

# Fact Sheet

## Overview of Approach and Concrete Actions

Updated: May 2015

The issues of contaminated water at the Fukushima Daiichi Nuclear Power Station (NPS) and its decommissioning remain an urgent priority for the Government of Japan and significant progress has been made to date. The Government has assumed a proactive role in resolving the issue, providing financial support and ensuring that accurate information is disseminated to both the public and the international community in a timely and effective manner. Japan has adopted the highest level of standards for food and water quality, in line with international guidelines, and continues to implement stringent monitoring and distribution management to ensure the safety of its food and water.

### The Facts:

#### (1) Decommissioning

- Decommissioning of Fukushima Daiichi NPS are in progress based on the “Mid-and-Long-Term Roadmap towards the Decommissioning of TEPCO's Fukushima Daiichi Nuclear Power Station Units 1-4”.
- On Nov. 18, 2013 transfer of fuel rods from the NPS No. 4 unit spent fuel pool started, and successfully completed by December 22, 2014.
- To further accelerate the decommissioning process led by the national government, the Nuclear Damage Compensation and Decommissioning Facilitation Corporation (NDF) was established on August 18, 2014.
- Additional measures have been introduced in 2015. Strontium removal operations started from January 19, 2015. Measurement of the position of fuel debris inside the Unit 1 reactor using Muons (a type of elementary particle), commenced on February 12, 2015. Further, an investigation inside the Unit 1 PCV was conducted using advanced robots from April 10 to 20, 2015.

#### (2) Contaminated Water Management

- On June 19, 2013, TEPCO announced that contaminated groundwater had been discovered at the Fukushima Daiichi NPS in the area between the turbine buildings and the sea port. Analysis indicates that the main source of the contamination is water in cable trenches that connect with circulation pumps near the shore, which became contaminated in March 2011.
- On Aug. 19, 2013, TEPCO announced that contaminated water also leaked from an above ground tank.
- Increased radioactivity has been observed within the port. However, this increase has been observed only within the port, in an area smaller than 0.3 km<sup>2</sup> and no significant increase in radiation levels was observed outside the port or in the open sea. The radionuclide concentrations remain within the WHO guidelines for drinking water.
- On Sep. 3, 2013, the Nuclear Emergency Response Headquarters (NERH), headed by Prime Minister Abe, decided the “Basic Policy” for the Contaminated Water Issue.
- NERH decided on December 20, 2013 to implement “preventive and multi-layered” measures in addition to countermeasures described in the “Basic Policy”.
- A number of ongoing measures were then implemented throughout 2014 including the pumping of groundwater away from buildings (from May 21, 2014) the installation of land-side impermeable walls with frozen soil (commenced June 2014) and the installation of additional multi-nuclide removal equipment, or ‘ALPS’, (operations commenced from September 2014)
- The result of a comprehensive review of all the possible risks which might have an impact outside the site boundary of Fukushima Daiichi NPS was released on April 28, 2015 by TEPCO. The review identified progress to date as well as areas for future risk management.
- In addition to this, the International Research Institute for Nuclear Decommissioning (IRID) continues to conduct Requests For Information (RFI) and seek innovative approaches for the contaminated water and fuel debris retrieval issues.

## IAEA's Assessment:

In February 2015, an International Atomic Energy Agency (IAEA) expert team completed a review of Japan's progress towards decommissioning. The expert team issued a report on May 14 which acknowledged Japan for achieving good progress in improving its strategy and the associated plans, as well as in allocating the necessary resources towards safe decommissioning. The report also notes that the government of Japan has implemented planned measures aimed at reducing nuclear and radiological hazards on the site.

The previous IAEA assessment also addressed monitoring of food products (including seafood), adding that the joint FAO/IAEA Division understands that measures taken to monitor and respond to issues regarding radionuclide contamination of food are appropriate and, that the public food supply chain is under control and remains safe.

## The Response:

### Three principles for countermeasures against contaminated water in the "Basic Policy":

Remove sources of contamination

Isolate water from contamination

Prevent leakage of contaminated water

### Other approaches described in "Basic Policy":

- Establish a team to **gather knowledge and expertise** on a global basis.
- Adopt a preventive approach through **identification of further potential risks**.
- Maintain an **on-site-focused stance**, to ensure early detection of any issues and enable countermeasures to be monitored and revised as necessary.
- **Reinforce communications efforts** to ensure timely dissemination of accurate information on the current status in multiple languages for the international community.

### Progress to date on "Preventive and Multi-Layered Countermeasures" includes:

#### Remove sources

- To reduce the groundwater level, the steady release of pumped water on the mountain side of buildings has continued since May 2014.
- Strontium removal operations began in January 2015.

#### Isolate water

- Construction of impermeable walls with frozen soil.

commenced in June 2014 and has continued since. This process isolates groundwater flow from the contaminated area.

- Starting in September 2014, additional multi-nuclide removal equipment ('ALPS') was installed, with operations beginning in October 2014.
- Contaminated water is pumped from the affected trenches, and these areas are being further isolated from water flow.
- Groundwater from the mountain-side area of the plant is being pumped to reduce the amount of ground water inflow to the area.
- Install gutters at top of tanks.

#### Prevent leakage

- Treat the soil to prevent contaminated groundwater leaking to the sea by injecting sodium silicate, also known as liquid glass.
- Installing sea-side impermeable walls.
- Accelerate installation of welded-joint tanks.

