

Fukushima support

Shin-ichi Mitsuoka

Research Group for Reactions Involving Heavy Nuclei

JAEA is supporting activities concerning the accident of the Fukushima No.1 Nuclear Power Plant, with every possible effort, even involving retired employees. As a member of ASRC fully cooperating in the Fukushima support, I took a part in environmental radiation monitoring, soil sampling in areas around a radius of 20 km from the power plant, supporting evacuee for their momentary return home in the 20 km evacuation zone, body radioactivity survey and health consultation hot line to Public.

Beginning of April, I was dispatched to Fukushima prefecture as a member of the emergency environmental radiation monitoring team to measure the air dose rate and the cumulative dose, and to collect the soil and air-dust at the appointed places, such as Iitate-mura, Minami-Soma-shi, Iwaki-shi and Hirono-cho. Around the forests of Iitate-mura, which is located in the premeditated evacuation zone, there were hot spots of the air dose rate exceeding the maximum range of the scintillation-type detector. The ionization-type detector was also used as shown in the attached picture. With the monitoring team led by Fukushima prefectural office, we collected plants, drinking water and pond water. The date coincides with school entrance ceremonies, the additional missions of the air dose rate measurement and the soil sampling of the school grounds were operated. The data, measured every day, are announced immediately at the Ministry of Education, Culture, Sports, Science and Technology (MEXT) web-site. From such measurements, it gradually became clear that the environmental radiation was mainly due to the radioactive materials released from the crippled power plant by the hydrogen explosions just after the nuclear accident, and then deposited on the ground surface with rain.

Beginning of May, it was proposed by a scientific association consisting of researchers of universities and research institutes to make a detailed soil contamination map of whole Fukushima before the rainy season since a state of ground surface varied with rain. In June, a joint team of the scientific association and JAEA carried out the dose rate measurement and the soil sampling of 5 cm layer from the ground surface at about 2200 spots of 2 km square mesh in the 80km radius from the crippled power plant, and of 10 km square mesh outside the 80 km radius reaching the prefectural border between Fukushima and Ibaraki as well as Miyagi. Such soil samples collected by five at each spot have been analyzed the contamination levels for each isotope identified by using germanium detectors. The soil contamination map of radioactive cesium, iodine and other isotopes have been released from MEXT in August. It is expected to be used as initial data for the future to chase the influence on health of inhabitants and environment with the radioactive material deposited in soil.

The evacuee momentary return project which began in May has been carried out by the government and electricity companies in cooperation with many volunteers from universities, institutes and local governments. There are four staging bases in Fukushima to support the inhabitants evacuated from the restricted 20 km zone around the nuclear plant. I got on a dedicated bus from the Baji-Koen base in Minami-Souma-shi as a safety manager when the evacuee were allowed to go home only for two hours. It must have been a hard work for them to tidy up a mess and carry out their baggage in severe heat. In that area, near the Joban-line where a few kilometers west from the sea shore, the damage of the tsunami was devastating that many houses and cars were swept away. It was sad to realize how powerless I am to only gazing the white flags put up on wreckages.

JAEA operates the telephone health consultation to respond to questions raised by ordinary people with regard to the radiation and the security concerning the nuclear-power disaster. I tried to explain as clearly and sincerely as possible. JAEA intends to continue full support including decontamination and outreach activities. Through my experience of the Fukushima support, I came to believe that, even in such an unexpected situation when a mission does not progress as it was expected, it is important to do one's best while always caring about feelings of the inhabitants and giving the top priority to ensuring safety.

Reference : <http://www.ndc.jaea.go.jp/JNDC/ND-news/No100.htm>



In Iitate-mura, Fukushima
(April 2011)