

Situation and response of JAEA to the Great East Japan Earthquake  
(Outline of activities on March 11-April 20)

Summary

The Japan Atomic Energy Agency (JAEA) established emergency response headquarters lead by the president immediately after the earthquake in northeastern Japan (the great east Japan earthquake). The headquarters are continuously collecting detailed information of the equipment and facilities from all the sites of JAEA as well as giving directions to the sites towards recovery. JAEA as a designated public institution is also, with its full scale effort, supporting activities of other organizations.

Assistance to the Accident of Fukushima No.1 and No. 2 Nuclear Power Plants

- JAEA, with its full scale effort, is assisting activities concerning the accident of the Fukushima No.1 and No. 2 Nuclear Power Plants including environmental radiation monitoring, environmental radioactivity analyses, resident public consulting. JAEA's Nuclear Emergency Assistance & Training Center (NEAT), with close cooperation with each site of JAEA, is acting as a center of these supporting activities of JAEA.
- Experts of JAEA are providing scientific advice and technical supports to the Nuclear Safety Commission of Japan and the Ministry of Education, Culture, Sports, Science and Technology (MEXT).

Situation of each site

- Checks of facilities were made immediately after the great east Japan earthquake.
- Some equipment and facilities of the sites in Ibaraki Prefecture were damaged. Recovery of the damages is underway. Also recovery programs are being planned. In these sites electric and water supply was stopped. However, these lifelines have recovered to the sites. Within the sites, checks and repair works on the leaking points of piping of clean water supply as well as recovery of electric power distribution to facilities are underway.

Assistance to the Accident of Fukushima No.1 and No. 2 Nuclear Power Plants

JAEA is also, centered on with its full scale effort, conducting the following activities concerning the accident of the Fukushima No.1 and No. 2 Nuclear Power Plants. JAEA's

Nuclear Emergency Assistance & Training Center (NEAT), with close cooperation with each site of JAEA, is acting as a center of these supporting activities.

(Environmental Radiation Monitoring)

- Environmental radiation monitoring outside of a 20 km radius of Fukushima No.1 Nuclear Power Plant using monitoring cars and screening survey of body contamination are conducted.
- Body contamination measurements and decontamination are made with a body cleaning car and a body surface measurement car at Fukushima Prefectural Medical University.
- Radioactivity measurements with a whole body counter car are conducted to assess internal dose of workers.
- On April 14, environmental radiation measurements were conducted at 52 points in Fukushima prefecture including elementary schools and junior high schools upon request from MEXT. Based on the results, further survey of gamma dose rates will be conducted at school yards and other places.

(Environmental Radioactivity Analyses)

- Continuous environmental radiation monitoring and radioactivity measurements with periodical sampling of dust in the air are made mainly at the sites in Ibaraki Prefecture.
- Radioactivity measurements are conducted with the sea water samples and dust samples in the offshore of Fukushima Prefecture collected by Japan Agency for Marine·Earth Science and Technology (JAMSTEC).
- Radioactivity measurements are conducted with soil samples from Fukushima No.1 Nuclear Power Plant upon request from Tokyo Electric Power Company (TEPCO) through MEXT and the Nuclear and Industrial Safety Agency (NISA).

(Resident Public Consulting)

- Resident health consultation hotlines have been installed at NEAT and have been responding about 400 inquiries per day. The hotlines were reinforced with help of related organizations and will continuously provide services.
- Consultations to residents are made at the information desks installed at Fukushima Jichikaikan and Ibaraki Prefecture Office.

(Scientific Advice and Technical Supports)

- Experts of JAEA are dispatched to the Nuclear Safety Commission of Japan and other organizations. These experts are cooperating on technical study of the diffusion assessment and analyses and radiation management. Departments of

JAEA are providing to the experts with appropriate scientific data to assist their judgement.

- JAEA is assisting the Emergency Operation Center (EOC) of MEXT for the data compilation of environmental radiation/radioactivity monitoring on a 24-hours-a-day basis.
- JAEA is cooperating on the international activities of EOC.
- JAEA is assisting the Ministry of Economy, Trade and Industry (METI) to provide information to the public.
- An expert of monitoring survey is dispatched to Ibaraki Prefectural Government for planning of environmental sampling to establish the monitoring program of the prefecture.
- JAEA is planning to make analyses of the water which accumulated in the turbine buildings of Fukushima No.1 Nuclear Power Plant upon request from TEPCO.

(Equipment Support)

JAEA has conducted radiation measurements and other activities with dispatching monitoring cars, a whole body counter car, a surface contamination counter car and a body decontamination car. JAEA is also providing survey meters and individual dose meters to local governments and TEPCO, which contributes to the enhancement of radiation measurements.

Tables of JAEA's Assistance regarding the Accident of Fukushima No.1 and No. 2 Nuclear Power Plants

1. Supporting activities of JAEA (as of April 20)

Items		Places or Organizations	April 20	Accumulated Man-days from March 11
Environmental Radiation Monitoring				
	Emergency monitoring	Outside of a 20 km radius	12	626
	Environmental radiation measurement	Elementary and junior high schools, etc. in Fukushima Prefecture	-	29
	Body survey, etc	Fukushima Prefectural Medical University	9	481
		Hitachi Health Center	-	28
Environmental Radioactivity Analyses				
	Environmental monitoring	NEAT	3	105
	Body radioactivity measurement	NEAT	-	12
		Fukushima Prefecture	2	78

Consultation to Public				
	Consultation to Public	NEAT	19	721
		Fukushima Prefecture Office	4	158
		Ibaraki Prefecture Office	-	12
	Explanation to evacuated residents	Tsukuba-city Douhou Park	-	3
Scientific Advice & Technical Supports				
	Monitoring program planning support	Ibaraki Prefecture Office	-	5
	Assessment and analysis of diffusion	Nuclear Science & Engineering Directorate, JAEA	4	131
		NEAT	1	36
	Support to Nuclear Safety Commission, etc	Cabinet Secretariat, Cabinet Office	7	262
	Data compilation of radiation/radioactivity	MEXT	38	773
	International cooperation and other support activities	MEXT	1	23
	Public Information and other support activities	METI	1	14
Others				
	Direction, Report, Coordination	NEAT	50	1680
	Transportation	Fukushima Prefecture	9	378
Total			160	5555

## 2. Supporting equipment from JAEA (As of April 20)

Items	Categories	Numbers
Special Mobile Cars	Whole Body Counter Car	1
	Surface Contamination Counter Car	1
	Body Decontamination Car	1
	Monitoring Cars	3
Measurement Devices	Survey Meters (including 4 Neutron meters)	192
	Personal Dosimeters	18

## Situation of each Site

### Nuclear Science Research Institute including J-PARC

- Checks of facilities were made immediately after the earthquake of March 11. There have been no effects on the environment, no fire accident and no serious injury, although there were some damages to facilities and equipment.
- Great gaps between buildings of J-PARC and surrounding ground have occurred. Examination on the accelerators inside the facilities has not been conducted due to lack of electric supply. Restart of the facility may take long time.
- On March 13, commercial electric supply has resumed since around 15 o'clock and electric supply from the ultrahigh voltage transformer station to each facility has completely restored by March 16. Electric power sources for lightings and other purposes were recovered in almost all facilities and fire alarms were recovered in around 80% of facilities.
- On March 15, industrial water supply from Ibaraki Prefecture was received and water supply was restored to the inlet of each facility. Checkups of piping and related equipment are being conducted.
- Due to the damage to the 1<sup>st</sup> Administration Building, the use of the building was stopped and the on-site emergency headquarters was established in a temporary building in front of the 1<sup>st</sup> Administration Building.
- On March 23, the public clean water supply to the site resumed. Facilities are in the process of clean water flow tests.

### Nuclear Fuel Cycling Engineering Laboratories

- Checks of facilities were made immediately after the earthquake of March 11. There has been no effect on the environment, no fire accident and no serious injury, although there were some damages to facilities and equipment.
- On March 13, commercial electric supply has resumed since around 15:30 and all the electric supply was replaced from emergency electric generators to commercial supply by March 14. Other systems, for which soundness of buildings are being conducted, are in the process of restart.
- On March 15, industrial water supply from Ibaraki Prefecture was received and water supply was restored to the reprocessing facility within the same day. Checkups of piping and related equipment of the other facilities are being conducted.
- On March 19, 1 expert of monitoring survey was dispatched to Ibaraki Prefectural Government to participate in the planning of environmental sampling program (monitoring program) of the prefecture.
- On March 22, the public clean water supply to the site resumed. Facilities are in

the process of clean water flow tests.

#### O-arai Research and Development Center

- Checks of facilities were made immediately after the earthquake of March 11. There has been no effect on the environment, no fire accident and no serious injury, although there were some damages to facilities and equipment.
- Commercial electric supply resumed through transformer station of the northern part of the center at around 20:00 on March 13, all the equipment and facilities have been restored on March 14.
- The northern part of the center is receiving public drinking water supply as well as industrial water as usual.
- The center is supporting drinking water supply to the public in Oarai-town from March 18 to March 21.
- On April 8, the center made analyses of sea water from inshore of O-arai upon request from O-arai town municipal office and reported the results to the office.
- Reinforcement works on the transformer station building of the southern part of the Center were almost finished on March 18. Commercial electric supply was recovered on March 19. Experimental Fast Reactor Joyo has started to receive commercial electric supply and the emergency electric generator has been stopped. On March 22, electric supply to all the facilities in the southern part of the center was recovered.

#### Naka Fusion Institute

- Checks of facilities were made immediately after the earthquake of March 11. There has been no effect on the environment, no fire accident and no serious injury, although there were some damages to facilities and equipment. Electricity supply was terminated at around 17:30 and the operation of facilities was stopped.
- The monitoring posts resumed operation at around 19:30 on March 12 using emergency electric generators.
- Situation of damages to equipment and facilities were checked on March 13.
- On March 16, commercial electric supply has resumed since around 18:30 and all the electric supply to each facility will be resumed after checkup of equipment.
- On March 28, water supply to the institute was recovered. The works for water supply to the facilities inside the institute are underway, because water is stained.
- On April 7, water leakages of piping for the outdoor hydrant system were repaired and all the hydrant system has been fully restored.

#### Aomori Research and Development Center

- Checks of facilities were made immediately after the earthquake of March 11. There has been no damage to the facilities.

- Electric supply was resumed to the Ominato facility on March 12 and the Sekinehama facility on March 13. Electric supply resumed to the Rokkasho facility on March 13. All the facilities are receiving commercial electric supply.

#### Head Office (Tokai, Ibaraki)

- Almost all functions inside of the building have been recovered, although some facilities including air-conditioners are still damaged.
- On March 23, water supply to the building was recovered.
- Emergency activities are conducted at the Nuclear Emergency Assistance & Training Center (NEAT).

#### Other sites

- There has been no trouble in other sites, namely, Horonobe, Takasaki, Tono, Tsuruga Head Office, Monju, Fugen, Kansai, and Ningyotoge
- No abnormality at intakes of sea water at Monju and Fugen.