The Nuclear Regulation Authority (NRA) received a report from Japan Atomic Energy Agency (JAEA) on the leakage of radioactive material in the non-radiation controlled area in the materials testing reactor facility (JMTR) at Oarai Research and Development Center.

Today (Nov.9), the NRA received a report from the JAEA on the leakage of radioactive material in the non-radiation controlled area of the materials testing reactor* facility (JMTR) at JAEA Oarai Research and Development Center, in accordance with Nuclear Regulation Act.

There was no impact on the environment from radioactive material in this event.

*A research reactor for testing the durability and integrity, etc. of fuel and material of the reactor.

1. Contents of JAEA report

On November 8, when the JAEA conducted its self-inspection to confirm the integrity of the drainage piping*, dripping was identified on the surface of the drainage piping in the non-radiation controlled area of JMTR. After the finding, the leakage point of the piping was mended with silicon tapes, and then, the leakage stopped.

A small amount of radioactive material was detected in measuring the dripping water.

Therefore, today (Nov. 9), the JAEA reported the NRA that the dripping water from the drainage piping contained radioactive material.

*A The piping for draining hand-washing water, etc.

2. Impact on safety of the facility

This was water leakage with radioactive material in the non-radiation controlled area due to the loss of the confinement function of the piping. The licensee confirmed that the amount of leakage was small, the leakage point was amended with silicon tapes immediately after finding, and the leakage has already stopped.

No abnormal changes in readings were observed in off-gas monitors and radiation monitors installed in the facility. There was no impact on the environment from radioactive material, and no workers were exposed to radiation.
3. Actions taken by the NRA

After the event was reported to the NRA by JAEA, local nuclear safety inspectors rushed to the site to confirm nuclear safety and continued to check the JAEA’s response.

This event was reported in accordance with Article 62-3 of the Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material, and Nuclear Reactors. The NRA will continue to rigorously check the investigation into the cause of the event and the countermeasures against possible recurrence of the event, as carried out by the licensee.

(Results of provisional INES (*) event rating)

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<th>Criterion 1</th>
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Rating basis: Although there could be a large impact on the environment in this event if the all analysis samples would leak, the amount of the leakage this time was actually small, and further development of this event was not likely. In addition, the piping with the leakage is inside the trench and the leakage was identified by operator’s self-inspection. And the rating was judged as “No safety significance” of INES level 0.

*INES Evaluation:
INES (International Nuclear and Radiological Event Scale) is an indicator used to promptly communicate the safety significance of a reported nuclear and radiological incidents or accidents. Events are evaluated based on 3 rating criteria (namely, criterion 1: people and the environment, criterion 2: radiological barriers and controls at facilities, and criterion 3: defense in depth) and the highest level among 3 ratings is adopted as the INES rating level of the event. The INES levels range from Level 0 (no safety significance) to Level 7 (major accident).

Appendix:
Fig.1: JMTR facility site plan (Available only in Japanese)

Fig.2: The condition of the drainage piping (Available only in Japanese)
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