Securing Work Environment at Control Room

[In the case of Rokkasho reprocessing plant]
- Even in the event of a station blackout, the supply capacity of the power source vehicles that have been deployed in accordance with the emergency safety measures is sufficient to power the main control room’s emergency ventilation and air conditioning system equipment (the recirculation system).
- The procedure manual required for operating the main control room’s emergency ventilation and air conditioning system equipment during emergencies was prepared.
- The necessary materials and equipment, including replacement parts for the filters (high-performance particulate filters) of the main control room’s emergency ventilation and air conditioning system equipment, are prepared.

Attachment 1

Exhaust fan
Air blower
Air conditioning unit
Fig. 1 Normal operation and fresh air intake

Exhaust fan
Air blower
Air conditioning unit
Fig. 2 Recirculation operation

*: Fully open
*: Fully closed
[In the case of Tokai reprocessing plant]
- As no emergency ventilation and air conditioning system equipment is installed in the recirculation system, ventilation and air conditioning equipment featuring iodine removal filters will be installed by the end of this fiscal year.
- In the event of a station blackout before such equipment has been installed, the valves in the air supply and exhaust lines will be closed manually in order to eliminate the air stream lines to and from the control room. In addition, workers in the control room will wear half-face masks. To prevent contamination, air locks will be provided for the control room doors. Procedure manuals were prepared for these measures.
Securing Means for Communication in the Reprocessing Facilities during Emergencies

- In Rokkasho reprocessing plant, the communications equipment that is used normally, such as on-site PHS and paging devices, will function on batteries, etc. for approx. one to three hours after a station blackout. In preparation for long-hour blackout, three power generators will be deployed by the end of July. Before the power generators become available, a means of communication will be secured by using transceivers (dry cell battery-operated) and messengers.

- In Tokai reprocessing plant, on-site PHS and paging devices, etc. will become unusable in the event of a station blackout and tsunami. As a measure against such a situation, transceivers (operated by rechargeable or dry cell batteries) and portable wireless devices (rechargeable) will be secured as an alternative means of communication. In addition, relocation of on-site PHS equipment, etc. to higher place (the disaster prevention and management building scheduled to be built) is being planned.

[An example of the Rokkasho reprocessing plant]
Securing Materials and Equipment such as High Level Radiation Protective Suits, and Organizing a Radiation Control System

- Lead-laced high-level radiation protective suits, full-face masks, Tyveks, personal dosimeters, contamination survey meters, ionization chamber survey meters, etc. are prepared in quantities sufficient to respond to accidents.
- In addition, based on the lessons learned from this accident, tungsten-laced high-level radiation protective suits are prepared.

[Example of a tungsten-laced high-level radiation protective suit]
- Weight: approx. 18 kg
- Shielding ability: equivalent to a reduction of about 20% of the dose of exposure

- Conventionally, Rokkasho reprocessing plant have had an agreement that allows licensees of nuclear energy related activity to cooperate with one another in lending materials and equipment as well as dispatching personnel during emergencies.
- In Tokai reprocessing plant, when there are shortages in materials, equipment, or radiation control personnel necessary for radiation control, supplementary materials and equipment and additional personnel assistance are available from the other sections of the laboratory as well as other laboratories belonging to organizations in the Ibaraki area. In addition, a system in which 18 nuclear sites in the Tokai area will cooperate during emergencies has been established in accordance with an agreement concluded between the nuclear sites.
- A system has been established to enable radiation control personnel to focus exclusively on priority tasks during emergencies by having other personnel perform the supportive tasks, such as dose management of workers, etc. and materials and equipment management. In addition, the monitoring and operating personnel for each process will be educated about radiation work. By introducing such systems and education, a system has been established to assist radiation control personnel during emergencies.

![Radiation control personnel and other personnel diagram]

- Priority tasks (examples)
  - Dose management of workers
  - Contamination management of workers, etc.
  - Measurement of radiation in the work environment
  - Planning of radiation work

- Assistive tasks (Examples)
  - Contamination measurement of workers, etc.
  - Materials and equipment management
  - Other additional tasks
Deployment of Heavy Machinery for Rubble Removal

- Heavy machinery will be deployed to remove rubble scattered by the earthquakes or that is expected to be brought about by tsunamis.

[An example at Rokkasho reprocessing plant]

![Wheel loader](image_url)

### Specifications

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<tr>
<th>Specification</th>
<th>Value</th>
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<tr>
<td>Overall width</td>
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