

Possible melted fuel seen for first time at Fukushima plant

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Associated Press

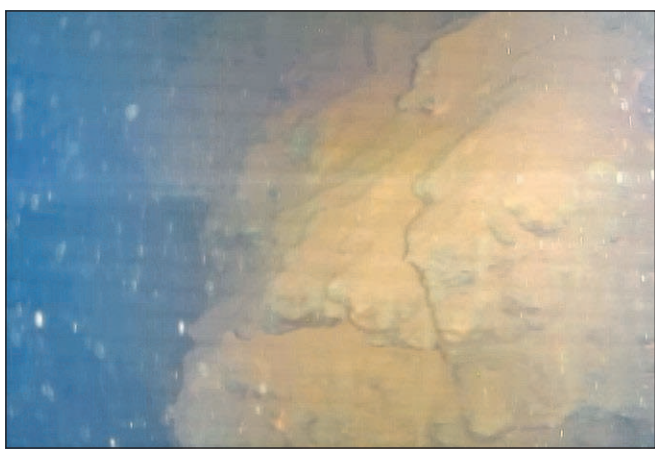
TOKYO — An underwater robot captured images of solidified lava-like rocks Friday inside a damaged reactor at Japan's crippled Fukushima nuclear plant, spotting for the first time what is believed to be nuclear fuel that melted six years ago.

Plant operator Tokyo Electric Power Co. said the robot found large amounts of lava-like debris apparently containing fuel that had flowed out of the core into the primary containment vessel of the Unit 3 reactor at Fukushima. The plant was destroyed by a massive earthquake and tsunami in March 2011.

Cameras mounted on the robot showed extensive damage caused by the core meltdown, with fuel debris mixed with broken reactor parts, suggesting the difficult challenges ahead in the decades-long decommissioning of the destroyed plant.

Experts have said the fuel melted and much of it fell to the chamber's bottom and is now covered by radioactive water as deep as 6 meters (20 feet). The fuel, during meltdown, also likely melted its casing and other metal structures inside the reactor, forming rocks as it cooled.

TEPCO spokesman Takahiro Kimoto said it was the first time a robot camera has



This image captured by an underwater robot provided by International Research Institute for Nuclear Decommissioning shows lava-like lumps believed to contain melted fuel inside the Unit 3 reactor at Fukushima Dai-ichi nuclear plant in Okuma town, Japan, Friday.

captured what is believed to be the melted fuel.

"That debris has apparently fallen from somewhere higher above. We believe it is highly likely to be melted fuel or something mixed with it," Kimoto said. He said it would take time to analyze which portions of the rocks were fuel.

In an earlier survey Wednesday, the robot found severe damage in the vessel, including key structures that were broken and knocked out of place.

The robot, nicknamed "the Little Sunfish," on Friday went inside a structure called the pedestal for a closer look. TEPCO plans to send the robot farther down on Saturday in hopes of finding

more melted fuel and debris.

Experts have said the melted fuel is most likely to have landed inside the pedestal after breaching the core.

Kimoto said the robot probe in its two missions has captured a great deal of useful information and images showing the damage inside the reactor, which will help experts eventually determine a way to remove the melted fuel, a process expected to begin sometime after the 2020 Tokyo Olympics.

"It's still just the beginning of the (decades-long) decommissioning. There is still a long way to go, including developing the necessary technology," he said. "But it's a big step forward."

Oregon regulators dilute Gov. Brown's clean air plan

PORTLAND (AP) — Oregon's polluters have again drastically diluted an effort to clean up toxic air in the state.

A 2011 effort to fix Portland's bad air failed. More recently, industry lobbyists convinced lawmakers to withhold money for implementing new rules that Gov. Kate Brown proposed after the 2016 Bullseye Glass crisis in Portland. Now, citing industry "feedback," the Department of Environmental Quality has loosened the rules themselves.

The newly revised draft rules allow polluters to create far more cancer risk across Oregon than the department initially proposed.

In the original plan, released in March, no business would have been allowed to increase the cancer risk by more than 10 people in every million who breathe the air for 70 years. In the new plan, existing polluters could increase the risk above more than 100 cancers in every million people with agency approval. No cap would be set.

The department has also added a loophole that would give local politicians a say about whether some of the state's biggest polluters should be subject to limits on the toxic chem-

icals coming from their smokestacks.

The loophole would enable the agency's director to exempt the state's highest polluting businesses from requirements to nearly eliminate the risk from their toxic emissions. Companies would be eligible for the exemption if they installed some pollution controls and consulted with the state health department and local politicians.

The latest move carries far more significance than the budget fight in Salem. This industry victory has been authored by a state agency that answers to the governor, an indicator that her commitment to her clean air overhaul may be wavering amid business opposition.

The deference to local lawmakers evokes what happened with concerns over toxic pollution from Entek International, a Lebanon manufacturer that uses a cancer-causing solvent, trichloroethylene. When the department began investigating the risks to neighbors, local politicians criticized the agency for attacking a major employer.

State lawmakers who represent the area around Entek berated the department during hearings in Salem; one pledged to

never fund its budget again. The criticism, coupled with an unprecedented gag order, succeeded in getting the department to slow down its plan to tell neighbors about the potential risks of breathing the air there. The environmental quality department planned to deploy air monitors months ago but its deputy director, Leah Feldon, said Thursday it still has not.

Feldon could not cite another example of a law her department enforces that gives local politicians any discretion over whether it should be followed. Nor could she immediately point to another state's laws with a similar loophole.

Robb Cowie, a spokesman for the Oregon Health Authority, which is jointly drafting the rules, said the changes reflect what he called "feedback" received from an advisory committee of industry and environmental groups.

"In our state, there are communities that do have a major employer," Cowie said. "We're not giving the community a veto. But we are providing an opportunity for input to inform that decision based on the concerns and what that local community wants us to take into account."

It's unclear whether the changes came at Brown's urging.

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