



Issues of Water and Light in the Turbine Buildings at Fukushima Daiichi

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Workers at the Fukushima Daiichi plant have been trying to reestablish electricity connections to pumps so as to restart the cooling system for the reactors at the plant. According to news reports, two of the major obstacles have been

- a high radiation environment (on the order of 1,000 millisieverts per hour) due to contaminated water on the floor of the turbine buildings, and
- a lack of light in the turbine buildings, which has forced the electricians to work in the dark.

The combination of these two factors has made it exceedingly difficult to accomplish the objective and has so far frustrated it. Pumping water out of the reactor buildings has not been possible since there are no empty tanks on site of sufficient capacity to hold the water, which is too contaminated to be pumped into the ocean. Recent reports indicate that the water is also leaking out of the building on to the site, further contaminating the working environment and complicating efforts to bring the problem of cooling the reactors and spent fuel pools under control.

It is extremely difficult to suggest possible courses of action from afar; yet sometimes, the ability to bring the experience of other localities and technological challenges to bear on a problem may be helpful. In this spirit, we put forward a suggestion in the hope that it might be considered by those on sight who are struggling with the very difficult and complex effort to bring seven major sources of [radioactivity](#) under control (three reactors and four spent fuel pools). The suggestions presented here may or may not be suitable courses of action. However, they may be worthy of consideration after which the authorities may decide whether they merit implementation or suggest alternative approaches. It should be understood explicitly, that we are not recommending that the steps outlined below be implemented, since we are not in a position to evaluate the various possible safety and feasibility issues associated with them. The responsibility for making and implementing decisions belongs fully and solely to the Japanese government's safety authorities and the Tokyo Electric Power Company.

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