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Earthquake struck Kashiwazaki-Kariwa Nuclear Power Station

At 10:13 a.m. on July 16, 2007, a strong earthquake measuring 6.8 on the Richter scale struck Chuetsu area in Japan, resulting in automatic shut down of unit 2, 3, 4 and 7 at Kashiwazaki-Kariwa NPS as designed, which is located approximately 9 km from the epicenter. Unit 2 was under start up operation when the reactor was shut down. Unit 1, 5 and 6 were not in operation for annual outage when the earthquake occurred. Although Tokyo Electric Power is still conducting investigations, there is no environmental impact.

The maximum acceleration observed at the station was 680 gals. The designed acceleration at the observation point is 273 gals. A detailed investigation on seismic safety including seismic data analysis will be carried out.

Due to the earthquake, a fire broke out at the house transformer of unit 3, which was extinguished in about two hours at 0:10 p.m..

Water in the spent fuel pool of unit 6 sloshed around. Some leaked into non radiation controlled area on the third floor and mezzanine, and was discharged to the sea via a discharge channel. The amount of water discharged to the sea was estimated about 1.2 m³ containing 9 x 10⁴ Bq radioactivity in total. Because the water was diluted to one-several hundred millionth the legal limit of the activity concentration for discharge water from the station, which is required by law, it was estimated that there was no impact on the environment. The discharge had stopped on July 16.

As of July 17, approximately 50 damages on equipment in the station were identified and further investigation has been proceeding.

In addition, iodine and particle radioactive materials (chromium 51 and cobalt 60) were detected at the filter of stack at unit 7 during the weekly survey on July 17. The detected radioactivity was approximately 3 x 10⁸ Bq. The relation with the earthquake is under investigation. The dose equivalent due to the radioactivity was estimated approximately 1.1 x 10⁻⁷ mSv, which was far below the annual dose limit for public (1 mSv) and it was estimated that there was no impact on the environment.

Above information is as of July 17 and will be updated as the further investigation by Tokyo Electric Power will be carried forward.

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