Yesterday brought the strongest aftershock yet to Japan, which caused some damage at another nuclear reactor.

**Thursday's quake damages Onagawa nuclear plant**

Nothing major, but problems include:

- Splashed spent fuel pool water (not much)
- Water leaks around plant
- Blowout panels in turbine building damaged
- Three of four external power lines out

Tepco reported that the reactors at the Fukushima plant sustained no additional damage, but then they have apparently been remiss in reporting the actual state of affairs previously:

**No. 1 reactor lost cooling function on March 11**

Unreleased data obtained by NHK suggest that the failure to maintain the cooling functions of the No. 1 reactor at the troubled Fukushima Daiichi nuclear power plant possibly triggered a hydrogen explosion at an early stage.

The data show that the water level inside the No. 1 reactor dropped to 45 centimeters above the fuel rods, or about one-tenth the normal level, nearly 7 hours after the March 11th earthquake and tsunami. The fuel rods become exposed 11 hours later.

But they are now thinking ahead.

**New cooling options being explored**

Tokyo Electric Power Co. is considering alternative methods, including the construction of improvised systems, to cool reactors at the crippled Fukushima No. 1 nuclear power plant.

Ongoing operations—which involve pouring water directly into the reactor cores to lower temperatures inside the pressure vessels of the Nos. 1 to 3 reactors to below 100 C--have not worked as expected, and restoration of the reactors' existing cooling
"It might be wise to set up new cooling systems," said Michio Ishikawa, the top adviser of the Japan Nuclear Technology Institute. "If the current conditions continue, the amount of radioactive substances being discharged from the reactors might increase. Therefore, all possible options need to be considered.

Others are looking even further ahead.

**After Japan, global experts come up with safety plan for nuclear plants**

This group of 16 nuclear scientists — from the United States, Germany, Spain, France and many other countries — has issued a statement, ‘Never Again: An Essential Goal for Nuclear Safety’, that was handed over to the director general of the International Atomic Energy Agency (IAEA) in Vienna on Wednesday.

Importantly, the group has warned against "a natural tendency of human beings for complacency".

...or the natural tendency of regulatory bodies to conduct studies and then ignore the findings.

How did we get here again?

**This pdf report from Areva**, dated April 7, provides a good visual step-by-step overview of the Fukushima accident.

Meanwhile, Japan is buying fewer roses:

**S Korea Seeks To Diversify Export Markets For Roses**

SEOUl, April 8 (Bernama) -- South Korea is seeking new overseas markets for roses after shipments to Japan have plunged following the massive earthquake and nuclear crisis, Yonhap News Agency reported a state-run farm exporting corporation as saying Friday.

and the financiers have managed to survive all this:

**Hedge Funds Chase Japan Opportunities After Enduring Quake, Nuclear Crisis**

Hedge funds investing in Japan are scouting for opportunities after weathering the country’s worst earthquake and resulting nuclear crisis as the Bank of Japan pumped record funds into the financial system.

R-SQUARED Master Fund, which benefited from investments in put options and credit default swaps before the March 11 temblor, is finding opportunities in subordinated debt. Dymon Asia, which started a macro hedge fund in 2008 with capital from Tudor Investment Corp., sees potential in the foreign exchange market after the fund returned
8 percent last month.

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