

## **SUMMARY OF THE PROCEEDINGS OF THE 12<sup>th</sup> NUCLEAR REFORM MONITORING COMMITTEE MEETING, JANUARY 30, 2017**

**Venue:** TEPCO Headquarters 10F West Conference Room

**Participants:**

- Dr. Dale Klein (Chairman)
- Lady Barbara Judge (Deputy Chairman)
- Masafumi Sakurai (Member of the Committee)
- Fumio Sudo (TEPCO Chairman, Member of the Committee)
- Kazuhiro Suzuki (Secretary-General)
- Naomi Hirose (TEPCO President and CEO, Chief of the Nuclear Reform Special Task Force)
- Takafumi Anegawa (Managing Executive Officer, Secretary General of the Nuclear Reform Special Task Force)
- Naohiro Masuda (Managing Executive Officer, President of Fukushima Daiichi D & D Engineering Company)
- Dr. John Crofts (Managing Executive Officer, Chief of Nuclear Safety Oversight, Head of Nuclear Safety Oversight Office)
- Chisa Enomoto (Head of Social Communication Office)

### **Comments from Committee Members**

Dr. Klein noted that it is important, when conducting a self-assessment, to keep being self-critical and that TEPCO should find things to improve based on the result of a self-assessment. Then, he said, the Committee will review and monitor those activities.

He noted that TEPCO is making significant progress, but that there is always room for improvement. He said the Committee believes that the top management of TEPCO fully understands safety culture, and the challenge will be when everyone in the organization understands that culture. He also said TEPCO needs to continue to improve communications and build trust among their stakeholders and the public.

Lady Judge said one never finishes in the journey towards nuclear safety and that this self-assessment is just the first step of the journey. She said the Committee should commend TEPCO for undertaking this effort. She noted there still needs to be more formal training down to the level of front-line managers, and that contractors need to be held to the same standard as the TEPCO employees.

She noted that especially in the nuclear industry, communication is vital and that TEPCO needs to be more forthcoming and more transparent in its communication, especially at the local level. However, she said, TEPCO has come a very long way.

Mr. Sakurai noted the progress of nuclear safety reform at TEPCO. Rather than in the past, when the Committee reviewed safety in the context of individual incidents, the self-assessment provided the opportunity to review it comprehensively and not in the context of emergency response. He said he hoped that this calmer situation will continue on into the future.

Mr. Sakurai also noted that for the reviews, he visited all TEPCO's nuclear sites and also visited the Palo Verde Nuclear Power Station in the U.S. to understand what kind of nuclear safety programs are currently in practice, what kind of approaches they take, and what kind of facilities or equipment have been put in place. He said this has provided a valuable reference point against which to assess TEPCO's progress, but also noted there are important differences in circumstances between the U.S. and Japan that must be taken into account.

Referring to Lady Judge's observation that nuclear safety is an endless journey, he noted that it is an endless journey for human resources development as well. Therefore, he said, there needs to be long-term plans for human resource development, and urged top management to consider this.

### **Submission of Review Results on Self-Assessment (by the NRMCC) to the Chairman of TEPCO Holdings Board of Directors**

Dr. Klein, Chairman of the NRMCC, submitted Review Results on Self-Assessment to Mr. Sudo, the Chairman of TEPCO Holdings Board of Directors.

Mr. Sudo first thanked Dr. Klein, Lady Judge, and Mr. Sakurai very much for the great effort and time they have put into preparing the Committee's review of the self-assessment.

He said that each of the committee members had been to the sites to look at work activities and had many direct conversations with Mr. Hirose, President and CEO, as well as nuclear power division management.

He also said that this year is going to be a memorable year as TEPCO steps into the new stage of management. He said the board of directors will seriously consider the findings of this report, and endeavor to make sure that the nuclear safety reforms and management reforms are steadily implemented so that TEPCO can regain the trust of the general public as soon as possible.

He asked the Committee to continue providing advice for further improvement.

### **Comment from the Chief of TEPCO Nuclear Reform Special Taskforce**

Mr. Hirose thanked the Committee for its review of the self-assessment report. He said that there are very many things that TEPCO needs to learn from the Fukushima nuclear accident, the most important of which is to never think that this is enough. In the actual self-assessment, there are issues and challenges that TEPCO needs to improve, and it is committed to making those improvements.

He also noted that decommissioning is going to be a very long endeavor for 30 to 40 years and that TEPCO needs to continue on with the understanding that this is a long journey. This self-assessment is one tool for TEPCO to ensure it pursues continuous improvement over that time.

## **Action Plans/Actions being implemented based on the Self-Assessment of Nuclear Safety Reform**

Action plans/actions being implemented based on the self-assessment of Nuclear Safety Reform were reported by Secretary General of Nuclear Reform Special Task Force Anegawa. Supplementary reports were given by President of Fukushima Daiichi D & D Engineering Company Masuda, Chief of Nuclear Safety Oversight and head of NSOO Dr. Crofts, and head of Social Communication Office Enomoto.

### *Succession Planning*

Lady Judge said that it's very good that TEPCO is doing succession planning and that TEPCO should make sure that there's always somebody ready to jump in if necessary.

Mr. Anegawa responded that they have tried to make succession plans for the General Manager of Nuclear Power & Plant Siting Division and the President of Fukushima Daiichi D & D Engineering Company, having taken advice about those of overseas companies from an expert.

Mr. Sudo asked Mr. Anegawa to define job descriptions, which is the basis of succession plan, for middle-management positions and above.

Mr. Anegawa said that they include the job description in the succession plan and they'd like to provide it to the Board of Directors when they complete it.

### *Contractors*

Mr. Sakurai noted that TEPCO is improving its ability to do work directly but that contractors will continue to be needed. Therefore, TEPCO needs to consider how to ensure contractors understand the effort for nuclear safety reform.

Mr. Anegawa responded that for TEPCO's group companies, TEPCO shared the information about its efforts for nuclear safety reform, and that TEPCO would like to roll it out to the other contractors as well.

### *Governance*

Mr. Sudo said that it is very important to make sure that the mechanism of governance is functioning effectively. It is also effective to share and leverage among the company departments causes and actions for the troubles experienced for the past year or past six months. He noted that there should be a joint meeting or conference about the measures for troubles between the sites and the engineering organization for more efficiency and a multi-faceted approach should be considered.

Mr. Anegawa responded that TEPCO will keep the necessary engineering staff at the sites. Capacity to identify causes and actions at the site and the supportive activities from the engineering department will have to be well

aligned. TEPCO will make sure to balance that as they go.

#### *Landside Impermeable Wall ("Ice Wall")*

Dr. Klein asked why freezing on some parts of the Land-side impermeable wall have not been undertaken.

Mr. Masuda responded that TEPCO is using a gradual approach to freezing the ice wall so as not to cause the rapid change of ground water level and cause contaminated water to flow out of the reactor building or turbine building.

#### *Safety Oversight*

Lady Judge said that NIEP usually deals with assessing and oversight of operating of nuclear reactors and asked if it could provide relevant review on what TEPCO is doing.

Dr. Crofts responded that NIEP spent a week with TEPCO. He said they went to Kashiwazaki Kariwa, Fukushima Daiichi and Fukushima Daini and spent time for interviews at headquarters. He thought that it is difficult to assess the situation at TEPCO in that time scale, but they made a lot of observations on behavior. He said that it was pretty hard and tough, but it taught them a lot and he thinks it was relevant.

Dr. Klein asked if NSOO had areas where they were asked to come in and give advice from the front-line workers.

Dr. Crofts responded that Mr. Anegawa and Mr. Masuda occasionally asked NSOO to look at a specified area, but NSOO had not been asked to look at from the front-line workers. That was one of the observations that NIEP made. Because maybe NSOO has not been good enough in telling them who NSOO is, what it does, and that it is available to help.

Lady Judge asked Dr. Crofts how NSOO knows when its advice is actually taken.

Dr. Crofts said that NSOO relies on followup conversations with Mr. Anegawa, Mr. Masuda and the site superintendents. He noted that every two or three months, NSOO goes and verifies that things have actually been done and the response is generally good.

Mr. Sudo noted that the front-line supervisors are the middle managers, their capability levels are quite diverse and that this difference in capability may affect safety. He said that TEPCO should know the types of gaps they have in terms of their capabilities and think about how to close that gap.

#### *Communications*

Lady Judge expressed the concern that after a period of improvement TEPCO's communications regressed, and also expressed concern whether risk

communicators are getting to the people at the local level. She said she thinks the communications at the local level have to be given higher priority and that TEPCO also needs to improve its international communications.

Mr. Hirose said that he agrees that communication is an area in which TEPCO needs to continue to improve. TEPCO needs to develop a special team and he'd like to have many advices and input as well.

Mr. Sakurai noted that allocation of roles between Corporate Communication Office, Social Communication Office and Risk Communicators haven't been clearly differentiated or delineated. It's fine to have a special team, he said, but TEPCO needs to sort out the allocation of roles.

### **Review Results of the NRMCA on the Self-Assessment of Nuclear Safety Reform**

Dr. Klein said that doing a self-assessment first, then finding out where the challenges are. It is helpful to listen to expert who has done it many times about the points that aren't fully understood. It will be better next time, the third time TEPCO might actually get there.

Lady Judge said that since TEPCO is just so early in the self-assessment, they have to keep comparing themselves to people that have done it a lot of times.

Mr. Sakurai said that "alignment" is a difficult term to explain with words, but going to the Palo Verde Nuclear Power Station and seeing how workers work and things posted on the walls, he thinks that really explained to him and convinced him what they mean by "alignment". He also said that there is the kind of thing such as Emergency Response Center configuration, the access route that the Committee also wants TEPCO to learn.

He noted that the current surroundings of TEPCO are challenging, still, safety is first.

He also noted that, in communication, it is not appropriate to emphasize peace of mind too much. Peace of mind is for the receiving end whether they feel it or not. If TEPCO does their work safely, it would lead to peace of mind.

Mr. Sudo said that Mr. Sakurai visited the Palo Verde, and he felt something new. He thinks those are things that plant managers at Palo Verde created, and those really show up in concrete forms. TEPCO has to set the bar high, and then aspire to reach that high goal. He thinks, because of lack of job description, TEPCO was not able to quantify performance, and share the understanding.

### **Comment from the Chief of TEPCO Nuclear Reform Special Taskforce**

Summarizing key outcomes of the Committee's meeting, Mr. Hirose noted three things:

- TEPCO must continue self-assessment and TEPCO has to learn about

self-assessment itself and, on a more daily basis, run this PDCA cycle of self-assessment as well.

- TEPCO must sort out the allocation of roles in communication.
- TEPCO will take multiple actions to ensure that it is moving towards full alignment, and TEPCO will continue to make improvements in this regard by leveraging advice from the Committee.