

Tokyo Electric Power Company Holdings, Inc.
Board of Directors

Results from the Monitoring of Nuclear Safety Reforms

In September 2012, Tokyo Electric Power Company Holdings, Inc. (hereinafter referred to as, “TEPCO HD”) established the Nuclear Reform Special Task Force in order to reflect upon the Fukushima Daiichi Nuclear Accident. In conjunction with this, TEPCO HD also established the Nuclear Reform Monitoring Committee (hereinafter referred to as, “NRMC”) in order to monitor and supervise [reform] initiatives from an outside perspective.

The NRMC is monitoring/supervising reform initiatives that TEPCO HD needs to implement in order to be a nuclear operator with the world’s highest level of safety awareness, technological capability, and the ability to engage in dialogue with society.

The NRMC has continually monitored/supervised the following key issues pointed out during the 19th meeting of the Nuclear Reform Monitoring Committee held on March 9, 2022.

- ✓ Initiatives to continually improve safety
- ✓ Control-focused management
- ✓ Communication within the organization and with society

During this time, the NRMC has received midterm reports from TEPCO HD (via online conferencing on March 22, 23, 24, August 30, and September 1, 2023), exchanged opinions with upper management 25 times (face-to-face and via online conferencing systems), and visited both the Fukushima Daiichi Nuclear Power Station (August 26, December 20) and the Kashiwazaki-Kariwa Nuclear Power Station (April 24, December 18).

Additionally, in order to examine “initiatives to continually improve safety” and “communication within the organization and with society,” the NRMC has conducted interviews with field workers from the Fukushima Daiichi Nuclear Power Station (hereinafter referred to as, “Fukushima Daiichi”), the Fukushima Daini Nuclear Power Station, and the Kashiwazaki-Kariwa Nuclear Power Station (hereinafter referred to as, “Kashiwazaki-Kariwa”) in order to identify specific changes that have occurred since the Fukushima Daiichi Nuclear Accident and in the wake of a string of improprieties that occurred at Kashiwazaki-Kariwa.

Today, at the 21st meeting of the Nuclear Reform Monitoring Committee, TEPCO HD gave a report on the status of nuclear reform initiatives and improvements made to address these key issues mentioned above.

- In light of the Government of Japan’s decision to commence the discharge of ALPS-treated water on August 22, 2023, TEPCO HD commenced ocean discharge from Fukushima Daiichi

on August 24. However, in light of the body contamination that occurred during the cleaning of additionally installed ALPS pipes on October 25, it is apparent that there are issues that need to be addressed pertaining to safety management and field skills, and that this issue extend to contractors as well. In addition, the leak of water containing radioactive substances from purification equipment was found on February 7, 2024, it is required to ascertain the root causes and implement measures of this issue. It is extremely regrettable that this incident was allowed to occur, and the NRMC would once again like to emphasize the high importance of suitably engaging in tasks pertaining to treated water and other decontamination activities while prioritizing safety.

- At Kashiwazaki-Kariwa, a self-assessment was performed in May 2023 by a team that included external experts in preparation for the WANO restart review. And, in June 2023, the Committee to Assess Improvement Measures Pertaining to Physical Protection Incidents was voluntarily established as a measure to prevent corrective measures implemented to address the string of incidents from becoming transient actions. Furthermore, in December, 2023, even though notification of the change of the handling classification for nuclear regulatory inspections was received, TEPCO HD will not allow itself to be content, and should rather further elevate safety through continual improvements.

The NRMC's findings pertaining to improvements to address the key issues and overall conditions at TEPCO are as follows:

- ✓ After almost 13 years of engaging in improvement initiatives since the Fukushima Daiichi Nuclear Accident, TEPCO HD has steadily made progress throughout the entire organization. It is vital that upper management provide the leadership needed to continue these nuclear reforms while ensuring that all TEPCO and contractor employees never forget that safety is their highest priority.
- ✓ Initiatives to continually improve safety
 - Great advances have been made in safety awareness compared to before the Fukushima Daiichi Nuclear Accident. In addition to the great qualitative change in the safety awareness of individual workers that experienced the harsh conditions of the accident for themselves, and efforts to pass on that experience to the next generation, it is thought that the continual implementation of various initiatives to improve safety awareness throughout the organization in light of regrets about the accident has contributed to this advancement. However, ascertaining the root causes of negative events, setting priorities for safety countermeasures, and employing the PDCA¹ process continue to be challenges for TEPCO HD.
 - In regards to safety measures at Kashiwazaki-Kariwa, the NRMC has confirmed that numerous safety measures, such as equipment improvements, the introduction of new equipment, and the implementation of various countermeasures have been implemented, and that operators are being trained on this new equipment and the implemented countermeasures. However, during this period of long-term shutdown,

¹ PDCA is an acronym for "Plan, Do, Check, Act," a management method by which work efficiency is improved through the repetitive implementation of these four processes.

TEPCO HD must thoroughly educate operators about the configuration of equipment that was altered as part of countermeasures implemented during the accident, and also formulate countermeasures to address the lack of experience of operators.

✓ Control-focused management

- The NRMC commends TEPCO HD for the great improvements that have been made to corrective action programs (CAP) and risk management, however although a certain degree of overall improvement has been made with key issues identified during the 19th NRMC meeting (Head Office and site department organization, over dependency on contractors, fire protection programs, configuration management, project management, governance and monitoring functions), we expect these initiatives to continue going forward.
- At Kashiwazaki-Kariwa upper management must steadily move forward with the transition from construction mode to operation mode with the knowledge that there will be difficulties along the way. The fact that the company is transitioning to a management model that considers the relocation of the Head Office Nuclear Power Division functions should be commended. Continuity is important when it comes to the management model, and when unforeseen conditions arise, TEPCO HD must be able to revert back to that management model without having to focus all of its attention on those unforeseen conditions.

✓ Communication within the organization and with society

- TEPCO HD should be commended that all station personnel seem to feel that internal communication has become more open than it was in the past. Initiatives engaged in at Kashiwazaki-Kariwa based on the “purpose,” such as cultivating a sense of unity and encouraging employees to greet one another, are not separate objectives, but rather tools used to vitalize communication. The objective of these initiatives is to create an environment within which everyone can quickly share information without mental burden even if there is apprehension. So, the NRMC would like to stress the importance of accurately conveying the fundamental significance and objective of these initiatives to all parties within the organization.
- Communicating with society’s various stakeholders is indispensable for nuclear safety. It is vital that upper management lead the way to proactively conveying a singular message of nuclear power station safety and reliability through many voices, and build trust with stakeholders through dialogue. In recent years, compound disasters caused by natural disasters, such as earthquakes, have become common, and the Fukushima Daiichi Nuclear Accident is no exception. Making meticulous preparations during times of normalcy with both software and hardware to ensure that stakeholders receive the information they need is indispensable for an emergency response. In light of the diversification of communication mediums over recent years, the NRMC expects that TEPCO will inspect and develop methods for conveying the information that society wants accurately and in a timely manner. In particular, in the event of a compound disaster, misperceptions about the health risks associated with radiation can have a detrimental impact, such as by delaying rescue efforts. To prevent this, it is vital that risk communication between TEPCO and the local governments and local residents be developed during times of non-emergency.

Although progress has been made with each of the aforementioned key issues, the destination point for each issue has yet to be reached. Continual improvement is needed to elevate nuclear safety. However, in various industries we have seen time and time again that even if safety culture improves, as time passes, bad habits start to reappear. Going forward, it is vital that TEPCO work with contractors to transform these initiatives into sustainable systems, mechanisms and culture that take root in the organization and are not reliant upon any specific individuals. To ensure that TEPCO HD can continue to reap the benefits of the nuclear power reforms it has implemented to date, the NRMC would like to see it voluntarily continue initiatives pertaining to safety culture, training, and communication.

The sense of responsibility of workers in the field that diligently engage in their duties under harsh environments are TEPCO HD's greatest assets. The NRMC would like to see TEPCO HD upper management rally this potential and continue to improve so as to become a company that is truly trusted by society.

Nuclear Reform Monitoring Committee

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