

## *Restart information of the Ikata nuclear power station unit 3*

August 1, 2016  
Shikoku Electric Power Company

### **Ikata Unit 3: Recovery of RCP-3B**

*It was detected that the flow rate<sup>\*1</sup> increased in the No.3 seal leakoff line of the Reactor Coolant Pump 3B (RCP-3B) of the Ikata Unit 3 (PWR, 890Mw) during the RCP test operation.*

*Operators tried to adjust seating condition of the No.3 seal without success. At 9:20am, July 17, the station decided to replace the affected seal with spare one.*

*The No.1 and 2 seals of RCP-3B are working in a good condition.*

*There is no radioactive impact to the environment due to this event.*

*(Press release on July 17, 2016)*

*The station investigated the No.3 seal and discovered that the seal ring slightly tilted, which prevented it from moving smoothly.*

*On July 12, the station performed a leak rate test of the containment vessel. During the test, high pressure worked on No.3 seal and caused the O-ring<sup>\*2</sup> to stretch and fill gaps around the seal, which supposedly produced strong friction. The seal ring was likely to get stuck because of this friction.*

*This is supposed to be a reason that the seal ring tilted when the RCP-3B started up, causing the seat surface uncovered and allowing seal leakoff flow rate to increase.*

*The station is going to replace the RCP-3B No.2 and No.3 seals with spare components. At the same time, seals of the RCP-3A and 3C will be also replaced to ensure a similar trouble will not happen.<sup>\*3</sup>*

*This event is not in the category of events which require reporting to the government according to the law or circular notice.*

*(Press release on July 25, 2016)*

Since the seals of RCP-3A through 3C were all replaced, the station activated the RCPs and confirmed at 08.30am today that the No.3 seal leakoff rate is normal and the operating condition is good.

In addition, the station has revised the manual to ensure that pressure working on No.3 seal during a CV leak rate test does not become higher than normal.

<sup>\*1</sup> No.3 seal leakoff rate

The RCP shaft is sealed by triple sealing system of No.1, 2 and 3. While the primary coolant is sealed by No.2 seal, No.3 seal serves to control pure water to clean the No.2 sealing part. The flow rate at the No.3 seal outlet is called the No.3 seal leakoff rate.

The No.3 leakoff water travels in the dedicated piping until reaching the tank within the containment vessel.

<sup>\*2</sup> O-ring is a ring-shaped sealing part which is circular in cross-section

<sup>\*3</sup> No.2 and No.3 seals are replaced altogether because they connect each other

*(Translated by JANSI)*