

Concept of emergency work taking radiation exposure dose into consideration

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Nuclear Regulation Authority

1. Nuclear emergency situation of Act on Special Measures Concerning Nuclear Emergency Preparedness

- The Act on Special Measures Concerning Nuclear Emergency Preparedness defines a “nuclear emergency situation” as “a situation where radioactive materials or radiation at an abnormal level has been released outside the nuclear site of a nuclear facility employer (outside of a vessel used for transportation in the case of transportation of radioactive materials outside the nuclear site – hereafter referred to as ‘transportation outside the nuclear site’).”
- If “a radiation dose exceeding the reference level defined by a Cabinet Order is detected nearby the boundary of a nuclear site in the procedure defined by a Cabinet Order or if another event defined by the Cabinet Order is detected as an expectation of ‘a nuclear emergency situation,’” the nuclear disaster prevention manager of the nuclear facility employer must notify the Government in accordance with Article 10 of the above Act.
- If the notification event according to Article 10 “exceeds the criterion of abnormal radiation dose defined by the Cabinet Order” or if “an event defined by the Cabinet Order as that which indicates occurrence of a nuclear emergency situation occurs,” the Prime Minister will declare a “nuclear emergency situation” according to Article 15 of the above Act.

2. Concept of emergency work

According to the concept of “nuclear emergency situation,” the following events of radioactive materials (or radiation) released at an abnormal level or events with a high possibility of such can serve as a yardstick to separate radiation exposure dose limits during emergency work:

(1) Part of notification event according to Article 10 of the Act on Special Measures Concerning Nuclear Emergency Preparedness

- 1) Detection of an increase in radiation dose or release of radioactive materials, such as detection of a radiation dose of 5 $\mu\text{Sv/h}$ or higher near the boundary of the premises of a nuclear site and detection of a radiation dose of 50 $\mu\text{Sv/h}$ or higher or detection of radioactive materials equivalent to 5 $\mu\text{Sv/h}$ outside the controlled area in the premises of the nuclear site (Item 1 through 4 of Paragraph 4 from Article 4 of the Act on Special Measures Concerning Nuclear Emergency Preparedness Cabinet Order).
- 2) Expectation of an increase in radiation dose or release of radioactive materials at a workplace inside or outside the premises or in a controlled area. This includes such events as when the water level of the spent nuclear fuel pool cannot be maintained or radiation or radioactive materials are released or may be released to the outside of the premises due to

an event attributable to other than the nuclear reactor facility (Item 5 of Paragraph 4 from Article 4 of the Act on Special Measures Concerning Nuclear Emergency Preparedness Cabinet Order).

- (2) Event according to Article 15 of the Act on Special Measures Concerning Nuclear Emergency Preparedness

All events that fall under the “nuclear emergency situation”.

Act on Special Measures Concerning Nuclear Emergency Preparedness

[Act No. 156, 17 December 1999, signatures of the Prime Minister, Finance Minister, International Trade and Industry Minister, Transport Minister, and Home Affairs Minister]

(Definitions)

Article 2

In this Act, the meanings of the terms listed in the following items shall be as prescribed respectively in those items.

- 2) “Nuclear emergency situation” means a situation where radioactive materials or radiation at an abnormal level have been released outside a nuclear site of a nuclear operator (in the case of the transport of radioactive materials outside the nuclear site (hereafter referred to as “transportation outside nuclear site”), outside a vessel which is used for said transport) due to the operation of the reactor, etc. by said nuclear operator (which means the operation of a nuclear reactor, etc., defined by Paragraph 1 of Article 2 from the Act on Compensation for Nuclear Damage (Act No. 147 of 1961); the same shall apply hereafter)

(Obligation to notify, etc. of a nuclear emergency preparedness manager)

Article 10

When a nuclear emergency preparedness manager has been notified that a radiation dose above the limit specified by a Cabinet Order has been detected, pursuant to the provisions of a Cabinet Order, near the border of an area where the nuclear site is located or has discovered such fact him/herself, he/she shall, pursuant to the provisions of the Cabinet Office ordinance or Nuclear Regulation Authority’s rules (in the case of the occurrence of an event pertaining to transport outside the nuclear site; the Cabinet Office ordinance; Nuclear Regulation Authority’s rules; and Land, Infrastructure, Transport and Tourism Ministry ordinance) and the nuclear operator disaster Emergency Action plan, immediately notify the Prime Minister, Nuclear Regulation Authority, the competent prefectural governor, the competent mayor of a municipality, and related neighboring prefectural governors (in the case of the occurrence of an event pertaining to transport outside the nuclear site; the Prime Minister; Nuclear Regulation Authority; Land, Infrastructure, Transport and Tourism Minister; and the prefectural governor and the mayor of a municipality who have jurisdiction over the place where said event has occurred) to that effect. In this case, the competent prefectural governor and the related neighboring prefectural governors shall notify the mayors of the related surrounding municipalities to that effect.

(Declaration of a nuclear emergency situation, etc.)

Article 15

In the case of falling under any of the following items, the Nuclear Regulation Authority shall, when the committee finds that a nuclear emergency situation has occurred, immediately report necessary information concerning the situation to the Prime Minister and submit a draft of a public notice under the provisions of the next paragraph and a draft of instructions under the provisions of Paragraph 3 to the Prime Minister.

- 1) Where the detected radiation dose pertaining to a notification which the Prime Minister and the Nuclear Regulation Authority have received pursuant to the provisions of the first sentence of Paragraph 1 of Article 10 or radiation dose detected by radiation measurement facility and by a measuring method, both of which are defined by a Cabinet Order, exceeds the radiation dose specified by a Cabinet Order, exceeds the radiation dose specified by a Cabinet Order as the condition of an abnormal level radiation dose.
 - 2) In addition to what is listed in the preceding item, where an event specified by a Cabinet Order as an event that indicates the occurrence of a nuclear emergency situation has occurred.
- 2) When there has been a report or submission under the provisions of the preceding paragraph, the Prime Minister shall immediately give public notice of the occurrence of a nuclear emergency situation and the following matters (hereafter referred to as “declaration of a nuclear emergency situation”)
- 1) The area where emergency response measures should be implemented
 - 2) The outline of the nuclear emergency situation
 - 3) In addition to what is listed in the preceding two items, the matters which need to be known by residents, visitors, and other persons, and public and private organizations (hereafter referred to as the “residents, etc.”) in the area listed in item 1.
- (Omission)