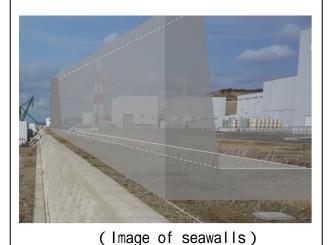
### Outline of measures to secure safety in Kashiwazaki Kariwa Nuclear Power Station

MANTUIII

#### **Installation of Seawalls**

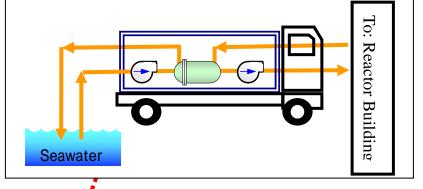
- install seawalls to prevent Tsunami from invading the site and to protect light oil tanks, buildings, and other facilities in the power station.



. Enhanced heat removal and cooling function

(4) Installation of alternative submerged pump and heat exchanger

- install alternative submerged pump and other equipment to continue to operate residual heat removal system even if cooling function using seawater is lost.



PRIMA

. Enhanced heat removal and cooling function

Transmission line

Spare line

Fresh Water

Tank

Filtered

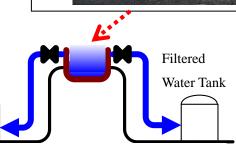
Water Tank

- (5) Installation of top venting on reactor buildings
- install top venting system to prevent hydrogen from piling up in a reactor building.

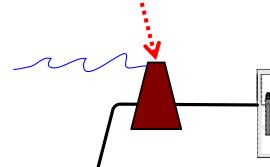
#### . Enhanced heat removal and cooling function

- (1) Installation of water source
- install a fresh water reservoir in the power station to secure stable supply of coolant water for reactors and spent fuel pools.









Heat Exchanger Building

Turbine Building Reactor Building

## . Countermeasure of inundation into buildings

- (2) Installation of water proofing gates
- install water proofing gate at reactor buildings and turbine buildings to protect equipment from water.

# . Enhanced heat removal and cooling function

- (7) Installation of a warehouse for emergency on a hill
- install of a warehouse containing facilities for emergency in case of Tsunami.

## <u>Enhanced heat removal and cooling function</u>

- (2) Additional installation of gas turbine generation vehicle
- install large capacity gas turbine generation vehicles to supply electricity to residual heat removal system in case of outage of all AC power.
- (3) Installation of medium voltage switchgear for emergency and permanent cables for reactor buildings
- install medium voltage switchgear for emergency and permanent cables for reactor buildings to secure power supply in case of outage of all AC power, and to supply power to residual heat removal system.

### . Enhanced heat removal and cooling function

- (6) Additional environment monitoring cars
  - prepare additional monitoring cars to continuously measure radiation dose at the site, for taking all possible measures to ensure gathering of information in emergency situations.



### . Countermeasure against inundation

- (1) Installation of seawalls
- install seawalls around reactor buildings containing critical equipment in order to prevent Tsunami from damaging power facilities and diesel generators for emergency and to secure safety of the power plant

