Fukushima: Memo emblematic of disaster plan flaws

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Regulators never questioned one-page document

Memo emblematic of disaster plan flaws

Nuclear regulators trusted that the reactors at the Fukushima No. 1 complex were safe from the worst waves an earthquake could muster based on a single-page memo from Tokyo Electric Power Co. nearly a decade ago.

In the Dec. 19, 2001, document – one double-sized page obtained by The Associated Press under the public records law –\ Tepco rules out the possibility of a tsunami large enough to knock the plant offline and gives scant details to justify this conclusion, which proved to be wildly optimistic.

Regulators at the Nuclear and Industrial Safety Agency had asked plant operators for assessments of their earthquake and tsunami preparedness. They didn't mind the brevity of the utility's response, and apparently made no moves to verify its calculations or ask for supporting documents.

"This is all we saw," said Masaru Kobayashi, who now heads NISA's quake-safety section. "We did not look into the validity of the content."

The memo has Japanese text, boxes and numbers. It also has a tiny map of Japan indicating where historical earthquakes are believed to have struck. Tepco considered five quakes, ranging from 8.0 to 8.6 magnitude, in the northeast, and 9.5 magnitude across the Pacific near Chile, as examples of possible tsunami-causing temblors.

In the next nine years, despite advances in earthquake and tsunami science, the document gathered dust and was never updated.

When Tepco finally did revisit tsunami preparedness last year, it was the most cursory of checks. And the conclusion was the same: The facility would remain dry under every scenario the utility envisioned.

"There was an attitude of disrespecting nature," said Kobe University professor emeritus Katsuhiko Ishibashi, who has sat on government nuclear safety advisory panels.

The towering waves unleashed by the magnitude 9.0 earthquake on March 11 destroyed backup generators for several reactors' cooling systems, and nuclear fuel in three reactors melted in the

worst such crisis since Chernobyl. Workers have yet to bring the plant under control more than two months later.

Ishibashi said the problem with the plant's tsunami preparedness didn't lie with the limitations of science back in 2001. The problem was that Tepco and regulators didn't look at risk factors more carefully.

"It is critical to be prepared for what might happen even if the possibilities are small," he said.

NISA's request for tsunami risk assessments did not have the force of law and thus the operators' responses technically were voluntary, but in the nation's often-informal regulatory structure, regulators would expect such a request to be obeyed.

Tepco's memo was titled "The Assessment of Effects Related to the Japan Society of Civil Engineers' 'Guidelines on Tsunami Assessment for Nuclear Power Plants' Å\ Fukushima No. 1 and No. 2 Nuclear Power Plants."

The company said it used measures for expected earthquakes and other "parameters" to calculate that water would not surpass 5.7 meters at Fukushima No. 1.

The waters set off by the March tsunami reached 14 meters above sea level, according to Tepco.

One big reason for the underestimate: Tepco's experts asserted that the biggest earthquake that the nearest fault could produce was 8.6 magnitude. At magnitude 9.0, the quake that struck was four times more powerful than that.

"The results of the study show the assessment for the maximum levels of tsunami at each site," says one line in the report's typically sparse, matter-of-fact language.

The document relied on guidelines for tsunami assessments written by the Japan Society of Civil Engineers. Those guidelines were not published until 2002 but were made available in advance to Tepco.

In the nearly 10 years since the memo, advances in science have exposed the potential Å\ and precedent Å\ for huge tsunami hitting Japan's northeast coast. Several studies showed that the Jogan tsunami of A.D. 869 went far inland in the area near the Fukushima No. 1 plant.

Other studies showed that the fault that erupted so violently was "stuck" and could produce the kind of truly massive quake that struck March 11.

Through the years, Tepco never changed the maximum tsunami heights expected at Fukushima No. 1, which was built in 1971.

"We assessed and confirmed the safety of the nuclear plants," Tepco civil engineer Makoto Takao asserted as recently as a November seismic safety conference.

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http://search.japantimes.co.jp/cgi-bin/nn20110529a1.html

Doubts deepen over TEPCO truthfulness after president's sightseeing trip uncovered

Suspicions that Fukushima No. 1 Nuclear Power Plant operator Tokyo Electric Power Co. (TEPCO) is hiding information were heightened on May 27 with revelations that its president was not where TEPCO had said he was on the day of the Great East Japan Earthquake.

TEPCO had claimed that on March 11 its President Masataka Shimizu was on a trip to meet with Kansai-area business leaders. The Mainichi discovered, however, that Shimizu was in fact sightseeing in Nara — a discrepancy that TEPCO now refuses to discuss.

According to sources close to the matter and the Nara Prefectural Government, Shimizu, his wife and secretary checked into a hotel in the ancient capital on March 10 for a two-night stay. The trio had planned to go watch a traditional event at Todaiji temple the next day.

On the afternoon of March 11, in his role as chairman of the Federation of Electric Power Companies of Japan (FEPC), Shimizu went to "observe" the site of the Heijokyu Imperial Palace. The FEPC had sponsored the 2010 celebration of the 1,300th anniversary of the transfer of the Japanese Imperial seat to the palace.

At 2:46 p.m. the earthquake occurred. Shimizu cut short his visit to the palace site, and canceled his hotel reservation for the night plus the plans to watch the Todaiji temple event.

During the trip, there were apparently no official events that could be considered work. Instead, the main objective of Shimizu's trip appears to have been enjoying the Todaiji temple event with his wife and secretary, even though March 10 and 11 were weekdays.

TEPCO has stated that Shimizu was in the area to meet with Kansai business leaders. However, a top-level executive of the Kansai Electric Power Co. denied that Shimizu had met with anyone from the company, and leaders of other major Kansai corporations also deny having met with Shimizu.

Meanwhile, TEPCO's public relations branch has refused to comment on Shimizu's Heijokyu Imperial Palace site visit. In response to Mainichi inquiries, it would only say, "President Shimizu's schedule also involves those he was with, so we cannot publicly release it. We will neither affirm nor deny (assertions about it)."

After the earthquake, it is said that Shimizu went to Aichi Prefecture, but it has also been said that he at one point headed from Nara to Kobe Airport via taxi. He later tried to take a Self-Defense Forces transport aircraft from Komaki Air Base in Aichi Prefecture back to TEPCO headquarters in Tokyo, but the aircraft turned back on the way and he was unable to return to Tokyo that day. On the morning of March 12 he returned to Tokyo by helicopter.

At the time of the earthquake, TEPCO Chairman Tsunehisa Katsumata was also absent from Tokyo on a business trip to China.

During this time, the reactor cooling functions at the Fukushima plant ceased to function and the cores of reactors No. 1-3 melted down, bringing about the worst nuclear disaster since Chernobyl.

Mainichi , May 28, 2011
http://mdn.mainichi.jp/mdnnews/news/20110528p2a00m0na004000c.html