(This is a provisional translation. Please refer to the official version in Japanese)

55th Nuclear Safety Commission Document No. 4

Basic Policy of Nuclear Safety Commission on radiation monitoring

July 21, 2011
Nuclear Safety Commission

Since the occurrence of the accident at Fukushima Dai-ichi NPP, emergency monitoring to handle the situation where radioactive materials have been released into the atmosphere has been conducted with the Ministry of Education, Culture, Sports, Science and Technology (MEXT) playing a central role. Now, four months have passed since the accident, and the amount of radioactive materials being released from the nuclear reactor facility is now considerably lower as compared to when the accident occurred.

In view of this situation, and from the perspective that it is appropriate to move on to a more global assessment of the effects on the surrounding environment and to contribute to considerations of future countermeasures, the Nuclear Safety Commission presents the basic concept on proceeding with future radiation monitoring.

1. Objective of radiation monitoring

Future radiation monitoring should present a detailed contamination situation (dose distribution) of the inhabited areas and places, and should address the following items.

1) Estimation of the exposure doses (external and internal exposure) received by the surrounding population from the onset of the accident, and the future estimated exposure doses.
2) Reviewing and deciding on measures to reduce exposure doses.
3) Reviewing and judging change/termination of evacuation areas, etc.
4) Health care of the surrounding population
5) Assess the situation on the movement/transition of radioactive materials released into the environment, in connection to 1)–4) above.

2. Points to note

To conduct radioactive monitoring effectively, cooperation between the state, municipalities, specialized agencies/research institutes and universities, etc. is essential. Therefore, in order to fulfill the points given in 1. above, it will become vital to collect data where its quality has been verified, conduct analysis and listen to opinions from specialists, and respect them while maintaining coordination amongst the institutions concerned.

The data collected through radioactive monitoring will continue to be collected and accumulated on a long-term basis as the basic material for health care, etc. for the surrounding population. Furthermore, the data will need to be of high quality to withstand verification from both inside and outside the country, so system consolidation for this will be required.

Also, regarding the emergency monitoring that has been conducted up to now, the location, frequency, detection sensitivity, etc. will be revised according to the above, and it would be appropriate to incorporate the revisions in future radioactive monitoring.

Based on these issues, the items and points to note for the radioactive monitoring to be conducted in the future are given in the Annex.

Annex

Items and Points to Note for Radioactive Monitoring to be Conducted

1. Monitoring items
   1) Estimation of the exposure doses (external and internal exposure) received by the surrounding population from the onset of the accident, and the future estimated exposure doses.
      A) Monitoring of chronological change
      B) Monitoring of mid to long-term radiation dose change

   2) Reviewing and deciding on measures to reduce exposure doses.
      A) Detailed monitoring of locations with exceptionally high dose rates as compared to the surrounding areas
      B) Monitoring of external exposure sources in various activities

   3) Reviewing and judging change/termination of evacuation areas, etc.
      A) Monitoring of mid to long-term radiation dose change
      B) Research in understanding the dynamics of the radioactive materials in the environment

   4) Health care of the surrounding population
      A) Monitoring of individual exposure dose data and verification with monitoring data
      B) Monitoring of food in market circulation

   5) Assessment of the situation on the movement/transition of radioactive materials released into the environment, in connection to 1)–4) above.
      A) Monitoring of mid to long-term changes in the amount of radioactive materials (radiation dose)
      B) Monitoring of understanding the diffusion trend in the ocean
      C) Monitoring of understanding the transition parameters

2. Points to note

The following points need to be observed in order to control and preserve the guarantee of quality of the radioactive monitoring data.

   A) The adoption of the analysis method provided in the Radioactivity Measurement Method Series[i] and of the lower limit for detection of the environmental radioactivity standard survey level for all radioactive nuclides that may have been released
   B) Unification of measurement/sampling methods based on the objective, calibration of measurement equipment, and cross-checking between institutions conducting the analysis
   C) Administration of monitoring data through database

[i] Radiation Measurement Method Series: An analysis method manual enacted by MEXT that provides a uniform/standardized method for analyzing environmental radiation (radioactivity).

Agenda for the 55th Extraordinary Meeting of the Nuclear Safety Commission

2:00pm on July 21, 2011
Meeting Room #643, NSC

1. Evaluation method and implementation plan about Comprehensive Evaluation of Safety of Existing Nuclear Power Plants Based on the Fukushima Dai-ichi NPP incident

   (Report by NISA & Discussion)

2. Outline of Progress Status of "Roadmap towards Restoration from the Accident at Fukushima Dai-ichi Nuclear Power Station" on July 19

   (Report by NISA & Discussion)

3. The monitoring results at schools in Fukushima

   (Report by MEXT & Discussion)

4. Basic Policy of Nuclear Safety Commission on radiation monitoring

   (Discussion and Decision)

5. Others

Press Release
(This is a provisional translation. Please refer to the official version in Japanese)
※This material and related data are also available at http://www.nsc.go.jp/NSCenglish/mnt/index.htm

Evaluation of Environment Radiation Monitoring Results

Original released on July 22, 2011
Nuclear Safety Commission

Nuclear Safety Commission (NSC) evaluates the Environmental Monitoring Results published by Ministry of Education, Culture, Sports, Science and Technology (MEXT). The evaluation results based on the information published on July 21, 2011 are described as below:

1. Ambient radiation dose around Fukushima Dai-ichi NPP

- Observation of ambient radiation dose rate at 20km or further from Fukushima Dai-ichi NPP found relatively higher dose rates locally at several measuring points. They however do not reach the level that might affect people's health.

- A part of the area at 20km or further from Fukushima Dai-ichi NPP where the integrated dose is so high that annual cumulative dose after the onset of the accident would potentially exceed 20mSv, was set to be "Deliberate Evacuation Area".

- High ambient dose spots not having regional extent as "Deliberate Evacuation Area", outside of "Deliberate Evacuation Area" and "Restricted Area", where ambient radiation dose rate is continually so high that their annual cumulative dose after the onset of the accident would exceed 20mSv are set to be "Specific Spots Recommended for Evacuation".

We need to further watch a variation of dose rate carefully, considering other factors such as weather and wind direction.

2. Dust sampling in the air around Fukushima Dai-ichi NPP

- With regard to the measuring result of the dust samples collected at 20km or further from Fukushima Dai-ichi NPP on July 18, I-131, Cs-134, Cs-137, I-132, Te-132 and other radioactive materials were lower than the detection limit.

We need to further watch variations of dust sampling data carefully, considering other factors such as weather and wind direction.

3. Airborne monitoring

- New data is not provided in terms of the airborne monitoring results.

4. Environmental sample around Fukushima Dai-ichi NPP

- Monitoring results collected between June 25 and July 20 were obtained on the soil, the weed and fallout. The soil still showed relatively higher values; we further need continued measurement on the drinking water (tap water) and foods.

- With regard to the measuring results of seawater collected around Fukushima Dai-ichi NPP and along the coast of Ibaraki prefecture between July 14 and 19, Cs-134 and Cs-137 were detected at some points. They were below the concentration limit.

- With regard to the measuring results of sea ground soil collected around the Fukushima Dai-ichi NPP on July 17, Cs-134 and Cs-137 were detected.

For the food distribution restrictions, be aware of the information announced by the Ministry of Health, Labor and Welfare (MHLW) regarding relevant intervention.

We also need to continue environmental monitoring by related organizations under the arrangement by MEXT, considering various elements such as weather change.

5. Environmental radioactivity level survey by prefecture

1) Ambient radiation dose rate

Some prefectures showed higher values compared with the average values obtained before the accident, however, their values do not affect people's health.

2) Drinking water (tap water)

- Be aware of the information on relevant intervention announced by the MHLW.

- In Tochigi prefecture, reading of drinking water (tap water) monitoring was 0.37Bq/kg for radioactive cesium the same as on July 20, as far as the data on radioactivity level in drinking water by prefecture published by MEXT was evaluated. It was lower than the indices to limit ingestion of food and drink (Note2).

We consider that further monitoring is needed on a continuous basis.

(Note)

(Note 1) Limits of the radioactivity in the water outside the peripheral monitoring area boundary as specified by the law are 4×10^{-2}Bq/cm^3 (40Bq/L) for I-131, 6×10^{-2}Bq/cm^3 (60Bq/L) for Cs-134, 9×10^{-2}Bq/cm^3 (90Bq/L) for Cs-137, 3×10^{-1}Bq/cm^3 (300Bq/L) for Sr-89, and 3×10^{-2}Bq/cm^3 (30Bq/L) for Sr-90.

(Note 2) Indices to limit ingestion of drinking water shown on "Regulatory Guide of Emergency Preparedness for Nuclear Facilities" are 300Bq/kg for radioactive iodine and 200Bq/kg for radioactive cesium.