

Ongoing Voluntary Efforts to Enhance Safety

In June 2014, the Company developed a roadmap of actions to be implemented (Further Strengthening of Ongoing Voluntary Efforts to Enhance Nuclear Safety), including actions to enhance safety in compliance with the new regulatory standards as well as emergency response capabilities such as strengthened training programs, drills, and organizations. We are determined to implement the roadmap through a cohesive effort of the entire company without being restricted by the regulatory framework.

Enforcement of Defense-in-Depth

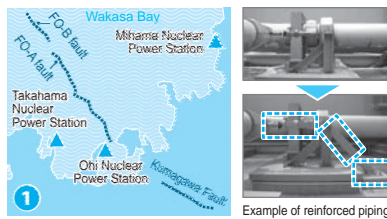
◆ Example of Takahama Units 3 & 4

Under the regulatory standard enforced in July 2013, multi-layered protective measures should be implemented to ensure safety and, in terms of the measures for each layer, the concept of "defense-in-depth," which does not rely on the effectiveness of the measures in other layers, is enforced.

Preparations to protect the power plant from natural phenomena (accident prevention)

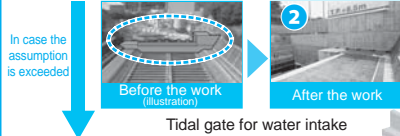
Preparation for earthquakes

- Detailed research to study the linked motion of faults near the power plant
The linked motion of faults has been analyzed conservatively; the Company has increased the assumed earthquake level and adopted reinforcements against earthquakes in the required locations.



Preparation for tsunami

- Tide embankments built to withstand an assumed tsunami of the largest magnitude



- Installation of watertight doors to protect safety-critical devices



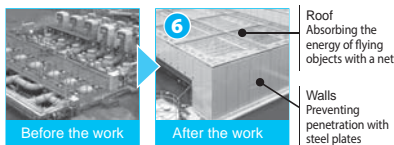
Preparation for fire

- In order to prevent fire spreading from the adjacent forest, trees along the perimeter of the power plant have been cut down to ensure an 18-m wide fire belt.



Preparation for tornadoes

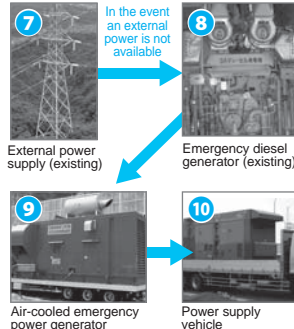
- Installation of tornado-resistant facilities to protect devices from flying objects
*It is assumed that a tornado with a wind speed of 100 m/s, exceeding the highest wind speed ever observed in Japan (92 m/s), would cause steel objects of (135 kg) to become airborne.



Measures to prevent serious accidents by cooling the reactor in a stable condition (preventing the development of accidents)

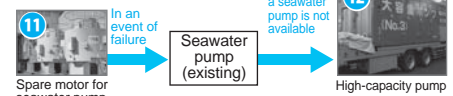
Enhanced power supply

- Enhancement of external power supply and ensuring redundancy and diversity of internal power supplies



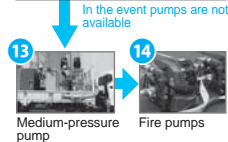
Enhanced cooling function

- Diversified seawater intake methods



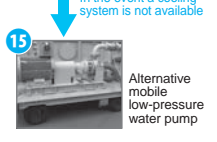
- Diversified cooling methods for steam generator

Auxiliary electrical water pump, turbine-driven auxiliary water pump (existing)



- Diversification of methods for direct cooling of core

Emergency core cooling system (existing)

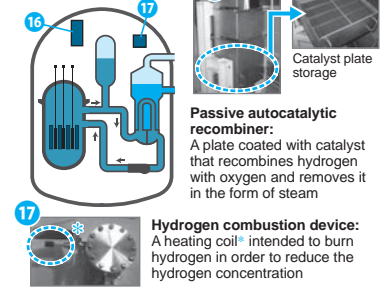


In an event of a serious accident

Responding to the remote chance of a serious accident (containing accidents)

Preventive measure against hydrogen explosion of containment vessel

- Installation of hydrogen concentration reduction device



Securing access routes

- Providing heavy machinery for removing wreckage



Limiting dispersion of radioactive substances

- Water cannon (limiting atmospheric dispersion)
- Silt fence (limiting marine dispersion)



Responding to widespread damage

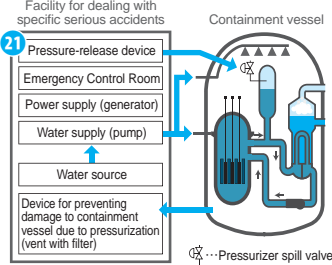
Responding to widespread damage to the plant due to a terrorist attack or natural disaster exceeding the assumed level

- Response with high-capacity pumps

In the event pumps are not available

- Plan to establish a facility for dealing with specific serious accidents*

* To be established within five years of the enforcement of new regulatory standards



Further preparation for unlikely events

Preventing serious accidents

