

Cause of and Countermeasures against Water Leakage from a Washing Water Tank in the RO Apparatus of Units 5 and 6 at Fukushima Daiichi NPS

<Reference>
September 24, 2013
Tokyo Electric Power Company

Time and date when the leakage was found:
At around 3:20 PM on September 12, 2013

Leakage location:
Washing water tank in the RO apparatus installed outdoor near the Units 5 and 6

The course of the incident:

- A TEPCO employee on patrol was found water overflow from the washing water tank of the RO apparatus installed outdoor near the Units 5 and 6.
- Water having leaked is water treated through the RO apparatus, and has a radioactivity density almost the same as water for yard sprinkling in the station.
- Given that there is no water passage such as a drainage ditch around the leakage location, we judged that no water has flowed into the sea.

[Previously announced on September 13]

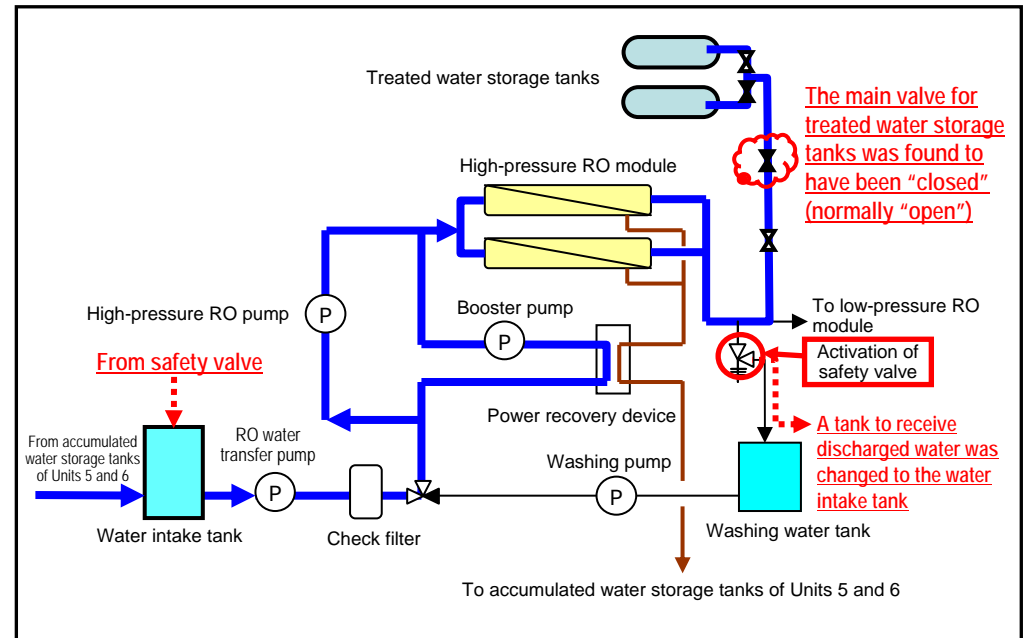
Possible cause:

- A worker who was conducting work nearby might have unintentionally touch the handle of the main valve of treated water storage tanks from the RO apparatus, and the valve might have been thereby closed.
- Since the main valve for treated water storage tanks is normally open, no one checked before the start of water transfer whether the valve was open.
- Water transfer from the RO apparatus to the treated water storage tanks was started under this condition. Therefore, the pressure at the exit side increased, and the safety valve was thereby activated. As a result, the washing water tank, which was receiving water, overflowed.

Recurrence prevention measures:

- An arrangement that enables prevention of water overflow from the washing water tank even when the safety valve is similarly activated is to be adopted, which circulates discharged water by feeding the discharged water to the RO apparatus's water intake tank located upstream, thereby preventing the water overflow.
- The handles of ball valves are to be detached from this valve and other similar valves that are operated normally "open" or "closed", and a warning notice is to be attached to each of them.
- The operation procedure is to be revised in such a manner as to require a worker to confirm that any valve included in the system is properly "open" or "closed" even in a case where the valve is usually not to be operated.

Schematic system diagram of an RO unit



Main valve of treated water storage tanks



Main valve of treated water storage tanks (enlarged)

* The photo was taken on September 13, 2013, and provided by TEPCO