Status of Hamaoka Nuclear Power Station Units Nos. 1, 2 and 5

Attachment

1. Shipment of spent fuel from Hamaoka Nuclear Power Station Unit No. 1

One spent fuel assembly is currently being stored in the fuel storage pool of Unit No. 1. This spent fuel assembly (termed “damaged fuel assembly” below) has been stored in the fuel storage pool since a leak of radioactive substances was detected in December 1994.

(1) Method of shipment of damaged fuel assembly

The damaged fuel assembly being stored in Unit No. 1 will be loaded into a shipping container fitted with a fuel assembly storage container (see Figure 1), and will be shipped to Unit No. 5 for storage in the Unit No. 5 fuel storage pool.

The shipping container for the damaged fuel assembly was brought into the facility on November 15, 2012. At present, we are conducting the necessary procedures to obtain government permission for the shipment of the damaged fuel assembly to the Unit No. 5 fuel storage pool.

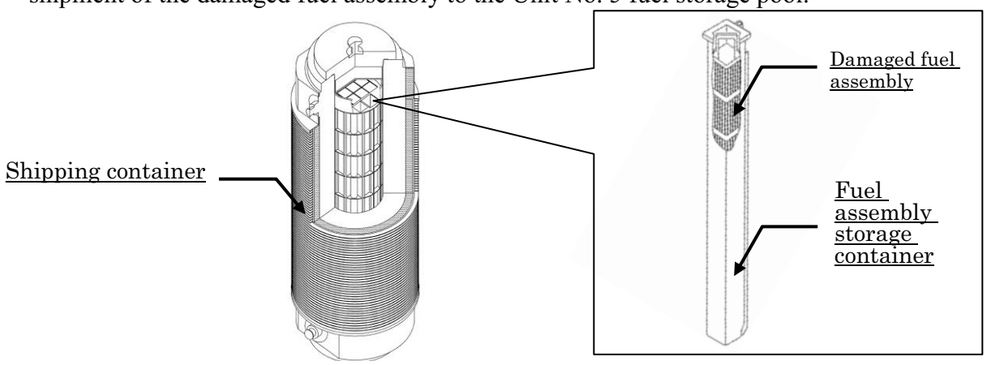

Figure 1　Diagram of fuel assembly storage container and shipping container holding damaged fuel assembly

(2) Inspection of damaged fuel assembly

An inspection of the damaged fuel assembly in December 1994 discovered no abnormalities such as significant damage or deformation, and it is therefore conjectured that the leak of radioactive substances from the damaged fuel assembly must have occurred through minute holes.

Because this was the first instance of a leak from a new fuel assembly, a further inspection was conducted in April 1995 in an attempt to determine new findings that would help to increase the reliability of fuel assemblies, and this inspection found that a crack had occurred in the circumferential direction of one of the fuel rods in the fuel assembly (see Figure 2).

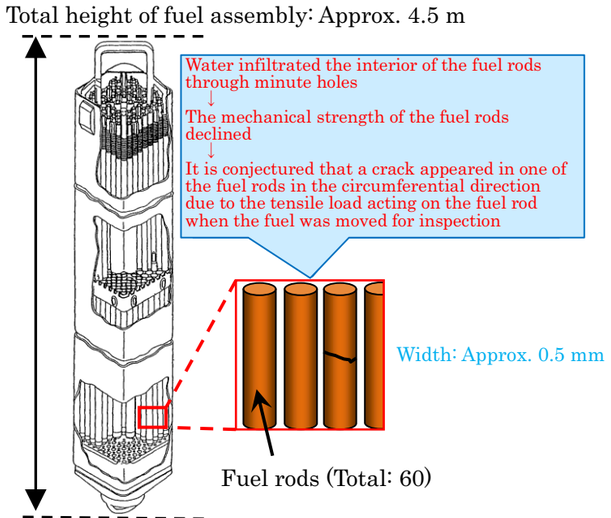

Figure 2　Status of damage to fuel assembly discovered in 1995 inspection

In addition to storing the damaged fuel assembly in the predefined location of the fuel storage pool, we will monitor the water quality and temperature of the pool and the level of radioactivity of the surrounding area.

We will conduct inspections including an external inspection of the damaged fuel assembly in preparation for its shipment, and will determine whether any changes in its state have occurred since 1995. Based on the state of the damaged fuel assembly in 1995, the existence of one damaged fuel rod has been set as the condition for use of the shipping container.

2. Shipment of spent fuel from Hamaoka Nuclear Power Station Unit No. 2

At present, 1,098 spent fuel assemblies are being stored in the fuel storage pool at Unit No. 2. The spent fuel being stored at Unit No. 2 is scheduled to be shipped to Unit No. 5 in shipping containers, following which it will be stored in the Unit No. 5 fuel storage pool.

We determined that in order to efficiently ship the spent fuel stored at Unit No. 2 and complete the shipment by the end of FY 2013, we would need an extra shipping container in addition to the one already on site, and we therefore brought another container into the facility on November 15, 2012. At present, we are conducting the necessary procedures to obtain government permission for the shipment of the spent fuel using the second shipping container, and when permission has been obtained and other necessary preparations completed, we will use the two shipping containers for the spent fuel assemblies.

3. Status of responses to damage to main condenser tubes in Hamaoka Nuclear Power Station Unit No. 5

On May 14, 2011, damage to the main condenser tubes of Unit No. 5 during the process of achieving cold shutdown following shutdown of the reactor resulted in the infiltration of seawater into the reactor systems, and we are therefore conducting salt removal procedures and inspecting and evaluating the equipment and the fuel.

(1) Status of responses to the present

Inside the reactor pressure vessel, immediately following infiltration, the seawater was diluted by the water for the pressure suppression chamber, and salt was removed via the reactor coolant purification system. As of the present, we have completed the process of removing the fuel assemblies inside the reactor pressure vessel, and we are commencing the inspection of the reactor pressure vessel and the internal reactor structures. To date, we have not detected any conspicuous corrosion or other abnormalities in the reactor pressure vessel or the internal reactor structures.

With regard to equipment other than the above, immediately following the infiltration of the seawater, we commenced salt removal procedures in sequence, and we are progressively examining pumps and heat exchangers in systems as we complete the salt removal. Up to the present, the results of disassembly inspections of equipment including the control rod drive water pumps, the residual heat removal pumps, and heat exchangers and valves in the reactor’s systems have shown overall a higher amount of adhesion of foreign matter and rust than was the case in previous inspections, but the level is such that it will be able to be removed during the cleaning process. In the case of equipment including the condensate collection pump outlet pipes, the adhesion of salt has resulted in corrosion in certain places, and we are currently examining the cause and formulating measures to respond.

External inspections of the fuel assemblies inside the reactor pressure vessel have not to date indicated that the infiltration of seawater has had any effect on the fuel.

The corrosion and other issues that have been detected to date will have no effect on the functions essential to maintaining the current state of cold shutdown of the reactor.

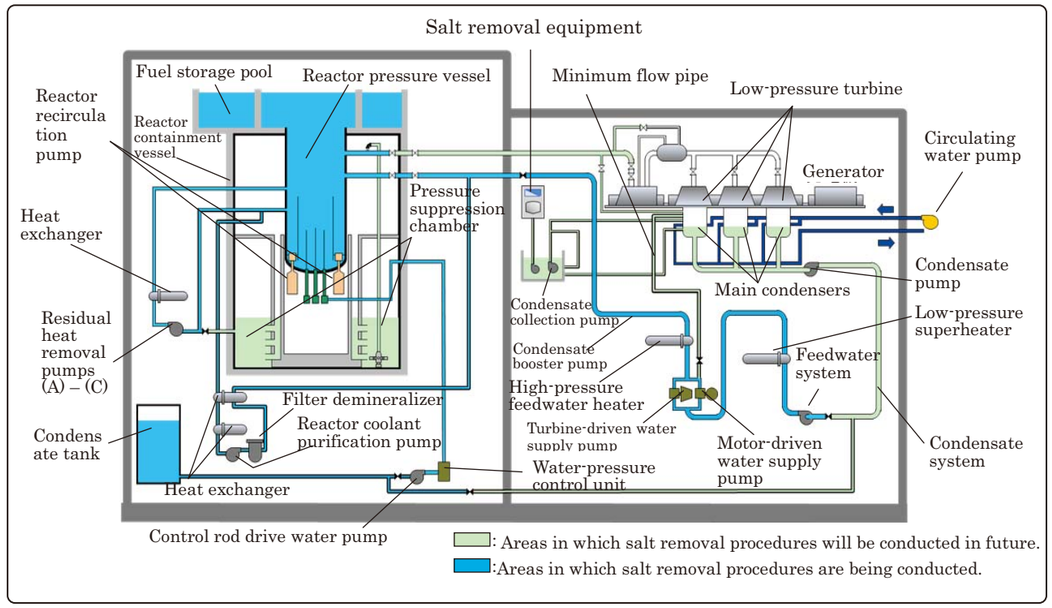

Figure 3　Status of progress of salt removal procedures

(2) Future responses

In order to ship the spent fuel from Units Nos. 1 and 2, it is necessary to ensure a space for operations in Unit No. 5, which will receive the fuel, and we will therefore close the lids of the reactor pressure vessel and containment vessel of Unit No. 5, which are currently open. Because of this, we will temporarily suspend the inspection of the reactor pressure vessel and the internal reactor structures of Unit No. 5 that is being conducted to enable response to the damage to the main condenser tubes in the reactor. These inspections and evaluations will be recommenced when the shipment of spent fuel from Units Nos. 1 and 2 has been completed, and we are looking towards their completion in September 2014. We will also proceed continuously with inspections and assessment of fuel and equipment other than the reactor pressure vessel and internal reactor structures.