

<Reference>

Regarding safety measure improvements after the accidents occurred at Fukushima Daiichi Nuclear Power Station

February 2, 2015
Tokyo Electric Power Company



東京電力

Issue 1: Lack of efforts to eradicate human accidents

1. Lack of continuous safety enhancement activity such as listing up danger zones and eliminating them.
2. Because of strong pressure to comply with the schedule, accident recurrence prevention activity was not thorough, and the range of inspection and measures were restricted.

Measures

- a. Expand further improvement of human safety activity under the management of Nuclear Division Director (For the issues 1, 2,)
- b. Enhance the " Safety First" awareness through the communication among Division Director, Chief Decommissioning Officer (CDO), Station Chief, other on-site leaders and cooperative companies. (For the issues 1,2,)
- c. Patrol the field by Division Director, CDO and Station Chief to find the risks and eliminate them. Also the heads of the Power Stations and the Subcontractor Chiefs to conduct joint patrols regularly. (For the issue1)
- d. TEPCO supervisors go on-site regularly to find the areas to be improved and the risks to be eliminated. (For the issue 1)
- e. In addition to the inspections and short-term measures conducted when operation is stopped, analyze the root cause of the accident and implement measures for improvement after resuming operation. (For the issue 2)

Issue 2: Weakness in making use of lessons learned from past troubles and accidents and rolling out information.

- 1 There was no clear assignment of the person in charge of analyzing and establishing the measures to accidents. This delayed the report submission.
2. The cover of the hatch at Unit 5 and 6 fell in August last year. If this information were broadly shared within the division, there was the possibility to prevent the accident which happened this time. Also the measures for the accident involving fallen single pipes in September last year did not lead to the prevention of the turning ladder rail accident in November and the accident which occurred this time.
3. Because of lack of root cause analysis, information was not rolled out as efficient measures.
4. Insufficient study of information regarding non-conformity, operation experience, and industrial accident.

Measures

- a. Appoint a person to be in charge of analyzing and rolling out measures. Set deadlines for inspection and roll-out of measures and the Station Chief to check regularly (For issue 1)
- b. The person in charge to write down the detail of the measures and share the information among the organization and confirm on-site practicality. (For issue 2)
- c. For the cause analysis, pursue the root cause until the lessons are learned which can be applied to other performances. (For issue 3)
- d. Make use of information of non-conformity, operational experience, and industrial accident by group everyday, improving risk management awareness of workers and roll out the information to the whole Power Station. (For issue 4)

Issue 3 Lack of management skill in accident prevention.

1. TEPCO's supervisors spent too much time on desk work and was not sufficiently trained for on-site supervision. Also skills to detect risks, point out and control unsafe action on-site are not enough.
2. Since the specific details of operational procedures are not described in the instruction manual. TEPCO's supervisors are not able to grasp the operation sufficiently.

Measures

- a. Trainings and drills to improve risk management awareness (For issue 1)
 - Build on-site simulation facility for workers to train and drill.
 - Receive instruction from outside experts, and define unsafe places and unsafe actions.
 - Collect typical risk management awareness examples, educate the supervisors and operation leaders.
 - Regardless of rank or role, acquire the capability and practice to point out unsafe activity whenever it is found.
- b. Grasping of working procedure (For issue 2)
 - Communicate with the supervisor of subcontractors and be able to clearly visualize the details of the operation.
 - When first-time procedures are added or procedures change, TEPCO employees to go on-site and confirm the correct operation procedure.