

Watchdog inspectors divided on fault activity at Oi nuclear plant site

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2

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The government's nuclear industry watchdog on Nov. 2 inspected a geological fault line at the site of the Oi nuclear power plant in Fukui Prefecture, which some experts suspect could open up in a future earthquake.

The fault in question, called the "F-6 fracture zone," cuts across the Oi plant site in a north-south direction between the No. 2 and No. 3 reactors.

The Nuclear Regulation Authority has not offered an opinion on the possible risk as members of the survey team remained divided on the issue.

It is set to meet Nov. 4 to discuss the matter further after Kunihiko Shimazaki, the agency's deputy chairman, conducts his own assessment.

"Requesting additional surveys is one option," he said.

Experts have expressed concern that slippage of an active fault near the Oi plant could induce movement along the F-6 fracture zone, with catastrophic results.

At the behest of the Nuclear and Industrial Safety Agency, the NRA's predecessor, Kansai Electric Power Co., the Oi plant operator, has been doing additional surveys since August. These have included work to expose geological formations.

KEPCO on Oct. 31 submitted an interim report to the NRA, saying it had so far found no data to contradict its previous assessment that the F-6 fracture zone is inactive.

It will issue a final report in December.

Four outside experts joined Shimazaki during the NRA's on-site fault survey on Nov. 2, where they inspected fault outcrops at two sites where KEPCO exposed geological formations.

The team members offered an array of opinions on the likelihood of fault activity.

Norio Shigematsu, a senior research scientist at the National Institute of Advanced Industrial Science and Technology, said: "There was little evidence that geological formations had shifted because of the fault. I'm not able to jump to an immediate conclusion."

But Mitsuhsa Watanabe, a professor of geomorphology at Toyo University, said there was clear evidence that geological formations had shifted, but at what period in the past he could not say.

Daisuke Hirouchi, an associate professor of geography at Shinshu University, and Atsumasa Okada, a professor of active fault studies at Ritsumeikan University, both said they were unable to assess the activity of the fault until they knew more about when the fault shifted.

Geological time is deemed relevant because the government's current nuclear reactor construction guidelines define active faults as those that have shifted during the past 120,000 to 130,000 years. Thus, the conventional wisdom is that an active fault that slid recently may move again in the future.

Shimazaki has said the definition of active faults should be broadened to include those that have shifted during the past 400,000 years.

Experts are hard-pressed to identify when fault movements occurred, partly because of an inherent difficulty in assessing geological faults and a dearth of evidence.

When KEPCO built the Oi plant, it stripped off geological formations that would have helped to identify when the last fault activity occurred. A lack of evidential materials and photographs of the geological formations means that a re-examination of controversial sites is no longer possible as pipes were embedded in the bedrock.

An "emergency water intake channel," a vital part of the facility that is designed to receive seawater to cool down diesel generators and other emergency equipment, runs directly above the F-6 fracture zone.

The government's guideline on building nuclear facilities to withstand earthquakes says no key component of a plant should be built directly above an active fault.

NRA Chairman Shunichi Tanaka has said he will ask KEPCO to shut down the Oi plant if the fault is considered to be active.

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