

### 3. An American's Perspective of the Recent Event in Japan and at the Fukushima Nuclear Station

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First I would like to express my deepest sorrows as to what has happened to both your people and your country.

The accident at your nuclear facility was well beyond standard accepted design basis in that both the tsunami and the earthquake were larger than designed for. This type of event is hard to imagine and it appears that the operator's response to flood the core with sea water as a last resort is exactly what the response to this beyond design basis event would dictate in the US as well. The Sever Accident Management (SAM) Guidelines were developed in the US for just this type event.

My civilian nuclear career (Senior Resident Inspector) began after the Three Mile Island (TMI) accident in the US. The Nuclear Regulatory Commission (NRC) required that a federal employee be stationed at all of the reactor sites to monitor day to day operations. There was a public outcry about the safety of the nuclear power station operation and many improvements were made to strengthen the existing regulatory program. However, the NRC worked through the issues and held many news conferences to help the public to understand what occurred and how the "Defense-in-Depth" features worked to mitigate the consequence of the accident. Remember that the TMI accident was a design basis event and all AC power was not lost as it was at Fukushima.

It is my understanding that Japan has very little natural source for power production and has to import coal and oil for the conventional power plants. Up until this recent accident, Japan's nuclear oversight program appeared to be on the right track to facilitate improvements in plant operations. I am sure that the confidence of the regulator and the public has been shaken but the Japanese people are very resilient.

In the late 1980s & early 1990s, the NRC realized that shutting down a power plant over minor compliance issues may not be in the best interest of protecting the health and safety of the public it served. For example, in extreme climate conditions, forcing a possible "Black-Out" (total loss of the electrical grid in areas) or a "Brown-Out" (severe restriction on electrical usage in an area) could result in the loss of heating or cooling, traffic lights, transportation needs, and other emergency services and the public may suffer severe hardships. Then NRC may use a process known as enforcement discretion, which had to be supported by a risk assessment of how the degraded condition of the power plant would not result in undue risk to the public.

Hopefully your country will do a thorough review of the problem areas pointed out by this accident and make significant improvement in the plant's ability to withstand these types of events.

Remember that one's past can predict one's future. I believe that we can reflect on how far Japan has come after WWII. Japan is a very resourceful and resilient nation. I believe that nuclear power has helped your country become the great power you are today and should continue to be considered as one option for your power generation needs.

Sincerely, Your American Friend

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