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Japan releases radioactive seawater, uses bath salts to find leak

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By Risa Maeda and Yoko Kubota

TOKYO (Reuters) - Japanese engineers were forced on Monday to release radioactive water into the sea while resorting to desperate measures such as using bath salts to try to find the source of leaks at a crippled nuclear power complex hit by a tsunami on March 11.

Engineers also planned to build two giant "silt curtains" made of polyester fabric in the sea to hinder the spread of more contamination from the crippled Fukushima Daiichi plant, 240 km (150 miles) north of Tokyo.

The plant operator released low-level radioactive seawater that had been used to cool overheated fuel rods after it ran out of storage capacity for more highly contaminated water, Chief Cabinet Secretary Yukio Edano said.



"We have instructed strict monitoring of the ocean to firmly grasp the impact on the environment," said Edano.

Operator Tokyo Electric Power (TEPCO) said it would release more than 10,000 tonnes of contaminated water that was about 100 times more radioactive than legal limits in order to free up storage capacity for more highly contaminated water.

"We are very sorry for this region and those involved," a tearful TEPCO official told a news conference.

Engineers are still struggling to regain control of damaged reactors at the plant in the worst nuclear crisis since Chernobyl in 1986, with the government urging TEPCO to act faster to stop radiation spreading.

But it could take months to stem the leaks, warned one official, and even longer to regain control of the power station, damaged by last month's quake and tsunami.

Picture, graphic packages: r.reuters.com/wyb58r

DISASTER MAY SEE YEN WEAKEN

The 9.0 magnitude quake and tsunami left nearly 28,000 people dead or missing and Japan's northeast coast a splintered wreck. The world's costliest natural disaster has hit economic production and left a damages bill which may top \$300 billion.

"The damage from the nuclear crisis and the subsequent power shortage will last for several years," said Eiji Hirano, former assistant governor of the Bank of Japan (BOJ).

"There's a strong chance Japan's economy will contract in the current fiscal year," he told Reuters in an interview.

Japan's former currency czar Eisuke Sakakibara said the yen would weaken in coming months, possibly beyond 90 to the dollar, underlining expectations a near four-year rally in the currency may be over.

The yen traded at 84.05 per dollar on Monday.

The disaster initially saw the yen soar with speculation Japanese would repatriate funds for reconstruction, prompting the G7 intervention to knock it back.

"This atomic power issue is an incident which would result in depreciation of the exchange rate," Sakakibara, a former senior BOJ official, told foreign correspondents in Tokyo.

Unpopular and under pressure to quit or call a snap poll before the disaster, Prime Minister Naoto Kan has been criticised for his management of the disaster in the world's third largest economy.

In the face of Japan's biggest crisis since World War Two, one newspaper poll said nearly two-thirds of voters wanted the government to form a coalition with the major opposition party and work together to recover from the natural disaster.

Japan's two biggest parties may put aside bitter rivalry to join forces but partisan bickering could delay funding for massive reconstruction.

BATH SALTS, SEA CURTAIN

In their desperation to stop radioactive leaks, TEPCO engineers have used anything at hand.

At the weekend, they mixed sawdust and newspapers with polymers and cement in an unsuccessful attempt to seal a crack in a concrete pit at reactor No.2.

On Monday, they resorted to powdered bath salts to produce a milky colour in water to help trace the source of the leak. TEPCO said it was also planning to drape a curtain into the sea off the nuclear plant to try to prevent radioactive silt drifting out into the ocean.

The silt-blocking fence will take several days to prepare, said Hidehiko Nishiyama, deputy director-general of the Nuclear and Industrial Safety Agency (NISA).

The exact source of the radiation leaks remains a mystery, with NISA investigating a damaged embankment near a sluice gate at the No.2 reactor and the possibility it may be seeping through a layer of small stones below a concrete pipe.

TEPCO said it would build tanks to hold contaminated seawater, with a total capacity equivalent of six Olympic swimming pools. It was also towing a floating tank, to arrive next week, and was negotiating the purchase of three more.

Radioactive iodine 4,800 times the legal limit was recorded in the sea off the plant last week. The contamination later fell to 11 times, but spiked to 630 times the legal limit on Saturday, said Japan's Nuclear and Industry Safety Authority.

"We need to stop the spread of (contaminated water) into the ocean as soon as possible. With that strong determination, we are asking Tokyo Electric Power Co to act quickly," said Edano.

"If the current situation continues for a long time, accumulating more radioactive substances, it will have a huge impact on the ocean."

WORLD RADIATION FEARS CONTINUE

Small levels of radiation from the plant have been detected as far away as Europe and the United States and several countries have banned milk and produce from the vicinity.

Singapore extended a ban on Japanese food imports on Monday after detecting radiation in more fruit and vegetable imports. While Kan asked the European Union for a calm response to Japanese imports. The EU has urged radiation testing of Japanese food and feed imports.

After three weeks, many Japanese are angry the humanitarian disaster seems to have taken a back seat to the nuclear crisis.

More than 163,710 people are living in shelters, with more than 70,000 people evacuated from a 20 km (12 mile) no-go zone around the nuclear plant. Another 136,000 people living a further 10 km out have been told to leave or stay indoors.

Though criticised for his crisis management, voter support for Kan's government rose to 31 percent in a Yomiuri newspaper poll, from 24 percent in a survey conducted before the quake. Almost 70 percent of respondents, however, believed Kan was not exercising leadership, with 19 percent wanting him to step down.

(Additional reporting by Yoko Nishikawa, Shinichi Saoshiro, Leika Kihara and Rie Ishiguro in Tokyo, David Fogarty in Bangkok; Writing by Michael Perry and Paul Eckert; Edlting by Jonathan Thatcher and Robert Birsell)

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