Securing Work Environment at Main Control Room

- In order to secure work environment at a main control room (MCR) during emergencies in terms of radioactive radiation protection, measures will be taken to make the emergency ventilation and air conditioning system in the MCR available, using power supply vehicles (power source vehicles), even after a station blackout has occurred.
- Using power supplies supplied by power source vehicles and other means deployed (or additionally deployed) based on the emergency safety measures, sufficient supply capacity will be ensured. Documented procedures for operating ventilation and air conditioning system will be developed.

(An example representing plants)
Securing Means for On-Site Communication in Emergency

- Common on-site communication equipment (on-site PHS and paging device) can function for a given length of time even after a station blackout; however, in preparation for long-hour blackout, any or all of the following measures will be taken.

  1. Measures for making power supply possible using power source vehicles and other devices deployed based on the emergency safety measures
  2. Deployment of alternative communication means (transceivers, satellite phones, battery-powered interphones, etc.)

- When necessary as mid-term measures, paging and on-site PHS equipment will be relocated to higher places (such as a newly established and seismically isolated building to protect them from earthquakes, tsunami, etc.).
Securing Materials and Equipment such as High-Level Radiation Protective suits and Establishing a Radiation Control System

- More than a certain number (10 pieces) of high-level radiation protective suits will be provided.

Tungsten vest

- Arrangement is made through documentation among licensees so that materials and equipment such as high-level radiation protective suits and personal dosimeters can be accommodated among them.

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【(A licensee)】

Accommodated

【Other licensees】

- A system will be established where radiation control personnel can be supported from other divisions and departments during emergencies and assisted by personnel other than radiation control personnel.

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【A power plant in question】

Support

Radiation control personnel

Personnel other than radiation control personnel

Assistance

【Head office and other power plants】

Radiation control personnel

Personnel other than radiation control personnel

&Major assistive tasks

・Lending of dosimeters ・Input of data relating to exposure doses

・Procurement and management of materials and equipment ・Others
Measures to Prevent Hydrogen Explosion (for BWR)

- To prevent hydrogen from accumulating in large amounts in a reactor building, ventilation ports for venting hydrogen out of the reactor building will be provided. For this, a procedure for making holes on a reactor building will be developed.
- As mid- and long-term measures, hydrogen-venting devices will be installed at the top of a reactor building and hydrogen detection equipment will be installed to check its status.

(An example representing BWR plants)
Measures to Prevent Hydrogen Explosion (for PWR)

- Large dry-type containment vessel
  - To prevent hydrogen that leaked from a containment vessel to accumulate in large amounts outside of it, procedures will be developed to release hydrogen that leaked into reactor annulus outside by using annulus ventilation equipment (including filters) operated using electric supply from power source vehicles or other devices.
  - As a mid- and long-term measure, a static and catalytic hydrogen recombiner, which needs no power supply, will be installed inside a containment vessel.

- Ice-condenser-type containment vessel
  - By activating a hydrogen igniter (hydrogen combustor) installed inside a containment vessel, hydrogen concentration can be reduced. A procedure for activating igniter through electricity supply from a power source vehicle will be developed.
Deployment of Heavy Machinery for Rubble Removal

- Heavy machinery for rubble removal scattered by tsunami or other disasters will be deployed. (They are deployed at high places free from the possibility of being damaged by tsunami.)

【Wheel loader】
(An example representing plants)