A Look At Fukushima Errors

MARI YAMAGUCHI, Associated Press

TOKYO (AP) — Workers overfill a tank, spilling radioactive water on the ground. Another mistakenly pushes a button, stalling a pump for a vital cooling system. Six others get soaked with toxic water when they remove the wrong pipe. All over the course of one week in October.

A string of mishaps this year at the crippled Fukushima nuclear power plant, which was swamped by a tsunami in 2011, is raising doubts about the operator's ability to tackle the crisis and prompting concern that another disaster could be in the making.

Worried Japanese regulators are taking a more hands-on approach than usual. They met with Tokyo Electric Power Co. officials this week to discuss how to prepare for a typhoon that could dump heavy rain on Fukushima on Saturday. Nuclear Regulation Authority Chairman Shinichi Tanaka has scheduled a Monday meeting with Tokyo Electric's president to seek solutions to what he says appear to be fundamental

Human error is mostly to blame, as workers deal with a seemingly unending stream of crises. Tanaka said earlier this month the repeated "silly mistakes" are a sign of declining morale and sense of responsibility. The operator, known as TEPCO, acknowledged a systemic problem in a recent report: Workers under tight deadlines tend to cut corners, making mistakes more likely; at times, they don't fully understand their assignment or procedures.problems.

The utility has been losing experienced workers as they reach their radiation exposure limits, and hundreds of others are quitting jobs seen as underpaid given the difficulty and health risks. Regulators have urged the plant to have enough supervisors to oversee the workers on site; TEPCO says it has added staff and is ensuring proper field-management.

Some of this year's mishaps:

— Oct. 20-21: Heavy rains wash contaminated storm-water over protective barriers around storage tanks at six locations, before workers finish setting up additional pumps and hoses to remove the water.

— Oct. 9: Six workers remove the wrong pipe, dousing themselves with highly radioactive water. TEPCO says exposure for the workers, who were wearing facemasks with filters, hazmat suits and raingear, is negligible. An estimated 7 tons of water almost overflows the barrier around it.

— Oct. 7: A worker mistakenly presses a stop button during a power switchboard check, stalling a pump and cooling-water supply to the Unit 1 reactor for a split second. A monitoring device for Units 1 and 2 and a building ventilator also fail briefly until backup power kicks in.

— Oct. 2: Workers overfill a storage tank for radioactive water, spilling about 430 liters (110 gallons). The workers were trying to maximize capacity amid the plant's water storage crunch. Most of the spill is believed to have reached the sea via a nearby ditch.

— Oct. 1: About 5 tons of contaminated rainwater overflows when workers pump it into the wrong tank, most of it seeping into the ground.

— Sept. 27: A piece of rubber lining mistakenly left inside a water treatment unit clogs it up, causing it to fail hours after it resumed a test-run following repairs. The fragment is removed, and the unit returned to testing.

— Sept. 19: A firefighting water pipe is damaged during debris removal, and 300

liters of non-radioactive water spurt out. The same day, TEPCO provides Prime Minister Shinzo Abe with a hazmat suit for a plant visit with the wrong Japanese character for his family name on the nametag. Spotting the mistake halfway through the tour, an apparently displeased Abe peels the sticker off.

— Sept. 12: A water treatment machine overflows, leaking about 65 liters of contaminated water, when a worker doing unrelated work nearby inadvertently

shuts a valve.

— Aug. 19: A patrolling worker finds a massive pool of contaminated water spilling out of a protective barrier around a storage tank. TEPCO later concludes an estimated 300 tons escaped unnoticed over several weeks.

— April 4: A worker pushes the wrong button on a touch panel, temporarily stopping one of three water treatment units during a pre-operation test.

Humans aren't always to blame. A rat sneaked into an outdoor power switchboard on March 18, causing a short-circuit and blackout lasting 30 hours in some areas. Four nuclear fuel storage pools lost cooling, but power was restored before a meltdown. A few weeks later, workers caused another short-circuit while installing anti-rat nets, leaving one of the fuel storage pools without cooling for several hours.

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