

# Status of the safety measures to comply with new regulations

August 4, 2013  
Tokyo Electric Power Company

These leaflets aims to inform status of the safety measures being established for Units 6 and 7 to comply with the new regulatory requirements. The information shown in these leaflets was recently explained at Kashiwazaki City Assembly and Kariwa Village Assembly and various feedback was provided. We continue to establish measures taking the feedback into account for further safety enhancement.

## Tsunami countermeasures

Voluntary measures such as building an embankment and installing watertight doors for buildings have been implemented **to protect facilities important to safety from tsunamis of 15m height.**

The new anticipated tsunami height in front of the sea water intake has been estimated to be 6m at the maximum, while the previous estimation was 3.3m. (The highest run-up height has been estimated to be 8.5m.)



Tidal Embankment for Units 5-7

## Fire protection measures

All power cables are fire-retardant. Measures based on three policies, "prevention," "early detection and extinction" and "mitigation", have been implemented to protect the safe shutdown function of the reactor in the event of fire.

## Countermeasures for internal flooding

**Waterproof treatments have been performed to protect zones containing equipment important to safety from water intrusion** in the event of internal flooding in the Reactor Building or other facilities due to pipe break.



Example of waterproof treatment at pipes and cables

## Earthquake countermeasures

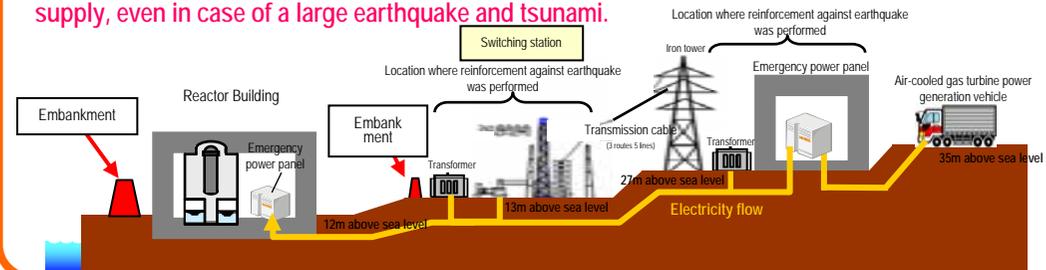
The Design Earthquake Ground Motion was revised based on the Niigata Chuetsu-oki Earthquake and earthquake reinforcements have been completed.

In addition, seismic safety analysis was performed assuming simultaneous movement of active faults around the power station **and it was confirmed that there would be no impact on facilities important to safety.**

It was confirmed that faults within the site have remained inactive for about 200 thousand years.

## Reinforcement of the electric system

The system to receive power from external sources has been reinforced **to maintain external power supply, even in case of a large earthquake and tsunami.**



## Countermeasures to other natural phenomena

Regarding strong winds, tornados, volcanoes, lightning, snowfall, low temperatures and forest fires, an impact assessment on the power station was performed **and it was confirmed that there would be no impact on facilities important to safety.**



Arrester tower (countermeasure for lightning strike)

## Countermeasures for severe accidents

The following measures have been established **to prevent damage of the reactor core and hydrogen explosions.**

- Diverse and redundant water injection measures (fire engines, reservoirs, etc.)
- Capability to heat removal (alternative seawater heat exchange facilities, etc.)
- Damage prevention of Primary Containment Vessel (PCV) and hydrogen treatment measures (filtered venting system, etc.)



Reservoir

# Outline of the filtered venting system

## Purpose of installation

Purposes of installing the filtered venting system are :

- (1) Venting before the reactor core damaging : to prevent the reactor core damage to maintain radioactive materials within the fuel.
- (2) Venting after the reactor core damaging : to minimize soil contamination outside the site assuming all core cooling functions reinforced after the Fukushima accident are out of work.

## Outline of System

The system removes steam and hydrogen within the Primary Containment Vessel (PCV) through a route which branches from the "(1) Existing venting system (hardened venting system) exhaust route (see the figure below)," and after reducing radioactive materials through "(2) Filtering equipment (see the figure below)," releases steam and hydrogen from the roof of the Reactor Building.

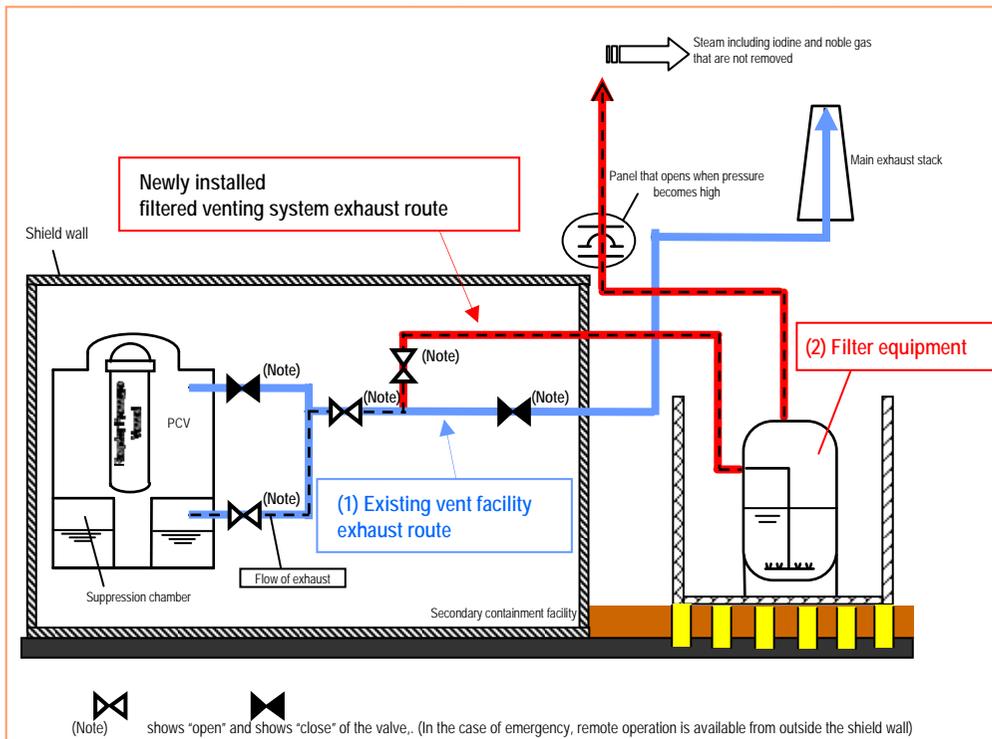


Image of the filtered venting system

## Structure and effect of the filter equipment

To prevent different subsidence from that of the Reactor Building in case of an earthquake, the equipment is supported by the same foundation of the Reactor Building.

Stretch joints are used to absorb the difference in displacements of two points. Particle-type radioactive materials (radioactive cesium) are collected and 99.9% removed through a process traversing the water scrubber and metal filter.

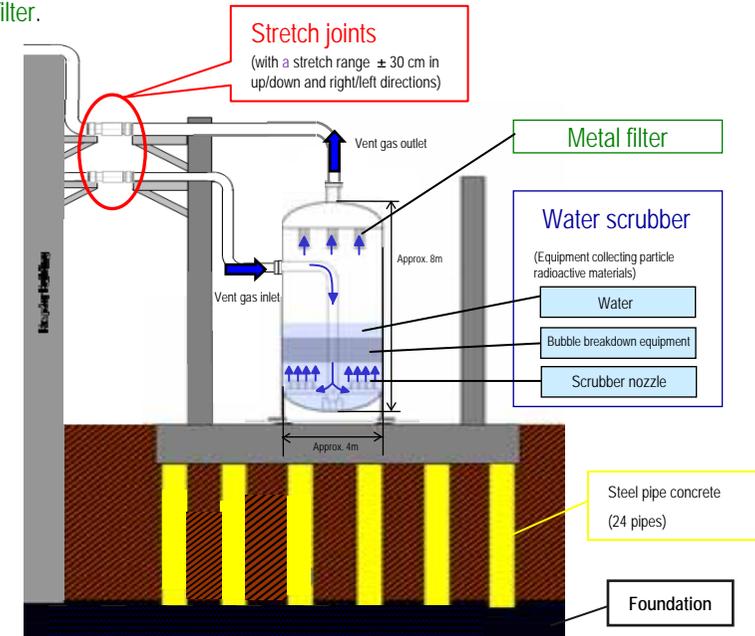


Image of the base structure

## Operation

The specific operation procedure is under discussion with national and municipal governments and local communities.

Based on the lessons learned from Fukushima accident, diverse communication media with national and municipal governments and local communities, such as satellite mobile phones and satellite faxes, have been established .