

Japan: Fukushima, water tanks and radioactivity

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Workers covered in toxic water as pipe disconnected at Fukushima plant

TOKYO (Kyodo) — Highly radioactive water leaked from a desalination facility at the severely damaged Fukushima Daiichi nuclear power plant on Wednesday morning when workers wrongly disconnected a pipe, plant operator Tokyo Electric Power Co. said.

A total of 7 tons of water flowed out from the pipe for over an hour, but it remained inside leak-protection barriers set up around the facility. Six of the 11 workers were covered in the toxic water but unlikely to have suffered internal exposure, the utility said.

Nuclear Regulation Authority Chairman Shunichi Tanaka told a press conference that the leak seemed to be another accident triggered by “carelessness” at the plant.

TEPCO said the water, which leaked from about 9:35 a.m., contained around 34 million becquerels per liter of radioactive substances that emit beta rays such as strontium-90. Beta particles can penetrate the skin but can be blocked with a thin sheet of metal, such as aluminum.

Dosimeters showed that subcontract workers were exposed to up to 1.2 millisieverts of beta rays and up to 0.42 millisievert of gamma rays, which are emitted from radioactive substances like cesium and have a greater ability to penetrate other materials.

TEPCO spokesman Masayuki Ono told a press conference later in the day that the levels of exposure were unlikely to result in health problems for the workers.

The workers were supposed to replace an empty pipe connected to the facility but wrongly chose the pipe containing toxic water. The leak was finally stopped at around 10:50 a.m. because the workers had difficulties reconnecting the pipe.

The six workers were wearing waterproof jackets in addition to protective gear. Full-face masks also protected them from splashes.

Kyodo News, October 10, 2013

<http://mainichi.jp/english/english/newsselect/news/20131010p2g00m0dm038000c.html>

Water injection for damaged Fukushima reactor accidentally halted

TOKYO (Kyodo) — A pump to inject water into one of the severely damaged reactors at the Fukushima Daiichi nuclear complex halted Monday after a worker accidentally triggered a power failure, Tokyo Electric Power Co. said.

The halt occurred at around 9:47 a.m. but cooling of the No. 1 reactor immediately resumed through a backup pump, the utility known as TEPCO said.

TEPCO said the power failure occurred when one of two employees conducting routine checks of electricity equipment wrongly pushed a "stop" button on a switchboard, cutting power supply.

The utility does not have a procedure manual detailing how to manage the equipment and the worker had not previously conducted such checks, according to the utility. The other worker, who knew the proper procedure, was checking another switchboard and did not notice the mistake.

Kyodo News, October 7, 2013

<http://mainichi.jp/english/english/newsselect/news/20131007p2g00m0dm052000c.html>

Cesium in bay up by 13 times

Radioactive cesium levels surged 13 times in a day in the artificial bay at the crippled Fukushima No. 1 nuclear plant, Tokyo Electric Power Co. said Thursday.

Seawater sampled near a water intake for reactor 2 Wednesday contained 1,200 becquerels of radioactive cesium per liter, up from 90 becquerels the previous day, Tepco said.

The sampling point is inside a silt fence set up to limit the movement of water in the little harbor.

At an embankment around the water intake, Tepco is working to solidify the soil with chemicals to block contaminated groundwater from flowing into the bay.

Cesium levels rose as soil tainted with radioactive substances dropped into the bay during the work, Tepco said.

At a site outside the silt fence, cesium levels more than doubled to 227 becquerels Wednesday from 106 Tuesday.

Jiji Press, October 10, 2013

<http://www.japantimes.co.jp/news/2013/10/10/national/cesium-in-bay-up-by-13-times/#.UltbR1NjbRY>

High radiation reported near tanks

FUKUSHIMA — Tokyo Electric Power Co. said Friday that high radiation levels have been detected near three water storage tanks at the Fukushima No. 1 nuclear plant.

The highest reading was 69.9 millisieverts per hour near one of the three tanks holding radioactive water to the west of the building housing reactor 1.

It is the same area where high radiation levels were detected in early September. The highest reading at that time was 2,200 millisieverts per hour.

No leak of radioactive water has been confirmed, and there has been no change in water levels in the three tanks, Tepco officials said.

The utility found the high doses during a routine inspection Thursday. The highest radiation levels near the other two tanks were 19.95 millisieverts and 39.95 millisieverts.

Radiation checks were conducted about 5 cm from the tanks near their base.

Jiji Press, October 11, 2013

<http://www.japantimes.co.jp/news/2013/10/11/national/high-radiation-reported-near-tanks/#.Uluf0VNjbRY>

TEPCO to reinforce monitoring activities at Fukushima plant's port

TOKYO (Kyodo) — The operator of the crippled Fukushima Daiichi nuclear power plant said Friday that it will reinforce radiation monitoring inside the plant's port where the concentration of radioactive cesium is rising.

For a week from Friday, Tokyo Electric Power Co. plans to check every day the radiation level of the sea water at five points, including at the entrance to the port, TEPCO officials said.

The utility has detected that the concentration of cesium is rising near the water intake of the plant's No. 2 reactor, one of three units that suffered meltdowns during the 2011 nuclear crisis. An undersea curtain called a "silt fence" is placed around the intake to prevent the spread of contamination.

Seawater samples taken from inside the curtain area Tuesday contained 90 becquerels of cesium per liter, while samples taken Wednesday and Thursday contained 1,200 becquerels and 970 becquerels of cesium respectively.

Radiation levels outside the curtain have also been rising.

TEPCO believes the change in radiation levels is related to the soil improvement work the utility is conducting at the coastal site, which is likely to have affected the flow of groundwater passing through the plant premises.

The utility also said on Friday that highly radioactive water that leaked from the plant's desalination facility on Wednesday totaled 11 tons, not 7 tons as announced earlier.

The water remained inside leak-protection barriers set up around the facility, meaning none leaked into the sea.

In that incident, six workers were soaked by toxic water when they wrongly disconnected a pipe that was not empty. They were able to wipe off the contamination and did not have to receive medical treatment.

The desalination facility is used in the water circulation process to keep the three crippled reactors cool.

Kyodo News, October 12, 2013

<http://mainichi.jp/english/english/newsselect/news/20131012p2g00m0dm002000c.html>

Farmers near Fukushima plant begin rice harvesting for first time since accident

TAMURA, Fukushima — Farmers began to harvest rice here on Oct. 8 in fields within a radius of 20 kilometers from the crippled Fukushima No. 1 Nuclear Power Plant for the first time since the outbreak of the nuclear crisis.

Hisao Tsuboi, 63, and his 60-year-old wife Chikako — a farming family in the Miyakoji district of the Fukushima Prefecture city of Tamura — were delighted to be surrounded by gold-colored rice ears. They said, “We can harvest good rice because it was hot this summer and temperatures here on higher ground fluctuate between warm and cool.”

The Tsubois expect to reap more than 12 metric tons of rice — Hitomebore (love at first sight) short-grain variety as well as Chiyonishiki and other varieties. After going through inspections for radiation, some of the harvested rice will become part of the government’s stockpiled rice while the remaining grain will be sold directly to those customers in the Kanto region they knew well prior to the outbreak of the nuclear crisis.

More than half of the residents in the Miyakoji district, which is located within a radius of 20 kilometers from the troubled nuclear plant, are either full-time or part-time farmers.

The district was reorganized into an “area preparing for the lifting of evacuation orders” and decontamination work on residences was completed in June this year, but only 20 percent of the 119 households are staying at their homes. Only three households in the Miyakoji district, including the Tsubois, harvested rice there this time.

Mainichi Shimbun, October 8, 2013

<http://mainichi.jp/english/english/newsselect/news/20131008p2a00m0na009000c.html>

Radiation exposure study finds no abnormality in Fukushima bull testis

SENDAI (Kyodo) — Researchers have found no effect of radioactive cesium on the testes — considered sensitive to radiation — and sperm count of bulls that had been left behind in the evacuation zone around the crippled Fukushima Daiichi nuclear power plant, according to a study made public Tuesday.

“In the future, we want to examine (radiation’s) genetic impact by transplanting fertilized eggs to cows or conducting artificial insemination,” said Manabu Fukumoto, a Tohoku University professor of pathology who was involved in the research published online by Britain’s Scientific Reports.

The group analyzed three bulls — two found in the village of Kawauchi in September 2011 and one in the town of Naraha in January 2012, which were left behind within the 20-kilometer radius from the plant that experienced multiple meltdowns after the March 2011 quake and tsunami.

Microscopic observations found no abnormality in their testes' internal shape or their ability to produce sperm. The cell division process leading to sperm formation was also comparable to specimens that had not been exposed to radiation, according to the study.

Kyodo News, October 9, 2013

<http://mainichi.jp/english/english/newsselect/news/20131009p2g00m0dm033000c.html>

NRA chief hints at delaying safety screening of Kashiwazaki-Kariwa nuke plant

The Nuclear Regulation Authority (NRA) chief has hinted at the possibility of delaying a safety review of the Kashiwazaki-Kariwa nuclear power plant in Niigata Prefecture for a planned restart amid the Fukushima contaminated water crisis, during an interview with the Mainichi Shimbun.

NRA Chairman Shunichi Tanaka made the suggestion during the interview on Oct. 9, saying, "We will first and foremost evaluate the situation at the Fukushima No. 1 Nuclear Power Plant," amid a series of blunders at the plant including leakages of radioactively contaminated water.

Tokyo Electric Power Co. (TEPCO), the operator of the Fukushima No. 1 nuclear plant, had earlier filed a request with the NRA on Sept. 27 for a safety screening of the No. 6 and No. 7 reactors at the utility's Kashiwazaki-Kariwa plant for a planned restart of the facility.

On Oct. 4, the NRA instructed TEPCO to file a written report on its measures to address contaminated water at the Fukushima plant and whether the utility would be able to properly manage safety at the Kashiwazaki-Kariwa plant. TEPCO is scheduled to submit the report by the end of this week.

With a new leak of highly radioactive water from a desalination facility at the Fukushima plant on Oct. 9 in mind, Tanaka told the Mainichi, "The Fukushima No. 1 nuclear plant has been hit by trouble almost every day. We must wait until the current situation is settled and the utility can properly manage the facility. We will examine if TEPCO is actually implementing what it states in its report (to be submitted)."

"The work environment at the Fukushima plant is fairly harsh. For such tough work, TEPCO's regular employees should take the lead, but I wonder what actually has been going on at the site. TEPCO tends to use subcontractors and is likely to have avoided directly tackling (the trouble-hit work)," Tanaka said.

He said the NRA will take about a month to examine TEPCO's report before determining its validity.

So far, five power companies have filed for safety screenings on a total of 14 reactors at seven nuclear power stations. While Tanaka withheld from clearly stating that the NRA was putting on hold the screening of the No. 6 and No. 7 reactors at the Kashiwazaki-Kariwa plant, he told the Mainichi, "We can't work on the (Kashiwazaki-Kariwa) plant as quickly as with other nuclear plants (whose safety screening is under way). The public won't tolerate that."

Regarding other utilities whose nuclear reactors are currently under review by the NRA for planned restarts, Tanaka said, "Some utilities have shown resistance (to our screenings). It is the power companies themselves that would suffer losses from any delayed screenings. Even if they lag behind, we will not become lenient."

He especially criticized Kansai Electric Power Co. for denying possible links between three active faults surrounding the No. 3 and No. 4 reactors at the Oi nuclear power plant and the No. 3 and No. 4 reactors at the Takahama nuclear plant, both in Fukui Prefecture, saying, "The screening has been sluggish because the utility is maintaining things like that.

Mainichi Shimbun, October 10, 2013

<http://mainichi.jp/english/english/newsselect/news/20131010p2a00m0na015000c.html>

District's evacuation order may be lifted — Any residents returning to Tamura area to get dosimeters

The government hopes to partly lift its evacuation order starting Nov. 1 at a district within the 20-km no-go zone around the Fukushima No. 1 nuclear plant, according to sources.

The government will present a plan to lift the order for the Miyakoji district, located in the city of Tamura in Fukushima Prefecture, at a meeting with residents Monday, the sources said.

The period in which Miyakoji residents are allowed to visit the area for long stays to prepare for their permanent return is set to expire at the end of October.

The long-stay program was launched in August following the completion in Miyakoji of work to remove radioactive substances emitted by the March 2011 triple meltdowns at the Tokyo Electric Power Co. nuclear plant.

Miyakoji would be the first district to see the evacuation order lifted among those falling within the no-go zone designated by the government soon after the nuclear crisis was triggered by the March 11, 2011, earthquake and tsunami. If the order is removed, Miyakoji residents would be able to return to their homes without restrictions.

But local concerns about an early lifting of the evacuation order remain strong. If many residents express caution at Monday's meeting, the government may extend the long-stay program and delay lifting the order until December or later, the sources said.

Miyakoji is currently an area in which preparations are being made for a possible lifting of the evacuation order and the permanent return of residents. The district was reclassified in April 2012, as the annual radiation dose per person was found to be 20 millisieverts or less.

Officials from the Cabinet Office and the Environment Ministry, as well as Tamura Mayor Yukei Tomitsuka, will take part in Monday's meeting, the sources said.

The central and municipal governments will propose lifting the evacuation order and will then solicit residents' opinions. The government and the municipality will also explain support measures, including a plan to distribute dosimeters to those returning home.

The city will further present a progress report on setting up a makeshift shopping area in Miyakoji and explain plans to call on a major convenience store chain to establish an outlet in the district, the sources said.

The central and local governments will consider further support measures if they are requested by

local residents.

Jiji Press, October 12, 2013

<http://www.japantimes.co.jp/news/2013/10/12/national/districts-evacuation-order-may-be-lifted/#.Ulu pRFNjbRY>
