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Nuclear Crisis following Tohoku Pacific Ocean Earthquake Our Response

President Yonezo Tsujikura

We offer our deepest condolences to all those affected by the tragic chain of events following the devastating earthquake and tsunami that struck Tohoku region on March 11, 2011.

The Fukushima Dai-ichi and Dai-ni Nuclear Power Plants have been stupendously damaged by the 9.0-magnitude massive earthquake and subsequent tsunami.

Their reactors in operation were automatically shutdown as designed, and emergency diesel generators were put into motion. However, they were soon stopped and all AC power sources were lost, including off-site powers. Despite the furthest effort to cool the reactor cores and restore their safety functions, large amount of radioactive materials have been released into the environment, exposing general public and involved parties to radiation.

In response to these situations and in accordance with the provisions of Article 15 of the Act on Special Measures Concerning Nuclear Emergency Preparedness, the prime minister declared a nuclear power emergency, and more than 200,000 people were ordered to remain indoors or evacuate.

The disastrous tsunami hit Fukushima Dai-ichi Nuclear Power Plant beyond estimate; magnitude of the colossal quake is larger than the original estimate and the height of tsunami observed in neighboring city of Soma exceeded 7.3 m.

This resulted in the unavailability of emergency diesel generator as well as emergency use of seawater for cooling purposes. This meant that parts of safety functions to “shutdown,” “cool,” and “contain” were unavailable. Specifically, the losses of cooling functions have led to seriously damaging situations, including the fuel rods failure. Furthermore, not only the fuels contained in the reactor core but also those stored in spent fuel pool have been damaged.

Moreover, while efforts have been made to reduce the pressure inside the containment vessel, concerns for the “containment” function against radioactive materials/ray have also emerged. Also, reactor buildings housing containment vessels have been corrupted by several hydrogen explosions.



Much are left to be dealt with in several technical fields, including collecting/analyzing information, giving appropriate advices, and offering useful information to the general public. To pull these things together, each member of the AESJ has been serving his/her roles with all sincerity.

Examples include our expert groups working for the “Team 110”¹, launched in 2010 for the purpose of clarifying crucial information, and the continual updates on radioactivity-related technical information. Whenever requested, we will continue to offer our guidance to the utmost extent, as well as our contribution to the society by collecting, organizing, and analyzing information on radioactivity, earthquake, and the way incidents happened.

With the lessons learned from these events, proposals and recommendations need to be reflected on the measures/policies of relevant institutions and administrative organizations. We are committed to offering furthest support with our expertise in academic and technical fields.

Throughout these activities and enhanced communications, we strive to provide means for the society to better understand nuclear energy.

We will continue to support all concerned parties who have been making every possible effort to get things under control. Also, we would like to express our heartfelt sympathy for all those who have been forced to evacuate their homes.

With acknowledge Fukushima nuclear crisis as the worst nuclear disaster in history. Accordingly, members of the AESJ in various fields has joined together to deal with the crisis, starting with the reconstruction of fundamentals of safety system, since nuclear energy has proved itself the indispensable technology solution for energy issues. We hereby express our new resolution to continue to serve our roles as contributors to economic development.

¹ Note: “Team 110” is the group of experts established in the Public Relations Committee of the AESJ to offer readily available assistance to disseminate independent opinions and information for acute emergency at nuclear facilities (has been in operation since February 2010).