Japan : TEPCO loses trust over leak of radioactive water into sea. Huge leak of tritium feared. Fukushima fishermen protest

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Sommaire

Fukushima fishermen angry over contaminated water leaks into sea

FUKUSHIMA — Tokyo Electric Power Co. (TEPCO) said on July 22 that radioactive water was leaking from under its crippled Fukushima No. 1 nuclear plant into the Pacific Ocean, raising serious concerns and questions among local fishermen who still face a self-imposed ban on working the sea.

Local fishermen expressed their anger over contaminated water leaking into the ocean, which would spur harmful rumors and cause further damage to the fish industry in Fukushima Prefecture.

Local fisheries cooperatives had planned to start test fishing for whitebait and other fish offshore of Iwaki in September for the first time since the March 2011 disaster. TEPCO's announcement came after cooperative chairmen and related parties had a meeting on the matter with experts on July 22.

« We sensed that contaminated water might be leaking into the ocean, » a cooperative-related source in Fukushima commented. Another person questioned the timing of the announcement, saying « I wonder why TEPCO chose the day after (the House of Councillors) election (to admit that the contaminated water was leaking). »

TEPCO officials including managing director Tsunemasa Niitsuma visited the Fukushima prefectural fishery cooperative association in Iwaki to explain the situation at around 3:30 p.m. on July 22. Prefectural cooperative chairman Tetsu Nozaki and chairmen of Iwaki and Soma-Futaba cooperatives reportedly pressed the company to take immediate action to address the problem.

The prefectural fishery cooperative and TEPCO have been discussing the operation of a bypass system, which pumps underground water out into the ocean, as a measure to control the amount of radioactive contaminated water.

Senior cooperative officials said they would continue explaining the situation to their union members, but feelings of growing hostility among fishermen toward TEPCO are « unavoidable. »

« It's a tough situation, » commented Masakazu Yabuki, chairman of Iwaki fishery cooperative association. « It's TEPCO and the national government's responsibility to restore the ocean in

Fukushima, » he added.

Hiroyuki Sato, chairman of Soma-Futaba fishery cooperative which started test fishing last summer, expressed his frustration, saying « We have worked so hard to catch 15 types of fish that came in under the national limit (100 becquerels per kilogram) for radioactive contamination screening. »

Meanwhile, some 100 Fukushima fishermen expressed their anger and slammed TEPCO for its slow action on handling the situation during an information session held by the company in Iwaki on July 23.

Mainichi Shimbun, July 23, 2013
http://mainichi.jp/english/english/newsselect/news/20130723p2a00m0na009000c.html

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TEPCO loses trust over leak of radioactive water into sea

Tokyo Electric Power Co. (TEPCO) finally admitted on July 22 that radiation-tainted water has been seeping from the crippled Fukushima No. 1 nuclear plant into the sea.

Highly contaminated water was first found in an existing observation well at the nuclear plant on June 3. On numerous occasions since then, an increase in radiation levels had been measured in the sea and high concentrations of radioactive materials were detected in a new observation well, raising suspicions of leaks. But in an opinion on the cause of the increased levels, TEPCO had previously explained, « When contaminated water leaked from the vicinity of an intake of the No. 2 reactor in April 2011, right after the outbreak of the nuclear accident, some of it remained in the ground. We haven't seen any significant impact on the environment. »

Contaminated water has continued to accumulate at a rate of 400 metric tons per day as a result of groundwater entering damaged reactor buildings at the Fukushima plant. As of July 16, roughly 75,000 tons of water had accumulated in the No. 1-4 rector buildings. To reduce the amount of water building up, TEPCO initially planned to release groundwater that had not yet been contaminated into the sea, thereby limiting the amount of groundwater entering the reactor buildings.

However, small amounts of radioactive materials were detected in the groundwater, and local fisheries cooperatives objected to the plan due to fears it would spark harmful rumors about local marine resources. In the end the plan was derailed. Now, having admitted to a leak of contaminated water, the fishing industry's trust in TEPCO could diminish further.

The Nuclear Regulation Authority (NRA) pointed out this month that there were strong suspicions contaminated water had seeped into the sea. NRA Chairman Shunichi Tanaka stated, « Contamination of the sea, to a greater or lesser extent, is continuing, » suggesting it was possible that contaminated water that had leaked from reactor buildings had mixed with groundwater and was flowing toward the sea.

On July 22, TEPCO finally released its analysis of data on the sea level and the water level in a buried observation well near the sea. This overturned previous views on the situation. The company had reported the data to the NRA on July 18.

Seiji Abe, a Kansai University professor familiar with public utilities, criticized TEPCO's handling of the situation.

« Its response damaged trust that urgently needed to be restored, and its actions were extremely problematic, » he said. « The company still probably hasn't come to the realization that the monopoly it has had has created a wide gap between its reasoning and the public's demands. »

The government has been involved in creating a roadmap to decommission the damaged reactors at the Fukushima plant. However, it has not had a direct hand in any onsite work.

« TEPCO is the one that's working on the scene, » an official from the Ministry of Economy, Trade and Industry commented.

On the evening of July 22, Takeshi Takahashi, chief of the Fukushima No. 1 nuclear plant stabilization center, visited officials at the Fukushima Prefectural Government headquarters including Tetsuya Hasegawa, head of the living environment department, and explained the leaks.

« We apologize for causing concern. We'll take measures to prevent further leaks into the sea, » Takahashi said.

Hasegawa responded with a demand that TEPCO take proper measures to stop radioactive materials leaking into the sea and identify the cause of the leak.

Mainichi Shimbun, July 23, 2013
http://mainichi.jp/english/english/newsselect/news/20130723p2a00m0na011000c.html

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Tepco held back groundwater news — Fishermen slam tardy admission of radioactive flow into sea, of well levels in sync with tides

Tokyo Electric Power Co.'s admission Monday that radioactive groundwater from under the disaster-struck Fukushima No. 1 nuclear plant has reached the Pacific Ocean came about a month after the problem was confirmed.

Tepco had been taking groundwater samples from wells near the shore at the crippled plant to test for radioactive substances. It claims it only recently realized the water levels in the wells rose when the ocean tides did.

Tepco's slow action and tardy revelation, coupled with an apparent lack of coordination within the utility in sharing crucial data about the case, is making local fishermen increasingly distrustful of the utility.

At a Tuesday briefing for fishermen in Iwaki, Fukushima Prefecture, the day after the groundwater leak was admitted, participants expressed anger at the utility, with one calling for someone to take responsibility.

Following the March 2011 nuclear meltdowns triggered by the massive quake and tsunami, fishermen in the prefecture voluntarily suspended operations.

Finally in June last year, they began trial fishing in a limited area in the north targeting selected types of fish.

Fisheries officials were also considering launching limited operations in waters off Iwaki in the south from September. Then came TepcoÅfs admission.

« This will pose a significant hurdle to the trial operation. Even if we can catch fish, will we be able to tell consumers with confidence that they can eat them ? » said Masakazu Yabuki, 76, head of the Iwaki fisheries cooperative.

The utility announced in mid-June that high concentrations of radioactive materials were detected in groundwater observation wells located by the sea. It kept downplaying its possible impact on the sea, saying it did not detect any changes in concentration levels in nearby seawater.

The utility's cautious attitude about announcing the radioactive groundwater flow seems to stem from its urgent need to take measures against the ever-increasing amount of nuclear contaminated water.

At the Fukushima No. 1 plant, a huge amount of water has been pumped into the three reactors that suffered meltdowns. The water was tainted with radioactive materials and recycled for cooling the reactors after removing radioactive cesium and salt content.

Also, about 400 tons of groundwater flows into its reactor building basements daily and gets mixed with the water used to cool the reactors, creating a new contamination problem.

As of July 2, about 400,000 tons of contaminated water was stored in tanks.

The utility had planned to pump out the groundwater and release it into the sea before it enters the ground under the buildings. But it has yet to carry out the plan because of opposition from local fishermen.

The fishermen's distrust grew further after a series of problems surfaced, including an error in the way Tepco checked the radiation levels of the groundwater it seeks to release into the sea.

Tetsu Nozaki, 58, chairman of the fisheries co-op association of the prefecture, said, « It has become emotionally difficult to accept (Tepco's groundwater release plan) due to the leakage of contaminated water (into the sea). »

The utility acknowledged the contaminated groundwater was reaching the sea after realizing that the water levels in the wells rose when the tides came up.

The data had been collected since January by Tepco's civil engineering department working to design a sunken wall to prevent the spread of radioactive materials in the local harbor but had not been shared within the company.

The department overseeing contaminated water became aware of the existence of the data around July 17, sources said.

Tepco informed the Nuclear Regulation Authority of the data the following day, but did not make a public disclosure until the following week, considering the impact it would have on the upcoming briefing, they said.

Kyodo News, July 24, 2013

http://www.japantimes.co.jp/news/2013/07/24/national/tepco-held-back-groundwater-news/#.UfTz1KxGTFw

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Fishermen want drastic Tepco action

The National Federation of Fisheries Cooperative Associations lodged a protest with Tokyo Electric Power Co. on Thursday over the radioactive water flowing into the Pacific from the Fukushima No. 1 nuclear power plant complex.

It also urged Tepco President Naomi Hirose at the utilityÅfs Tokyo headquarters to take drastic steps to stop the tainted water and to enhance monitoring of the ocean in the vicinity of the nuclear complex, which was crippled by three meltdowns in March 2011.

The move came after Tepco admitted for the first time Monday that radioactive groundwater was flowing from under Fukushima No. 1 into the Pacific. The admission is just the latest water-related radiation issue to devastate the local fishing industry, which is eager to resume work since food-safety fears triggered by the crisis brought fishing to a halt.

Kyodo News, July 25, 2013
http://www.japantimes.co.jp/news/2013/07/25/national/fishermen-want-drastic-tepco-action/#.UfV4fKxGTFw
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TEPCO provides conflicting accounts on toxic water leak

Tokyo Electric Power Co. (TEPCO) was aware of a leak of contaminated water from the Fukushima No. 1 Nuclear Power Plant prior to its official announcement of the leak on July 22, the head of TEPCO's reconstruction headquarters in Fukushima Prefecture has suggested.

Headquarters chief Yoshiyuki Ishizaki said at a news conference on July 25 that he received an email from the utility's headquarters in Tokyo saying that TEPCO had no choice but to announce that radiation-tainted water from its crippled nuclear power plant had leaked into the Pacific Ocean.

While TEPCO had submitted data on the leak to the secretariat of the Nuclear Regulation Authority on July 18, the utility had thus far insisted that it couldn't explain the data until July 22.

After Ishizaki's news conference on July 25, TEPCO's public relations office said that it had no means to answer which email Ishizaki referred to. It said the office had heard TEPCO finished collecting data on July 21.

Ishizaki said he couldn't remember who sent him the email. He said the Tokyo headquarters' nuclear power division and the Fukushima No. 1 power station team determined that contaminated water was spilling out into the sea. The Fukushima reconstruction head office was not involved in

determining the situation, he added.

When asked by reporters if TEPCO had delayed the announcement due to a possible impact on the House of Councillors election on July 21, the public relations office denied it.

Mainichi Shimbun, July 26, 2013
http://mainichi.jp/english/english/newsselect/news/20130726p2a00m0na014000c.html

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Fukushima trench water crisis returns
Kyodo News, July 27, 2013
http://www.japantimes.co.jp/news/2013/07/27/national/fukushima-trench-water-crisis-returns/#.UfW0mqxGTFw

Tokyo Electric Power Co. said Saturday that the trench problem at the crippled Fukushima No. 1 nuclear plant has cropped up again and is sending highly radioactive water into the sea.

The water in the underground passage, which runs under the turbine building of reactor 2, contains 2.35 billion becquerels of cesium per liter, roughly the same as that measured right after the crisis began in spring 2011.

The latest sample, taken Friday from a trench, contained 750 million becquerels of cesium-134, 1.6 billion becquerels of cesium-137 and 750 million becquerels of other radioactive substances, the utility said.

A sample from April 2011 contained 1.8 billion becquerels of both cesium-134 and cesium-137 per liter. Cesium has a half-life of about 30 years.

The trench is believed to be the source of the groundwater problem thatÅfs been baffling TepcoÅfs experts for months. Their current theory is that the highly radioactive water found and left in the trench in 2011 is now leaking directly into the groundwater, which is seeping into the sea.

Tepco finally admitted Monday that contaminated water was getting into the Pacific. The admission came after the Nuclear Regulation Authority pointed out that highly radioactive water was Ågstrongly suspectedÅh to be seeping into the ground under the site and making its way to the sea.

The utility hopes to halt the problem by building a wall out of liquid glass between the reactors and the sea and removing the contaminated water from the underground passage.

Mainichi Shimbun, July 26, 2013
http://mainichi.jp/english/english/newsselect/news/20130726p2a00m0na014000c.html

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Tritium level also high in Fukushima trench water

Tokyo Electric Power Co. said Sunday it had detected a high level of tritium in water under its stricken Fukushima No. 1 power plant.

Tepco detected 8.7 million becquerels of tritium per liter in water taken Friday from a cable trench running under the turbine building of the No. 2 reactor at a point about some 50 meters from the Pacific Ocean. The reading is 145 times the legal limit.

While tritium is a common hazard at nuclear power plants, the revelation came a day after the utility announced that the same water sample contained 2.35 billion becquerels of cesium and 750 million becquerels of other, unnamed radioactive substances, including strontium, that emit beta rays.

All would likely pose a higher risk of cancer if ingested by humans.

Tepco has been unable to figure out why the groundwater is being tainted with radiation. Its latest theory appears to be that the water in the observation wells on its premises is being tainted by water from the cable trench.

Last week, Tepco admitted that groundwater tainted with radioactive substances leaked into the Pacific from the plant and that the water level in the wells was rising and falling with the ocean tides.

Jiji Press, July 28, 2013
http://www.japantimes.co.jp/news/2013/07/28/national/tritium-level-also-high-in-fukushima-trench-water/#.UfW_t6xGTFw

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Liquid glass fails to stop radioactive water leak into ocean from Fukushima No. 1 plant

Tokyo Electric Power Company (TEPCO) confirmed on July 31 that its efforts to firm up the seawall by inserting liquid glass into the earth has failed to prevent radioactive water from leaking into the ocean from its Fukushima No. 1 Nuclear Power Plant.

The foundation improvement construction was a major supplemental initiative aimed at preventing the leakage of tainted water into the ocean. It proved impossible to solidify shallow areas of earth using the glass, however, resulting in the contaminated water leaking into the ocean when groundwater levels were high.

TEPCO officials said that they had constructed a liquid glass shielding wall around 100 meters in length, at a depth of two to 16 meters underground, in order to cover the seawall near the plant's No. 2 reactor.

At present, however, the level of the groundwater near the seawall is exceeding that of the shielding wall by a depth of around one meter below ground level.

« We cannot deny that now (even after the shielding wall was constructed), the groundwater is leaking into the ocean, » TEPCO said.

Mainichi Shimbun, August 1, 2013
http://mainichi.jp/english/english/newsselect/news/20130801p2a00m0na004000c.html

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Cesium levels in water under Fukushima No. 1 plant soar the deeper it gets, Tepco reveals

Tokyo Electric Power Co. said Thursday it has detected high levels of radioactive cesium in water taken from deep under its disaster-hit Fukushima No. 1 nuclear plant.

Tepco found that water in a hole dug for a cable pipe contained up to 950 million becquerels of cesium per liter.

The pipe is located near another at the turbine building of reactor 2, where water has been found to contain high levels of radioactive substances.

Tepco said it believes this water was among the first contaminated in the early stages of the March 2011 meltdowns.

Studying water taken from 1 meter, 7 meters and 13 meters underground at a point some 65 meters from the Pacific, Tepco found 950 million becquerels of cesium and 520 million becquerels of beta ray-emitting radioactive substances, including strontium, in the water from 13 meters underground.

Water from 1 meter down contained 340 million becquerels, and a sample from 7 meters down contained 350 million becquerels.

Salt concentrations in water from 13 meters down were more than 10 times higher than water from 1 meter and 7 meters underground.

On July 26, Tepco detected 2.35 billion becquerels of cesium in water collected from a different cable trench closer to the ocean. Cesium, a metallic element, is subject to gravity.

It has already been widely reported that highly radioactive groundwater from under the plant had been flowing to the Pacific and that test wells dug near the shore showed water levels in the wells rose and fell with the tides, revelations Tepco has been criticized for being late to report.

Jiji Press, Kyodo News, August 1, 2013
http://www.japantimes.co.jp/news/2013/08/01/national/cesium-levels-in-water-under-fukushima-no-1-plant-soar-the-deeper-it-gets-tepco-reveals/#.Ugth1NgSrlc

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Huge leak of tritium feared in Fukushima

Tokyo Electric Power Co. said Friday that an estimated 20 trillion to 40 trillion becquerels of tritium from the Fukushima No. 1 nuclear plant may have flowed into the Pacific Ocean since May 2011.

The utility reported the estimate Friday to the Nuclear Regulation Authority after recently admitting that toxic water from the emergency cooling system set up after the nuclear crisis began on March 11, 2011, is leaking into the sea.

Nevertheless, Tepco said the size of the release is roughly in the allowed range of 22 trillion

becquerels a year but acknowledged it didn't take place in a controlled manner. Tritium has a half-life of about 12 years.

Since it doesn't know when the leak began, the utility has assumed the beginning was in May 2011, after it attempted to stop the toxic water from entering the ocean when it was discovered in April 2011.

The constant injection of water that is needed to keep the damaged reactors cool after the core meltdowns of March 2011 are generating a new radiation crisis at the plant that officials appear unable to solve without tainting the ocean and marine life.

Kyodo News, August 3, 2013
http://www.japantimes.co.jp/news/2013/08/03/national/huge-leak-of-tritium-feared-in-fukushima/#.Ugv2utgSrlc

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