

Nuclear emergency

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Nuclear power plants take various multi-layered safety measures to ensure that, if there is an accident or breakdown, the immediate external release of large amounts of radioactive material is prevented. However, if the situation is serious and large amounts of radioactive materials are released outside a nuclear facility, that could result in contamination of the nearby environment and exposure of the residents. Such a situation is called a "nuclear emergency".

Taking measures to minimize damage and protect the safety and assets of residents in case of a nuclear emergency is called "nuclear preparedness".

Characteristics of a nuclear emergency

Nuclear emergencies have unique characteristics which are absent from fires, or natural disasters such as earthquakes, storms or floods.

- 1 We cannot use our five senses to detect radiation, which is invisible, silent, and has no smell.
- 2 We cannot judge the extent of exposure by ourselves. Special measurement equipment is necessary.

Nuclear preparedness

The objective of emergency nuclear preparedness is to save the lives, health, and assets of residents, workers, and visitors in the neighborhood. In particular, security and safety against emergencies is required, and the same holds for nuclear preparedness.

The most important point in nuclear preparedness is to strengthen safety measures in nuclear facilities, and many measures are actually taken in the design, construction, and operation of nuclear facilities. However, it is important for us to know the basic facts on radiation and radioactivity, as well as the correct actions to take in order to minimize exposure in the case of a nuclear emergency.

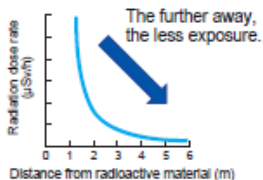
There are three fundamental principles for radiation protection, as shown below.

Three principles to reduce external exposure

1

DISTANCE:

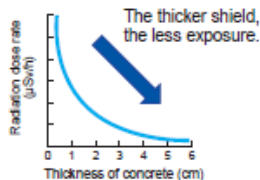
Increase distance from the radiation source.



2

SHIELD:

Block radiation by using a suitable shield.



3

TIME:

Reduce exposure time.

