

Fukushima: water decontamination again delayed, tons of 'radioactive' waste in storage

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Contents

- [120,000 tons of 'radioactive'](#)
- [Decontamination delayed: \(...\)](#)
- [Trouble continues at Fukushima](#)

120,000 tons of 'radioactive' waste in storage

At least 120,000 tons of sludge and ash either confirmed or suspected to have been contaminated by radiation from the Fukushima No. 1 nuclear power plant has been put into storage at water treatment and sewage plants in Tokyo and 13 eastern prefectures, it has been learned.

Municipalities concerned have called on the central government to find locations where the contaminated sludge and ash can be treated or safely disposed of.

The Health, Labor and Welfare Ministry on Thursday released the results of a survey on dehydrated sludge being stored at water treatment plants in Tokyo and 13 other prefectures, including Miyagi, Yamagata, Fukushima and Shizuoka, as of July 12.

Data on dehydrated sludge and ash stored at sewage plants as of Wednesday was supplied by local governments in the 14 prefectures and tallied by The Yomiuri Shimbun. The ash was produced by incinerating mud.

Under guidelines for handling radiation-contaminated material announced by the central government on June 16:

- Material contaminated with radioactive cesium of more than 100,000 becquerels per kilogram should be stored in shielded facilities.
- Material with cesium levels of 8,000 to 100,000 becquerels per kilogram should be sent to plants designed to handle treatment of industrial waste.
- Material with cesium levels below 8,000 becquerels per kilogram can be buried.

Water treatment facilities in 11 of the 14 prefectures—Tokyo and Nagano and Shizuoka prefectures being the exceptions—have found a total of about 37,290 tons of stored dehydrated sludge to be radioactive, according to the ministry.

About 54,630 additional tons of stored sludge and ash have yet to be tested for radiation.

None of the sludge was found to have radiation levels exceeding 100,000 becquerels per kilogram,

but 1,557 tons of mud with cesium levels of between 8,000 and 100,000 becquerels per kilogram remained untreated in five prefectures, including Fukushima, Miyagi and Niigata. Radiation in the remaining sludge was below 8,000 becquerels per kilogram.

The municipalities concerned have been unable to find anywhere to dispose of the sludge, or treat it so it can be safely reused.

Meanwhile, sewage plants in 12 prefectures had about 19,050 tons of dehydrated sludge and about 11,400 tons of ash and other substances. Fukushima Prefecture had the largest amount, with about 9,540 tons.

Some facilities said their storage spaces would be filled with sludge and ash within a few months.

Radioactive cesium was detected in the waste at levels as high as 446,000 becquerels per kilogram. Levels of more than 100,000 becquerels per kilogram were found only in waste stored in Fukushima Prefecture, but levels between 10,000 and 40,000 becquerels per kilogram were detected in ash in the northern Kanto region.

The government and the ruling Democratic Party of Japan are working on a lawmaker-sponsored bill for a law that will allow the state to take the initiative in treating radioactive sludge and other contaminated materials, according to sources.

The Yomiuri Shimbun , July 30, 2011

<http://www.yomiuri.co.jp/dy/national/T110729006250.htm>

Decontamination delayed: TEPCO fails to meet goal in removing radioactivity from water

Decontamination of highly radioactive water at the Fukushima No. 1 nuclear power plant has been proceeding at a snail's pace because of various malfunctions and other problems.

Even though one month has passed since decontaminated water began to be used to cool the plant's reactors, the average operating rate of the decontamination system is only 63 percent.

Tokyo Electric Power Co., operator of the plant in Fukushima Prefecture, had planned to reduce the contaminated water to a safe level by early August.

However, TEPCO said the decontamination operation rate for the week up to Tuesday was 58 percent. The rate was 54 percent the previous week.

About 29,000 tons of radioactive water have been decontaminated so far, an average operation rate of 63 percent.

The system, which was built in less than two months, has frequently broken down due to faulty valve operations and a malfunctioning alarm system. Last Friday, it stopped working for eight hours due to a power outage.

TEPCO's target operation rate is 90 percent. The utility expected the operation rate this month

would be 80 percent, but later lowered this to 70 percent. The current rate does not even meet this target.

By early August, TEPCO had intended to lower the level of radioactive water accumulated in the basement of the reactors to ensure it would not flow out of the plant, even though rainwater would be allowed to enter.

However, the decontamination operation target will not be reached until late September, two months behind schedule, according to the company.

To help facilitate decontamination operations, TEPCO is planning to introduce new machinery manufactured by Toshiba Corp. and other companies next month.

“As we’re operating a brand-new system, it’s not surprising there are some problems,” said Junichi Matsumoto, a TEPCO spokesman on nuclear issues. “But we’ve solved most of the problems that have occurred in the initial phase. When we start using the new equipment, the [system’s] rate of operation should increase.”

Decontamination work has been further delayed by the inflow of rainwater and groundwater.

Last week, torrential rain brought by a typhoon poured into the plant’s reactors. As a result, the quantity of radioactive water increased by 3,000 tons over the past week, registering about 120,700 tons as of Tuesday.

Of the decontaminated water, about 390 tons have been used to cool the reactors each day, but this water automatically becomes radioactive again.

Due to its poor cooling efficiency, the No. 3 reactor requires nine tons of water per hour, more than two times that used to cool Nos. 1 and 2 reactors. TEPCO is therefore considering a more efficient cooling method that uses less water.

The Yomiuri Shimbun, July 29, 2011

<http://www.yomiuri.co.jp/dy/national/T110728006393.htm>

Trouble continues at Fukushima nuclear plant’s water treatment system

TOKYO (Kyodo) — A desalination device that forms part of the crisis-hit Fukushima Daiichi nuclear power plant’s key water decontamination system halted for a number of hours Sunday in the latest glitch at the plant, Tokyo Electric Power Co. said late Sunday.

The plant operator said it resumed desalinating decontaminated water to be recycled as coolant for troubled reactors with a backup device about seven and a half hours after the halt occurred around noon, while continuing to cool the reactors with water supplemented from a nearby dam.

While looking into the cause of the latest trouble, Tokyo Electric said it will also add piping for the system’s cesium decontamination

component made by Areva SA of France because the volume of flow has not reached the expected level.

The water treatment system, which also comprises a cesium-absorbing device developed by Kurion Inc. of the United States, is designed to remove radioactive materials from and recycle the highly contaminated water accumulating at the plant as a side effect of initial emergency operations to cool overheating reactors.

Kansai Electric Power Co. said, meanwhile, its supply capacity will decline by 290,000 kilowatts on Saturday to 29.85 million kw at the end of July and 29.14 million kw in August, due to a glitch at its supplier's power generation facility.

The margin of reserve against estimated maximum demand will fall to 4.9 percent at the end of July and 7.1 percent in August, against the levels of 8 to 10 percent needed for a stable electricity supply, the utility serving western Japan said.

Kyodo, July 25, 2011

<http://mdn.mainichi.jp/mdnnews/national/archive/news/2011/07/25/20110725p2g00m0dm014000c.html>
