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Japan nuclear firm admits missing safety checks at disaster-hit plant

Documents show operator failed to carry out mandatory checks at Fukushima Daiichi and allowed fuel rods to pile up

Justin McCurry in Osaka
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Black smoke rising from reactor No 3 of the Fukushima Daiichi nuclear power plant. Photograph: AFP/Getty Images

The power plant at the centre of the biggest civilian nuclear crisis in [Japan's](#) history contained far more spent fuel rods than it was designed to store, while its technicians repeatedly failed to carry out mandatory safety checks, according to documents from the reactor's operator.

The risk that used fuel rods present to efforts to avert disaster at the Fukushima Daiichi plant was underlined on Tuesday when nuclear safety officials said [the No 2 reactor's storage pool had heated to around boiling point](#), raising the risk of a leakage of radioactive steam.

"We cannot leave this alone and we must take care of it as quickly as possible," Hidehiko Nishiyama, of the nuclear and industrial safety agency, said.

According to documents from Tokyo Electric Power (Tepco), the company repeatedly missed safety checks over a 10-year period up to two weeks before the 11 March disaster, and allowed uranium fuel rods to pile up inside the 40-year-old facility.

When the plant was struck by a huge earthquake and tsunami, its reactors, [designed by US scientists 50 years ago](#), contained the equivalent of almost six years of highly radioactive uranium fuel produced by the facility, according to a presentation Tepco gave to the International Atomic [Energy Agency](#) and later posted on the company's website.

The revelations will add to pressure on Tepco to explain why, under its cost-cutting chief executive Masataka Shimizu, it opted to save money by storing the spent fuel on site rather than invest in safer storage options.

The firm already faces scrutiny over why it waited so long to pump seawater into the stricken reactors and, according to a report in the Yomiuri Shimbun newspaper last week, turned down US offers of help to cool the reactors shortly after the disaster.

Critics of Japan's nuclear power programme say the industry's patchy safety record and close ties to regulating authorities will have to change if it is to regain public trust.

"I've long thought the whole system is a mess," Taro Kono, a Liberal Democratic party MP, told Reuters. "We have to go through our whole nuclear strategy after this.

"Now, no one is going to accept nuclear waste in their backyards. You can have an earthquake and have radioactive material under your house. We're going to have a real debate on this."

Kono wants to see the government lead a fundamental reform of the industry's structure, which he says has encouraged collusion between plant operators and the people who are supposed to regulate them.

Reports said safety lapses at the plant continued up to two weeks before the tsunami disabled cooling systems in its reactors and sparked the biggest nuclear power emergency the world has seen since Chernobyl in 1986.

One month before the tsunami, government regulators approved a Tepco request to prolong the life of one of its six reactors by another decade, despite warnings that its backup power generator contained stress cracks, making them more vulnerable to water damage.

Weeks later, Tepco admitted it had failed to inspect 33 pieces of equipment inside the plant's cooling systems, including water pumps, according to the nuclear safety agency's website.

Regulators have been accused of uncritically backing industry moves to prolong the life of ageing nuclear power plants such as Fukushima Daiichi amid mounting local opposition to the construction of new facilities.

A regulatory committee reviewing the reactor's stay of execution said maintenance management was "inadequate", and the quality of inspection "insufficient," according to reports.

When disaster struck earlier this month, the plant contained almost 4,000 uranium fuel assemblies kept in pools of circulating water – the equivalent of more than three times the amount of radioactive material usually kept in the active cores of the plant's reactors.

The drop-in water levels in some of those pools after the tsunami has caused fuel rods to overheat, raising the risk of a full meltdown and the release of dangerous levels of radioactivity into the atmosphere.

Tepco workers, troops and firefighters have been working around the clock to keep the storage pools replenished by dumping water from helicopters and via high-pressure hoses from the ground.

The No 4 reactor, which suffered two explosions last week, contained 548 fuel assemblies cooling in a water pool on its upper floor.

Japanese plans to store radioactive nuclear fuel after it has been used have made little headway.

A medium-term storage site in Mutsu, northern Japan, is not due to open until next year, and the construction of an enrichment and reprocessing plant in Rokkasho has been hit by technical glitches and other delays.

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