detector installed inside the Discharge Channel Monitor Building. The measurement results are recorded through the control board. After the measurement is done, the seawater is returned back to the water intake channel.





Function check
(Photo taken on February 12, 2013)

Function check [Permanent installation completed on February 18, 2013]
(Photo taken on February 12, 2013)