

Desperate efforts to prevent full meltdown at Fukushima

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Japanese authorities yesterday stepped up their increasingly desperate efforts to prevent a catastrophic meltdown of spent fuel rods and reactors at the Fukushima nuclear power plant.

Military helicopters dropped four loads of water onto the facility Thursday morning, and military and police trucks then fired water cannon from the ground. Concerns now centre on reactor 3, which uses dangerous mixed oxides containing uranium and plutonium, and the spent radioactive fuel rods in reactor 4, which may not be covered by coolant and exposed to the open air.

In a press conference earlier today, a Tokyo Electric Power Company (TEPCO) spokesman claimed that the hour-long water dousing operation had lowered radiation levels at the plant by nearly 20 points, to 292 microsieverts per hour at 8.40 p.m. on Thursday, and to 289 microsieverts per hour at 11 p.m. TEPCO added that video footage of what appeared to be steam rising from reactor 3 indicated success. The company also insisted that helicopter surveillance showed that there was water left in the cooling pool at reactor 4—contrary to statements issued Wednesday by Gregory Jaczko, chairman of the US Nuclear Regulatory Commission. This has not been independently verified, however, and there is no evidence that temperatures within the facility are falling.

Jaczko has insisted that the information he has received is correct. He told journalists yesterday he expected the situation to “take some time, possibly weeks” to resolve.

TEPCO’s latest claims appear to be part of its ongoing attempt to cover up the real situation. Video footage clearly showed that much of the water dropped by the military helicopters was sprayed over a wide area, with some evaporating in the air. The helicopters were shielded underneath with a lead plate, and the crew fitted with anti-radiation suits, but they still had to fly high above the plant to avoid excess radioactivity. The military and police truck fire hoses are designed for use in riot situations, and it is unclear how effective they were at targeting sensitive areas within the nuclear facility.

Several nuclear experts have warned that the water dumps fall far short of what is required to prevent the reactor cores and spent rods from overheating.

Professor Akira Yamaguchi of Osaka University told Japan’s state NHK broadcaster: “7.5 tonnes of water has been dumped. We do not know the size of the pool, but judging from other examples it probably holds 2,000 tonnes. It does not mean the pool needs to be completely full, but maybe a third of the tank’s capacity is needed. It [the water dumping] needs to be done continuously.”

Government officials also acknowledged that in addition to what was required for the spent rod water pools, each overheating reactor would probably require about 50 tonnes of water every day.

An unnamed senior defence ministry official told the *Mainichi Daily News*: “Unfortunately, with the [helicopter] pass-over method, the water dissipates and there isn’t much of a cooling effect.”

TEPCO is now attempting to reconnect power to the plant, laying a 1.5 kilometre electricity cable. The company has been criticised by several experts for not doing this much earlier. Even if power is restored, it is unlikely that the plant’s water pumps will be functional, and backup pumps will be required. The helicopter and truck water dousing, moreover, has to be suspended while work on the cable continues.

TEPCO has admitted delays in laying the cable. Reuters cited a company official saying: “Preparatory work has so far not progressed as fast as we had hoped.” He added that the cold weather was hampering the effort.

It is extraordinary that TEPCO remains in charge of the emergency response, despite bearing prime responsibility for what is shaping up as the greatest corporate crime of the twenty-first century. The conglomerate has an appalling safety record and a long history of cover ups and malfeasance (see: “Japan’s TEPCO: a history of cover-ups”).

Prime Minister Naoto Kan has barely made a public appearance in recent days, while his colleagues are reduced to leaking to the media details of Kan’s “angry” posturing. He previously demanded to know “what the hell is going on?” The *Mainichi Daily News* has now reported that the prime minister said on

Wednesday night: “In the worst case scenario, we have to assume that all of eastern Japan would be wrecked. The Tokyo Electric Power Co. has almost no sense of urgency whatsoever.”

Information continues to emerge detailing the impact of the Japanese nuclear industry’s cost-cutting and profit maximising drive. The *New York Times* has reported that some countries “have tried to limit the number of spent fuel rods that accumulate at nuclear power plants—Germany stores them in costly casks, for example, while Chinese nuclear reactors send them to a desert storage compound in western China’s Gansu province.” Japan, however, like the US, “has kept ever larger numbers of spent fuel rods in temporary storage pools at the power plants”. A total of 11,195 spent fuel rod assemblies are stored at Fukushima.

The *New York Times* asked Robert Albrecht, a nuclear engineer and former consultant to the Japanese reactor manufacturing industry, about the possibility of “recriticality” in the storage pools, where uranium would resume the fission previously engineered in the reactors. Albrecht said this was “very unlikely”, but could happen if the stacks of pellets slumped over and became mixed up on the floor of the storage pool. The chances of this happening, the *Times* explained, is nevertheless higher than it otherwise would be, because TEPCO “has reconfigured the storage racks in its pools in recent years so as to pack more fuel rod assemblies together in limited space.”

The Kan government and its predecessors are directly responsible for this situation. After World War II, the Japanese ruling elite moved to reduce its dependence on foreign oil imports by developing a large-scale, corporate operated domestic nuclear industry. Various right-wing nationalist elements also promoted nuclear energy in order to have available a potential Japanese nuclear arsenal. Public concern over the dangers of constructing such facilities in one of the most seismically active parts of the planet were brushed aside, and nuclear plants unable to withstand inevitable large earthquakes and tsunamis, like the one at Fukushima, were built across many of Japan’s coastal areas.

The dangers were well known but publicly suppressed. The British *Telegraph* has published a leaked US diplomatic cable, via WikiLeaks, which cites an unnamed International Atomic Energy Agency (IAEA) official saying that “[S]afety guides for seismic safety have only been revised three times in the last 35 years and that the IAEA is now re-examining them ... recent earthquakes in some cases have exceeded the design basis for some nuclear plants, and that this is a serious problem that is now driving seismic safety work.”

Another cable said of the Japanese nuclear industry: “We have seen too many cases of cost reduction competition through heightened efficiency jeopardising safety.” And another, sent from the US embassy in Vienna in July 2009, condemned the role played by Tomihiro Taniguchi, then head of safety and security at the IAEA. “Taniguchi has been a weak manager and advocate, particularly with respect to confronting Japan’s own safety

practices,” the cable read.

President Barack Obama gave a speech yesterday in which he promised to “continue to keep the American people fully updated”—but then said nothing about the latest US government information about the situation at Fukushima. Obama insisted there was no risk of radioactive fall-out reaching the US. The president’s remarks were centrally oriented towards defending the American nuclear industry, which he and his administration have close ties with. “Nuclear power is also an important part of our own energy future,” he declared, as he announced a “comprehensive review” of nuclear plants’ safety.

The devastating humanitarian crisis caused by last Friday’s earthquake and tsunami continues to grip much of north-eastern Japan. The official death toll is 6,405, and 10,259 are officially missing. The real number missing is far higher, as the government’s numbers only include those who have been reported missing by friends or family. Entire families and communities were swept away by the force of the tsunami, leaving no-one to report the missing.

The 700,000 survivors since evacuated are struggling to cope with sub-zero temperatures, food shortages, and a chronic lack of fuel and electricity. Numbers of new deaths are beginning to be reported from the evacuation shelters, especially affecting the elderly.

There is also a humanitarian crisis within the 20-kilometre official Fukushima evacuation zone, which remains far smaller than the 80-kilometre area declared dangerous by Washington. Little or no official assistance, including transport, has been offered to residents in the affected area. Many are stranded and short on basic supplies because no-one except emergency personnel are now entering the zone. Anger is escalating among ordinary people. Katsunobu Sakurai, the mayor of Minamisoma, a town within the declared exclusion area, told the BBC: “The government doesn’t tell us anything. We’re isolated. They’re leaving us to die.”



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