

The Outline of “Nuclear Safety Reform Plan Progress Report (FY2013 1st Quarter)”

July 26, 2013

Tokyo Electric Power Company

Progress on Nuclear Safety Reform Plan (Facility Reform)

- Fukushima Daiichi Nuclear Power Station;
 - “The Immediate Response Headquarters for Reliability Improvement at Fukushima Daiichi Nuclear Power Station” (Established on last April) have been planning and implementing countermeasures in response to troubles.
 - The timing for removal of spent fuel and fuel debris has been moved up.
 - High risks in facilities of Fukushima Daiichi leading to environmental radioactive material release are identified as follows.
 - Risks associated with failure to inject cooling water into reactor
 - Risks associated with failure to inject nitrogen gas into PCV, etc.
 - Risks associated with failure to cool spent fuel pool water (Units 1-4, and common-use pool)
 - Risks associated with leakage of contaminated water
 - Risks associated with power outages
- Fukushima Daini Nuclear Power Station;
 - As of May 30, work was completed on restoring the original on-site equipment to operation in place of the temporarily installed equipment with respect to systems involved in maintaining the cold shutdown.
- Kashiwazaki-Kariwa Nuclear Power Station;
 - As protection against tsunami, work has proceeded on various measures including the erecting flood embankments, flood barriers, deployment of alternate cooling equipment, and filtered venting (foundation work).

Progress on Nuclear Safety Reform Plan (Management Reform)

We are working to implement the following countermeasures.

Countermeasure 1	Reform to Top Management
Countermeasure 2	Oversight and Support for Top Management The Nuclear Safety Oversight Office was established on May 15 (General Manager: Dr. John Crofts).
Countermeasure 3	Strengthening Ability to Improve Defense in Depth
Countermeasure 4	Enhancement of Risk Communication
Countermeasure 5	Reform of Emergency Response Team in Station and Head Office
Countermeasure 6	Reform of Station Organization and Enhancement of In-house Maintenance

Review of the Reform Plan in Light of Exposed Problem in the 1st Quarter

TEPCO has initiated nuclear safety reforms, but several accidents or problems have occurred at the Fukushima Daiichi NPS in the ensuing period of time. We looked back once again on the following three events

[Power outage caused by mouse and recurred during corrective action]

- Safety awareness

Preparedness for troubles such as power outage should be, therefore, strengthened further in terms of defense-in-depth approach by raising technical capability of station personnel sufficient for immediate response.

- Technical capability

Management effort to build a work process such as giving guidance and support by experienced professionals was necessary to reduce safety risks.

- Dialogue skills

We should explain the status and importance of troubles, announce progress in restoration work, and show expectations for completion timing accurately from earliest possible moment.

[Contaminated water leakage from underground water storage]

- Safety awareness

We should have improved quality of oversight and swiftness of reporting consensually by defense-in-depth approach with high safety awareness, then, taken concrete risk reduction measures such as acceleration of the steel storage tank preparation project schedule for early transfer of the contaminated water from underground storage.

- Technical capability

Taking into account the risk of unplanned storage of highly contaminated water and the difficulties arising in leakage detection from the underground water storage, we should promote the improvement of leakage detection measures and surveillance system, and enhancement of technical and organizational capability for performing countermeasures needed.

- Dialogue skills

It is important to share the idea of overall risk minimization and set a logical order of priority for the constraints through comprehensible and patient communication with regulatory authorities and people in Fukushima,

[Groundwater contamination with tritium and other substances distributed east of Unit 1 and 2 turbine buildings]

- Safety awareness

the chance came to prepare the concrete countermeasures by the ways like organizing priority reviews concerning the change of status and/or placing a manager generally taking charge of the matter in order not to keep neglecting the risk once regarded as low-priority just after the accident.

- Technical capability

Hereafter when we manage the difficult problems, we should not rely on only one absolute measure but consider second and third options flexibly even if they only mitigate the risk partially. There might be schedule delays and/or unexpected matters.

- Dialogue skills

For management of difficult issues such as highly contaminated water accumulated in the trench, expertise and competency in communication are inevitable to share risks and cooperate with regulatory authorities, local municipalities and other concerned organization.

In the aforementioned three cases involving an accident or problem, among the background factors, there are the three issues of “safety awareness,” “technical capabilities” and “dialogue skills” which are derived from the root cause of insufficient advanced preparation for a severe accident or tsunami.

Consequently management will exercise leadership on its own and reliably implement the nuclear safety reforms in order to accelerate further it. In addition, we will conscientiously look back at the accidents and problems which have occurred during the period, confirm the appropriateness and degree of progress of the Nuclear Safety Reform Plan, and continue to make improvements.

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