Remarks by the Chairperson Dr.Yotaro Hatamura at the First Meeting of the Investigation Committee on the Accident at the Fukushima Nuclear Power Stations on June 7, 2011

My name is Yotaro Hatamura, and I was appointed as the chairperson of this committee. It is a great privilege for me to assume such an important role to coordinate and chair the committee. I would much appreciate your cooperation.

Please let me say a few words about what I am thinking as the chairperson.

The following is my principles in undertaking the duties as the chairperson. All ideas are of my own. They may not be deep enough or correct, but they represent what I am thinking. So I intend to move ahead with these ideas.

First, "the investigation should be conducted based on my approach."

There may or may not exist a common practice in an accident investigation, but in investigating the present accident, we will do what we think is important in a proper manner. Although I'm not sure if it is a correct way, I am convinced that, unless we carry out the investigation in such a manner, we will not be able to accomplish our mission.

In doing so, we must be aware of a number of important points. For one thing, we must not allow for the positions, situations, or interests pertaining to the people involved; it means we must not be influenced by personal interests. For the other, we should be aware that with its high energy density nuclear energy is dangerous. I believe that it was a mistake to regard nuclear energy as safe despite its risks.

Second, "considering the responsibility to our descendants, investigation result should stand up to critical evaluation even after 100 years later."

I am planning to pick up necessary viewpoints by deeply contemplating the very moment when the accident occurred. I would like to choose these perspectives in such a manner that we will not repent of not having a certain perspective at that time, when we look back upon the present day 100 years later. Although the occurrence of the accident is regrettable, we should make every possible effort to learn thoroughly so that we never overlook anything that we can learn only at this moment. For such purposes, I want to adopt viewpoints that I have so far developed through the "study of failure" and the "study of danger" that I have pursued on my own, and ensure that no meaningful viewpoints are missed.

Among these viewpoints, the history of technology is one example. How has nuclear power generation technology developed to date since its inception? How is such development reflected in today's technology? I would like to follow and shed light on its history.

Another example of such viewpoints is to learn from technologies of other fields. By tracing the history of other technologies, I intend to take into consideration the course that may be followed by the nuclear power generation technology hereafter.

Human memory is also another example; I would like to clarify how human memory changes with the passage of the time and thereby learn how society's perception about nuclear energy has changed or will change.

The scenario of the nuclear accident is another viewpoint. I would like to seek measures to prevent the recurrence of similar accidents in the future by looking into the background and the scenario of the accident as well as possible scenarios of future nuclear accidents.

The third principal is: "properly answer all questions held by Japanese citizens (convincingness)."

Japanese people have various questions on the accident. Questions vary from one person to another, depending upon his or her way of living and thinking, situation, knowledge, experience and so on. If we limit ourselves to a narrower scope under the pretext of probing into the causes of the accident, addressing the case only focusing on technical aspects or who to blame, our investigation will fail to convince many of the Japanese public. In other words, they will find the results of the investigation "hard to swallow."

If day by day people find our investigation "harder to swallow" or become less satisfied with it, they may feel increasingly unconvinced of our investigation. Even if all of us make hard efforts for the investigation, such unconvinced people may regard the investigation insufficient, corner-cutting, phony, or hiding something. I believe that it is important to clarify questions or doubts harbored by people and properly answer them in an understandable manner.

The fourth principle is: "properly answer all the questions harbored by people all over the world."

This accident affects not only people in Japan, but also people living in all parts of the world today and in the future. It is very important, therefore, that our investigation convinces people all over the world. They have diverse questions and doubts depending upon where they live and the culture they have. There are many things which are only natural in Japan, but may not appear so to people living in a different culture or region. Cases exist where things of no importance in Japan turn out to be very important in other countries. We should also note that questions and doubts harbored by people change over time. If we take these possibilities into consideration, I think it is necessary for us to be prepared for answering people's questions across time and space.

The fifth principle is: "we will not seek to hold any particular person or organization responsible."

In dealing with an accident, the investigation of the causes and the pursuit of the responsibility often conflict with each other. People may refrain from detecting the causes of an accident for fear of blaming someone.

Most people believe that determining both the causes of an accident and the locus of responsibility should be pursued in an investigation, and they actually think it possible. However, in determining the actual causes of an accident, we will not be able to correctly grasp the very phenomenon of the accident unless we draw its entire picture by hearing what people concerned thought or how they acted during the accident.

In this case, understanding the accident phenomenon should not be limited to the narrow scope of investigating its causes; we should inevitably deal with wider range of issues involving systems and other

matters. It would be impossible to have a true picture of the accident if people involved fail to tell what they thought or did just as they actually did for fear of being held responsible. Therefore, we will not be engaged in investigation activities aimed at finding who to blame. I think it is highly important for us to put forth such a basic premise and conduct necessary investigations based on it. As I said earlier, this is the only manner in which we will be able to conduct an investigation that shall be capable of standing up to critical evaluation even 100 years later.

The sixth principle is: “correctly grasp the very phenomenon of the accident that occurred.”

When I say “grasp the phenomenon,” it does not mean only grasping a narrowly defined physical one; it means thoroughly understanding the situations of all the factors composing the accident. We will not limit ourselves to determining the causes of the accident in a narrow sense; we will seek to reveal how the accident unfolded chronologically to draw a whole picture of the accident. Then we will utilize the knowledge thus obtained as lessons for the future.

In this case, our efforts will not be limited to narrow objectives such as the prevention of recurrence of similar accidents. I intend to create a system of knowledge that will enable us to utilize the acquired expertise in understanding future human activities, planning, operation, and so on.

The seventh principle is: “get to know the background to the phenomenon that occurred.”

We will not limit ourselves to grasping a direct phenomenon of the accident; we will shed light on the background of the accident. The background includes not only technical ones, but also organizational and social ones, together with historical changes that accompany each of such backgrounds. By extending timeframe and space, we will be able to grasp the whole picture of the accident. It is reported that the nuclear power stations suffered enormous damage because of the unexpected events, and we have to make clear what assumptions had been made in what kind of background.

As is the case with many accidents, an act of assuming is strongly influenced by the existing social or organizational background. I believe that, if we do not approach this accident from the viewpoint of an organizational accident, we will not be able to come close to the true picture of the accident.

The eighth and last principle is: “it is necessary to conduct a replicate experiment and to preserve the objects in drivable condition.”

This is a very important idea from the perspective of the “study of failure” or “study of danger” that I have been pursuing. Although I am not sure if we can fully realize such replication or preservation in the course of the present investigation, I must tell you the necessity of such approach in the first place.

With regard to the replicate experiment, we are doomed to overlook some important points if we attempt to understand an accident based on the existing approaches. If we examine each one of accidents and apply necessary replicate experiments, we will be able to notice missed viewpoints or correct wrong perspectives.

Although the accident at the Fukushima Nuclear Power Stations is apt to be regarded as having commenced upon the loss of power sources because of the tsunami, in chronological term, first came the earthquake, and then came the tsunami that led to the loss of power sources. Thus, essentially it is desirable that first we determine what the earthquake brought about by means of a replicate experiment,

and then replicate an experiment to see what happened following the loss of power sources.

It is extremely difficult, however, to replicate the experiment on a phenomenon like a meltdown. For such difficult parts, simplified experiments or simulations are needed. My basic idea is that we need to conduct an experiment using the materials that were actually involved in the accident or those equivalent to them.

In terms of the preservation of the accident in drivable or operational condition, these words may sound unfamiliar to you, but it is necessary. The drivable or operational condition does not solely refer to the literal meaning of drivable condition. It is a wider concept that includes the condition of objects that no longer function as originally designed. It may be impossible to convey the results of the investigation to future generations only with documents or visual images, and the truths about the accident will not be passed down. What's important, I think, is for future generations to feel directly what actually happened when they stand in front of the objects in a condition under which destruction and grave external impacts took place. We are required to preserve the accident sites in such a manner. Knowledge alone will not enable us to make a truly correct judgment in case anything happens. I am convinced that what future generations will feel as they stand in front of the remaining of the accident that are preserved in drivable condition will serve as the most important element for their future judgment.

I do not think that the eighth principle will be fully realized in the course of the investigation, but I should insist that this viewpoint is essential.

These are the fundamental ideas which I intend to apply in chairing the committee.