

The status report of an earthquake in Niigata prefecture and its effect on Kashiwazaki-Kariwa Nuclear Power Station, TEPCO <vol.2>

17 July 2007  
NISA, Japan

[Specification of the earthquake]

- Date and time of occurrence: on 16 July 2007, at around 10:13 am JST (01:13 UTC).
- Epicentre: 10km below the seabed off Jo-chuetsu area in Niigata prefecture (37° 5' N, 138° 6' E).
- Magnitude: 6.8.

[Situation of Kashiwazaki-Kariwa Nuclear Power Station]

- When the earthquake occurred, 4 reactors, Unit #2, #3, #4 and #7, were in operation (#1, #5 and #6 were out of operation for periodical inspection).
- The unit #2, #3, #4 and #7 were automatically shut down after detecting the seismic acceleration. Those units are on cold shut down condition.
- A minor fire broke out in the unit #3 transformer that supplies electricity to the facility, and it was notified to a fire station at 10:27 am JST, and extinguished at 11:58 am JST.
- The earthquake caused minor damage on the unit #3 seivice building, which is not directly related to the reactor operation.

[leakage of radioactive material]

- Water leakage was found at 3<sup>rd</sup> and 3M floor of the reactor building of Kashiwazaki-kariwa unit #6. The location was in the non-controlled zone. The leaked water was estimated as follows.
  - 3<sup>rd</sup> floor: 0.6litter,  $2.8 \times 10^2$ Bq
  - 3M floor: 0.9litter,  $1.6 \times 10^4$ Bq
- It was recognized that some leaked water was discharged into sea through draining route. Discharged water was estimated around  $1.2 \times 10^3$ ,  $6.0 \times 10^4$ Bq. NISA inspector confirmed that the discharging had already stopped.
- Puddles were found at operating floor of reactor buildings of all units.
- Radiation monitoring system at main ventilation stack of unit #7 detected iodine, Cr-51, and Co-60 during its regular weekly detection. The whole detected amount of radioactivity is estimated to be around  $3 \times 10^8$  Bq. And radiation dose from this radioactivity is estimated to be around  $1.1 \times 10^{-7}$  mSv, which is quite less than legislative criteria for public (1mSv/year), so that it doesn't have any effect on surrounding environment. Even though, the radiation monitor at main ventilation stacks and monitoring post detected no significant radioactivity. The result of other units' ventilation stack monitoring systems are less than detection limit. NISA directed TEPCO to investigate the relationship between the detection and the earthquake.
- In the radioactive solid waste storage house #2, about 100 drums fell down and lids of several drums were open. The contamination is under estimation.

[Other nuclear power stations]

- No unusual event was reported from other nuclear power stations relatively close to the area (Shika PS, Fukushima Daiichi PS, Fukushima Daini PS).

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