

Safety violations produce Japan's worst nuclear accident

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Forty-nine people, including three nuclear workers, were exposed to massively high levels of radiation after an uncontrolled nuclear chain reaction at a uranium processing plant in Tokaimura, Japan, last Thursday. Two of the three workers directly involved are unconscious and not expected to live. Thousands of workers and local residents may suffer from long-term radiation poisoning. Public authorities have admitted that it may take years before they are able to make a full assessment of the damage.

The worst nuclear accident in Japanese history began at 10.35am at the JCO plant, owned by Sumitomo Metal Mining, one of Japan's largest business groups. According to media reports, the three employees mistakenly loaded 16 kilograms of uranium dioxide—nearly eight times the safe amount—to hand mix a uranium-nitric acid solution. The three were inexperienced; two had never performed the task before and the third had carried it out a few times.

JCO employees were given no instructions about the dangers they faced and there was no procedure in place, or even a safety manual, instructing workers what to do in the event of an accident.

The company did not report the accident to the government for two hours. The chain reaction continued out of control for 18 hours, producing atmospheric radiation levels up to 20,000 times the normal levels. One hundred and fifty residents living within a 350-metre radius had to be evacuated from their homes and 300,000 residents in a 10-kilometre radius were forced to remain indoors for at least 36 hours. Evacuated residents returned to their homes last Sunday after an aluminum and sandbag retaining wall was erected around the plant.

Tokaimura, 140 kilometres north-east of Tokyo, is a major nuclear research centre. The town hosts

reprocessing, enrichment and laser isotope enrichment plants and is the site of Japan's previous worst nuclear accident in 1997 when 37 workers were irradiated after an explosion at a nuclear plant. Housing is located within metres of these plants, as are farms and other agricultural produce facilities.

Predictably, the company issued a public apology and then attempted to blame the three workers for the accident. Likewise, the government and public authorities admitted their response to the accident had been "lax" but then claimed the accident did not reflect on the rest of the nuclear industry. Prime Minister Keizo Obuchi offered his apologies.

Company officials at first claimed the accident was a result of "human error". Later, under questioning from the media, they admitted violations of national safety procedures.

Three senior JCO officials acknowledged that the company lacked proper safety procedures; used illegal production methods for at least two years; and changed its procedure manuals to allow workers to carry processed uranium in stainless steel containers. The officials have been questioned by police and could face criminal charges,

Some Japanese newspapers have suggested that the accident was caused by company demands for increased productivity. Dr Jinzaburo Takagi, founder of the Citizens Nuclear Information Centre, suggested that the accident could have been caused by government demands that the company boost production.

He said the accident proved that the company and the government's safety authorities were "incapable of handling nuclear materials". "This accident has brought to light the dissembling nature of the Japanese government's nuclear policy, which has been concealing the danger of nuclear utilisation with the

myth of the safety of nuclear energy," he said.

A major element in the accident is the free rein given to nuclear industry companies by the Japanese government. JCO and other nuclear processing companies, state- and privately-owned, are allowed to operate without any serious safety checks or controls.

According to internal company documents leaked last weekend, the government approved the construction and operations of the JCO plant, even though the building was incapable of containing radiation leaks and the company had no accident emergency plans. The government simply accepted JCO's statements that it was not necessary to prepare for a critical accident because the company's safety procedures and production methods would prevent it. JCO claimed that the density and mass of material used would be measured and kept within safety guidelines.

But the most damning feature of the disaster was the government's response. Prime Minister Obuchi and senior government officials treated it as a minor event. While Obuchi spent the day conferring with party bureaucrats over a cabinet reshuffle, his department issued a routine instruction for further information.

Chief Cabinet Secretary Hiromu Nonaka, after several meetings with the company and government nuclear safety officials, told a press conference at 4pm, five hours after the accident, that the situation was under control and would not worsen. An hour later he was forced to retract his statement and issue emergency evacuation orders.

Senior government officials were not given expert briefings on the escalating crisis until 6pm and an emergency meeting of senior government ministers was not held until 9pm. The Home Affairs, Labor and Health and Welfare Ministers did not attend the meeting.

Members of Japan's Self-Defense Force chemical warfare unit were eventually dispatched to site, but, not equipped to deal with nuclear accidents, withdrew. At one point the government issued a call for assistance from US forces stationed in Japan.

With anger rising among nuclear scientists and local residents, the government has been forced to announce an investigation into the JCO's operations. Special investigators have begun raiding JCO's offices. Whatever is revealed by these investigations, the government's last concern is the health and welfare of

local residents.

Osamu Yatabe, a local lawyer and former National Assembly representative for the district, told one Japanese newspaper that the government had constantly ignored warnings about the danger of the nuclear plants to local residents.

"A few of us tried to sound the alarms of danger for this industry. We were always in the minority though, because officers were able to convince people that accidents like Chernobyl and Three Mile Island could never happen here. In fact, Japan's safety precautions were supposed to be perfect," he said.

Japan, which lacks oil resources, is one of the most nuclear-dependent countries in the world—with 51 nuclear reactors producing 35 percent of its electricity. Most existing Japanese nuclear plants are 20 years old and accidents are numerous and increasing. There have been 19 low-level incidents this year and several major accidents, which have closed plants, over the last four years. Some of these include:

- * Serious leakage of radioactive coolant from a fast-breeder reactor at Monju in western Japan in 1995.

- * Explosion and fire at a plutonium reprocessing plant in Tokaimura, which irradiated 37 workers in March 1997.

- * A major accident in April 1997 at an advanced thermal reactor at Fugon, in western Japan. Eleven workers were irradiated.

- * In July 1999, radiation 11,500 times higher than the maximum allowed leaked from faulty pipes at a nuclear reactor owned by the Japan Atomic Power Company at Tsuruga, 350 kilometres west of Tokyo.



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