

## External Advisors Meeting held on 9 November 2023

The External Advisors Meeting is held generally twice a year in person to discuss and exchange views and thoughts on various challenges and issues on nuclear regulation between Advisors and NRA Commission. For the coming meeting, two topics are selected to be discussed. They are **1) Function and Relationships that Regulators Expect from TSOs**, and **2) Application of Graded Approach to Disposal of Radioactive Waste**.

### Topic 1: Function and Relationships that Regulators Expect from TSOs

1 – 1

The special feature of Japan's TSO is that there are both internal and external TSO to a nuclear regulator, the NRA. The internal TSO has been established as a division of the NRA and does not possess its own research facilities. In order for the internal TSO to proceed with its research, cooperation with external research institutions with research facilities is indispensable. Therefore, the NRA believes that it is necessary to clarify roles between the internal and external TSOs in research fields and topics, and to strengthen cooperation between the two through personnel exchanges between two TSOs.

In addition, a certain number of internal TSO personnel, although they are researchers, are not in research work for a limited period of time, however are in the regulatory activities related to their respective specialized fields, for example, earthquake and tsunami reviews, and work together with the staff of the regulatory departments.

One division of the entire JAEA organization that has TSO functions is the external TSO. The rest are regulated entities that retain nuclear research facilities and sources. The direction of the research field of the organization as a whole does not necessarily coincide with the direction of the research field that the regulator expects from the external TSO. For example, SMRs and light water reactors, etc.

Q 1 – 1

Do you have any comments or thoughts on situations of the internal and external TSOs, while sharing information on how TSO in your home country is structured and forms relationship with the regulatory body (including the degree of involvement to TSO governance from the regulatory body)?

1 – 2

As a relationship between regulatory departments and internal TSO in consideration of recent trends in the nuclear field, i.e. incorporating new technologies, when reviewing facilities or equipment that incorporate new technologies, the internal TSO is required to contribute to the NRA review activities with knowledge of the technical details under reviews. Therefore, the NRA believes that communication between internal TSO and the nuclear industry is becoming increasingly important to keep up technical updates and to understand in depth.

Q 1 – 2

Based on your own experience, what kind of efforts do you think are desirable regarding communication between regulators and the nuclear industry when incorporating new technologies?

1 – 3

As securing human resources in the nuclear sector becomes difficult, the human source development and securing competent researchers are the keen challenges for both internal and external TSOs in Japan.

Q 1 – 3

What effort do you think is most effective to work out these challenges?

1 – 4

There is a shortage of organizations that have the capacity to analyze samples from TEPCO's Fukushima Daiichi Nuclear Power Station (FDNPS), to clarify the properties of orphan sources, and to store radiation sources that are no longer in use. Regarding radioactive analytical samples generated from FDNPS, the part of JAEA that are not an external TSO to the NRA, conducts the analysis of samples from FDNPS. Not limited to the analytical work, there are public interest organizations for a wide range of regulatory tasks, such as the Nuclear Materials Control Center, which conducts operations related to safeguard, as well as the Nuclear Safety Technology Center, which conducts inspections related to RI regulations.

Q 1 – 4

Regarding the outsourced work described above, what are your thoughts on whether the NRA should be directly involved in the work that are outsourced, or whether an external organization such as an external TSO should be utilized? What is the preferred classification of an organization which provides technical support to the NRA other than the external TSO?