It's been a little more than three years since the Fukushima accident began. Where do things stand?

At Fukushima itself, the reactor owner is still struggling to get conditions under control. For instance, Asahi Shimbun reported last month,

> Treatment of radioactive water at the Fukushima No. 1 nuclear plant has been suspended indefinitely after a malfunction shut down the entire purification process and fouled up storage conditions, the plant operator said.
>
> The latest failure in the ALPS multinuclide removal equipment has exacerbated Tokyo Electric Power Co.'s struggles in dealing with the stockpile of radioactive water, which is growing at a rate of 400 tons a day, at the crippled nuclear plant.

Meanwhile, a number of books dissecting the accident and its causes have appeared.

On the U.S. side, it remains unclear how effectively the Nuclear Regulatory Commission and the industry have learned the lessons of Fukushima. The NY Times reported yesterday that:

> Owners of at least two dozen nuclear reactors across the United States, including the operator of Indian Point 2, in Buchanan, N.Y., have told the Nuclear Regulatory Commission that they cannot show that their reactors would withstand the most severe earthquake that revised estimates say they might face, according to industry experts.
>
> As a result, the reactors' owners will be required to undertake extensive analyses of their structures and components. Those are generally sturdier than assumed in licensing documents, but owners of some plants may be forced to make physical changes, and are likely to spend about $5 million each just for the analysis.

On the one hand, it's good that the NRC seems to have learned something from the

accidents and is taking steps to deal more effectively with seismic risk. On the other hand, it really shouldn't have required a catastrophic accident to get the agency to pay attention to the problem. And it's not clear how well the agency is responding to the other lessons of Fukushima. According to a recent, detailed report by the NRDC, it still hasn't really come to grips with the kind of hydrogen explosions that happened at Fukushima.

It's very difficult, if not impossible, for the non-expert to assess the technical issues involved in reactor safety. I wish I had more confidence in the government's oversight of the industry, because I can see potential for nuclear power to help us deal with climate change. But the NRC's reaction to problems has too often been belated and reluctant for me to simply take its safety assurances on faith.