

- TEPCO is determined to become **“a nuclear operator that continuously improves safety to unparalleled levels by enhancing safety levels on a daily basis while always keeping the Fukushima Nuclear Accident in mind”**. To this end, the company has been moving forward with the Nuclear Safety Reform Plan since April 2013.
- TEPCO has sincerely dealt with the issues pointed out and suggestions given by the IAEA, WANO, and the Nuclear Reform Monitoring Committee, which is comprised of experts from Japan and overseas, in an effort to reach the highest level in the world.

Points of this report

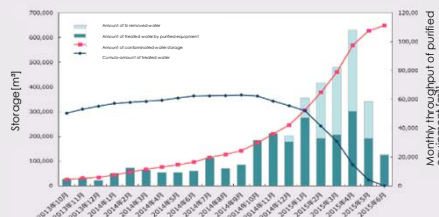
- Risk of water leakage has been significantly lowered due to completion of treatment of highly contaminated water stored in Fukushima Daiichi as well as progress in removal of contaminated water in seawater piping trenches.
- Systematic disclosure of all data relating to radiation in Fukushima Daiichi is progressing. By the summer, all data will be disclosed without fail.
- In order to prevent human injury, we will strengthen and continue initiatives such as hazard simulation training for work supervisors and workers. We are also improving work team leader training.
- Nuclear Safety reform shows solid progress, such as introduction of daily review of “10 features of sound nuclear safety culture” and utilization of operational experience (OE). On the other hand, we will try to enhance management observation (MO), which was identified as a weakness by third party (IAEA) reviews.

1. Status on safety measures of each site

Fukushima Daiichi

Significant reduction of leakage risk of contaminated water by completing the processing of high density contaminated water and making progress in filling the sea water piping trench.

- Continued treatment of highly contaminated water using 7 different facilities including ALPS, and completed treatment on May 27 except for water remaining at the bottom of the tanks.
- Completed filling of Unit 2 sea water piping trench, and removed contaminated water from the trench



Filling Shaft at Unit 2 Seawater piping trench

- Because the radioactive density of contaminated water in the trench is very high, removal therefore is a big step forward in reducing the risk of water leakage.

Continuous improvement of work environment attained by the reduction of radiation exposure of workers through decontamination, expansion of areas in which no full face masks are required, start services of a large rest house.

- Decontamination on the site progressing and increasing radiation monitoring. As a result, a full face mask is no longer required at 90% of the site, which alleviated the hardship of the workers
- Adjacent to the entrance control facility, a nine-storey large rest house which accommodates 1200 people started services from June 1.



Large rest house

More initiatives to secure personal safety

- “Industrial safety training” has started for supervisor and workers, with the purpose of looking for potential hazards in the work place and preventing accidents.
- We will improve the plan to gather and analyze incidents through MO for more effective application.

Attach a main rope and clip on the safety harnesses



Mandatory use of safety belts in high places

Fukushima Daini

Support Fukushima Daiichi decommissioning from various angles

- Utilize low-level nuclear waste transportation containers for Fukushima Daini to store rubble produced at Fukushima Daiichi
- Support Fukushima Daiichi decommissioning by temporary storage of contaminated water tanks, production of seawall blocks, laundry of special underwear for controlled area.



Attached safety belt training

Completion of industrial safety training to supervisors

- Industrial safety training facility (such as assembly of scaffolding) was set up on site and all supervisors received the industrial safety training.

Kashiwazaki Kariwa

Fully equipped facilities to further improve plant safety

- Facilities were upgraded to respond to various risks and prevent severe accidents, such as upgrading high-pressure alternative water feeding system, alleviating impact of internal flooding by installing discharge pumps around improvement equipment, prevention of external fire spread.



High-Pressure Alternative Cooling System (upgraded water injection function) installation

Third party review by the International organization (IAEA)

- IAEA's OSART* mission visited Kashiwazaki Kariwa from June 29 to July 13 to review nuclear safety culture and organization management for world's best nuclear power plant.
- Suggestions from Reviewers
 - ✓ Need to improve MO to make it effective
 - ✓ Improve procedure for additional safety measures facilities



Opening meeting



Checking safety measures facilities (Alternate heat exchanger car)

Make preparations and promptly implement improvements.

* IAEA dispatched Operational Safety Review Team: Operational Safety Review Team

Achievements in the FY2015 Q1, Nuclear Safety Reform Plan

2. Status of the Nuclear Safety Reform Plan (management side)

- Based on IAEA's review of our system operations and management including the Nuclear Safety Reform Plan, we are accelerating these improvements under the leadership of top management for further advancement. (Measure 1)
- We will tackle and solve issues that arise in management such as a high accuracy of disclosing of all Fukushima Daiichi radioactivity data. (Measure 4)

Safety Awareness	Technical Skills	Communication Competence
------------------	------------------	--------------------------

Measure 1: Management reforms

- We have implemented individual daily observations based on "10 Features of Sound Nuclear Safety Culture" for CEO, General Manager of Nuclear Power & Regional Relations Division and the Fukushima Daiichi Decontamination & Decommissioning Company President. It is now part of the daily routine. (executing rate : over 90%)



Using the booklet, "To improve Nuclear Safety"

- The purpose and interrelationships of various activities are explained in the booklet "To Improve Nuclear Safety". It was made for executives to implement the Nuclear Safety Reform.



General Manager of Nuclear Power & Regional Relations Division at Awards Ceremony

- Management and nuclear leaders hold dialogues with their employees to deliver their expectations and thoughts through various channels.
- FY2015 Q1 Awards given to employees who take initiatives.

Measure 2: Improvement of oversight and support to the management

- Nuclear Safety Oversight Office (NSOO) was reorganized as the entity which is now directly under the President (April 1, 2015). It will be directly involved in the nuclear safety decision making with observations and advice based on experience in the field.
- In order to prevent serious injuries at Fukushima Daiichi, education has been strengthened for working group leaders who lead the worksites, under the instruction and advice from NSOO.

Measure 3: Effective defense in depth proposals

- We held the First Improving Safety Proposal Competition 2015 and received 120 applicants.
- We are implementing excellent suggestions but speed is the issue.



Deploying wiring diagram of seawater electric machinery for emergency responses (Fukushima Daiichi)

Measure 5: Reinforcing emergency responses at nuclear power plant and headquarters

- In case the Main Anti-Earthquake Building is inaccessible, we conducted a drill in which the Emergency Response Headquarters are relocated to Unit 3 of Kashiwazaki Kariwa.



Emergency Response Headquarters was relocated from Anti-Earthquake Building to Unit 3 reactor building (Kashiwazaki Kariwa)



Large-scale firefighting training

- Firefighters of each plant have participated in Maritime Disaster Prevention Center's firefighting training to gain experiences.

Measure 6: Improving emergency response and onsite response

- At Fukushima Daini, we held a technology and skills competition to check the proficiency of our direct operational skills between June 11 and 25.
- We invited the Director of Plant Engineering from Palo Verde Nuclear Power Station (USA) to learn their best practice to develop system engineers and exchanged views.



Hauling of Standby Electric Machinery at the replacement drill (Fukushima Daini)

Measure 4: Enriched risk communication activities

- We continue to provide easy to understand information through various tools and opportunities such as plant tours and video production.



Video released "Robots in the Primary Containment Vessel"



A plant tour for Tokyo-based embassy staff (Fukushima Daiichi)

- Based upon our policy that we disclose all the radiation data, we have been releasing data as "Daily analysis results on radioactive material" since April 30.

- We established a manager of data administration to conduct checks on a daily basis. The data management was improved by introducing systematic monitoring of disclosure status with accuracy.
- We will systemize manual labor to improve accuracy. (Scheduled for this summer)



Daily data releases Currently approx. 50,000 cases/year. The data release coverage is going to be increased to approx. 70,000 cases/year by this summer. (Before: approx. 30,000 cases/year)

KPI self assessment on nuclear safety	81.6 points (Overall Nuclear Division) 94.3 points (Nuclear Leader) Basically favorable, but the interdivisional communications without being stuck in its own is the issue.
---------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

KPI on employee understanding and delivery of safety messages from Nuclear Leaders	50.0 points Understanding the messages and implementation of management observation (MO) are insufficient.
------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------

KPI on drawing up business plans to improve technical skills	77.5 points The business plans use Performance Objectives and Criteria (PO&C), the world's best standards performance level.
--------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------

KPI on the performance monitoring of the business plans	[Evaluation in FY2015 Q2] Execute business plans while improving technical skills by implementation of plan-do-check-action (PDCA) cycle.
---------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------

KPI on the status of internal communication	76.0 points (Overall Nuclear Division) 80.3 points (Nuclear leader) We will continue to be proactive for good internal communications.
---------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------

KPI on external evaluation over the information delivered by TEPCO	[FY 2014] +1.3 points (The quality and quantity of information delivery) +1.2 points (The significance and stance of Public Relations and Hearing) "Favorable" evaluation increased to that of the previous fiscal year.
--------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------