



Opinion exchange with the IAEA

In addition, Japan invited 18 representatives of international organizations and nuclear emergency preparedness organizations in various countries to observe the Comprehensive Nuclear Emergency Response Exercise held at Ohi and Takahama Nuclear Power Stations. Members of the delegations spent three days in the area, where they observed the evacuation of residents and the Declaration of a Nuclear Emergency Situation from the Prime Minister.

(2) Surveys of International Standards, etc.

December 2015 saw the first meeting of the IAEA's new Emergency Preparedness and Response Standards Committee (EPReSC), which has been held on a regular basis since then to examine the IAEA's standards regarding off-site nuclear emergency preparedness and the systems/management of major countries engaging in nuclear power generation. The Cabinet Office attended the meeting (the 6th meeting from June 12 to 14, 2018 and the 7th meeting from October 30 to November 1, 2018), and participated in discussions with experts from the IAEA and other member countries.

Section 4: 2018 Comprehensive Nuclear Emergency Response Exercise

4-1 Overview of Exercise

(1) Positioning and Objectives

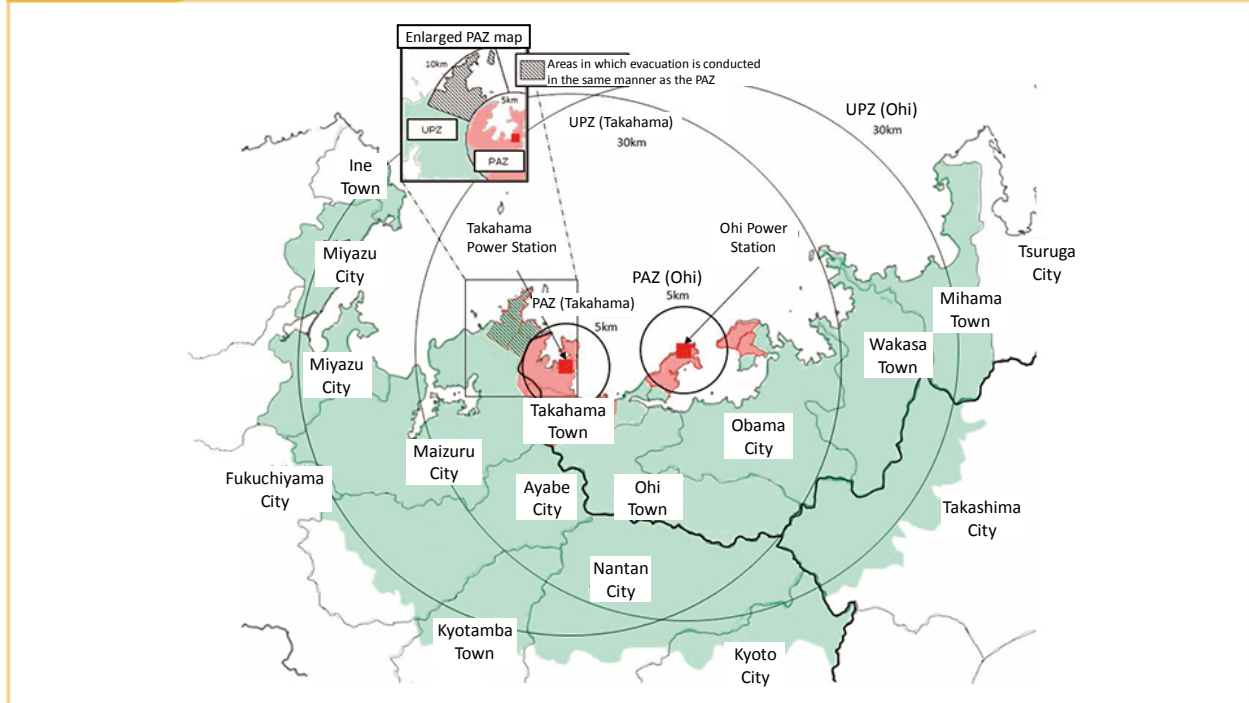
The Comprehensive Nuclear Emergency Response Exercise is a joint exercise involving the national government, local governments, and nuclear operators, in accordance with the Act on Special Measures Concerning Nuclear Emergency Preparedness. Based on the scenario of a nuclear emergency, it aims to verify systems for responding to such an emergency. The 2018 Comprehensive Nuclear Emergency Response Exercise was held at the Ohi and Takahama Nuclear Power Stations with the objectives as listed below (Reference: https://www8.cao.go.jp/genshiryoku_bousai/kunren/h30sg.html).

- To confirm the effectiveness of the disaster preparedness systems of the national government, local governments, and nuclear operators, and the cooperative frameworks of related organizations
- To confirm national and local systems and procedures specified in manuals for responding to a nuclear Emergency
- To verify the Evacuation Plan based on the Ohi Region Emergency Response and the Takahama Region Emergency Response (Fig. 4-1-1)

- To identify lessons from the outcomes of the exercise and improve emergency responses
- To enhance the skills of key personnel involved in nuclear emergency response measures and promote public understanding of nuclear emergency preparedness

Fig. 4-1-1

Priority Zones for Nuclear Emergency Response in the Ohi and Takahama Regions



Note) PAZ: Precautionary Action Zone

Note) UPZ: Urgent Protective Action Planning Zone

<Some residents living in Oura Peninsula in Maizuru City must evacuate in the same manner as the PAZ, as their evacuation routes are located near the PAZ borders.>

Source: Cabinet Office

(2) Subject Power Plants and Dates

The exercise was held on August 25 and 26, 2018 at Ohi Power Station and Takahama Power Station.

(3) Participants, etc.

(Number of participating organizations: 191; number of participants, including local citizens: approximately 21,200)

- Governmental organizations: Cabinet Secretariat, Cabinet Office, NRA, and other related ministries and agencies
- Local governments: Fukui Prefecture, Kyoto Prefecture, Shiga Prefecture, Ohi Town, Takahama Town, Maizuru City, 10 cities and towns within the UPZ and related cities and towns
- Nuclear operator: Kansai Electric Power Co., Inc.
- Related organizations: National Institutes for Quantum and Radiological Science and Technology, Japan Atomic Energy Agency, etc.

(4) Accident Scenario

After the external power source is shut down following an earthquake centered on northern Kyoto Prefecture, reactor coolant leaks from Unit 3 of the Ohi Nuclear Power Station. In addition, water injection to the reactor

becomes impossible due to the failure of the emergency core cooling system (ECCS), leading to the state of General Emergency.

Meanwhile, the Takahama Nuclear Power Station suffered no direct damage from the earthquake. However, water supply to the vapor generator of Unit 4 is shut down following the loss of external power source due to an electric line failure, while water injection to the reactor becomes impossible due to the failure of the ECCS, leading to the state of General Emergency.

(5) Content of Exercise

This exercise was held with the aim of further improving the effectiveness of the Evacuation Plan based on the Ohi Region Emergency Response and Takahama Region Emergency Response. It involved decision-making and operational drills relating to the evacuation of residents, tailored to the escalation of the situation in a complex disaster scenario, which involved a combination of a natural disaster and a nuclear emergency.

4-2 Overview of Performance

(1) Exercise in Rapid Establishment of an Initial Response System

The national government, local governments, and nuclear operator mobilized key personnel to set up an initial response system at their respective operational bases following an earthquake and gathered information about the status of the natural disaster and the power station. In addition, they used teleconferencing and other systems to strengthen communication between related organizations and prepare for an escalation of the situation.



Key personnel gather information
(Ohi Off-site Center)

(2) Exercise in Making Decisions Concerning the Evacuation Policies, etc. Based on Collaboration between National and Local Bodies

Following an escalation of the situation, the Prime Minister's Office and the other bases worked together to formulate and decide on protection measures, including the evacuation of local citizens. In addition, according to the escalation of the situation, the functions of the local headquarters were unified at the central headquarters for integrated management. At the Prime Minister's Official Residence, Prime Minister Abe carried out a Declaration of a Nuclear Emergency Situation in response to the General Emergency, and held the meeting of the Nuclear Emergency Response Headquarters with the participation of relevant ministers. During this meeting, the members of the meeting confirmed initiatives relating to protection measures, including the evacuation of local citizens, and approved the government's basic guidelines on emergency response measures.



Meeting of the Nuclear Emergency Response Headquarters (drill) participated in by Prime Minister Abe and relevant ministers

(3) Field training exercise on inter-prefectural evacuation, indoor evacuation, etc.

Following the site area emergency and general emergency, evacuation sites were arranged and transportation means were provided for residents in the PAZ and in the areas where protection measures similar to the PAZ are taken, based on the extent of the damage caused by the natural disaster. The residents were evacuated within or to outside the prefecture after having taken stable iodine agents. In addition, indoor evacuation was conducted to promote the understanding of the residents concerning the meaning of such evacuation. Also, the scenario assuming that radioactive materials had been released involved the urgent distribution of stable iodine agents, temporary relocation, and inspections of evacuation areas. For each evacuation, video footage transmitted by Japan Ground Self-Defense Forces and Fukui Prefectural Police helicopters was used to gain an understanding of the situation on the ground.



Evacuation exercise for persons who need special assistance (persons suffering acute disease)
(Ohi Town, Fukui Prefecture)



Video explaining the meaning of indoor evacuation
(Ine Town, Kyoto Prefecture)

4-3 Post-exercise Initiatives

Following the 2018 Comprehensive Nuclear Emergency Response Exercise, the Cabinet Office identified areas for improvement based on views expressed by experts and responses to a questionnaire distributed to local citizens who participated in the drill. These are summarized in the Report on the Findings from the 2018 Comprehensive Nuclear Emergency Response Exercise in March 2019.

Reference: https://www8.cao.go.jp/genshiryoku_bousai/kunren/h30sg.html

Going forward, the Fukui Local Nuclear Disaster Management Council will make improvements to the Ohi Region Emergency Response and Takahama Region Emergency Response and various manuals, following deliberations informed by the lessons and response guidelines described in this report. Moreover, the government will seek to further enhance the methods used for conducting the Comprehensive Nuclear Emergency Response Exercise, as well as the menu of scenarios and exercises, constantly reviewing the exercise to make it more realistic.