

Scientists say heavy metal in sludge not dangerous

October 7 2010, By PABLO GORONDI , Associated Press Writer



A Hungarian soldier, wearing protective gear, cleans a yard flooded by toxic mud in Devecser, Hungary, Thursday, Oct. 7, 2010. The toxic red sludge that inundated three Hungarian villages reached Europe's mighty Danube River on Thursday but no immediate damage was evident, Hungary's rescue operations agency said. The European Union and environmental officials had feared an environmental catastrophe affecting half a dozen nations if the red sludge, a waste product of making aluminum, contaminated Europe's second-longest river after bursting out of a factory's reservoir. (AP Photo/Bela Szandelszky)

(AP) -- The toxic red sludge that burst out of a Hungarian factory's reservoir reached the mighty Danube on Thursday after wreaking havoc on smaller rivers and creeks, and downstream nations rushed to test their waters.

The European Union and environmental officials both fear an

environmental catastrophe affecting half a dozen nations if the red [sludge](#), a waste product of making aluminum, contaminates the [Danube](#), Europe's second-longest river.

Officials from Croatia, Serbia and Romania were taking river samples every few hours Thursday but hoping that the Danube's huge water volume would blunt the impact of the spill.

The reservoir break Monday disgorged a toxic torrent through three villages and creeks that flow into waterways connected to the Danube. Creeks in Kolontar, the western Hungarian village closest to the spill site, were still swollen and ochre red days later and villagers said they were devoid of fish.

The red sludge reached the western branch of the Danube early Thursday and its broad, main stretch by noon, Hungarian rescue agency spokesman Tibor Dobson told the state MTI news agency.

Dobson said the pH content of the red sludge entering the Danube had been reduced to the point where it was unlikely to cause further [environmental damage](#). It had been tested earlier at a pH level of 13 and now was down under 10, and no dead fish had been spotted where the slurry was entering the Danube, he said.

A neutral pH level for water is 7, with normal readings ranging from 6.5 to 8.5. Each pH number is 10 times the previous level, so a pH of 13 is 1,000 times more alkaline than a pH of 10.

The Hungarian Academy of Science said sludge samples taken two days ago showed that the muck's heavy metal concentrations do "not come close" to levels considered dangerous to the environment. But the academy said Thursday it still considered the sludge dangerous - apparently due to its caustic characteristics.

The sludge has devastated local waterways.

"Life in the Marcal River has been extinguished," Dobson told The Associated Press, referring to the 25-mile (40-kilometer) stretch of the river that carried the red waste from Kolontar into the Raba River, which then flows into the Danube.

He said emergency crews were pouring plaster and acetic acid - vinegar - into the Raba-Danube meeting point to lower the slurry's pH value.

"The main effort is now being concentrated on the Raba and the Danube," he said. "That's what has to be saved."

Dobson said the lack of immediate environmental damage to the Danube or Raba was "by no means a victory declaration," cautioning that dead fish could still turn up shortly.

Prime Minister Viktor Orban, stopping at dawn in Kolontar, described the reservoir break as a disaster unprecedented in Hungary.

"If this had happened at night then everyone here would have died," the MTI news agency quoted him as telling villagers.

Orban suggested someone was clearly to blame, angrily exclaiming: "This is so irresponsible that it is impossible to find words!"

Local officials said 34 homes in Kolontar were unlivable but furious residents said the disaster had destroyed the whole village of 800 by making their land worthless. The prime minister called the worst-hit area a total write-off, saying he sees "no sense" in rebuilding in the same location.

Soldiers, emergency workers and volunteers dressed in a range of mud-

splattered protective gear kept shoveling out the muck Thursday, a process that one official said could take months.

It is still not known why part of the reservoir collapsed and allowed the toxic torrent estimated at 35 million cubic feet (1 million cubic meters) of waste to sweep through the villages, killing at least four people and leaving three people missing. Disaster officials said over 150 people had been treated at hospitals, and 11 were still in serious condition Thursday.

Hungary's top investigative agency, the National Investigation Office, took over the probe into the spill and planned to look into whether on-the-job carelessness was a factor.

MAL Rt., the Hungarian Aluminum Production and Trade Company, which owns the Ajkai Timfoldgyar plant where the spill occurred, insists the sludge is not considered hazardous waste according to EU standards. It has also rejected criticism that it should have taken more precautions at the reservoir.

South of Hungary, the 1,775-mile (2,850-kilometer) long Danube flows through Croatia, Serbia, Romania, Bulgaria, Ukraine and Moldova before emptying into the Black Sea.

At the Croatian village of Batina, the first site after the Danube leaves Hungary, experts were taking water samples Thursday which they will repeat daily for the next week, the state-run news agency HINAS reported.

In Romania, water levels were reported safe Thursday, with testing being carried out every three hours. Romanian Waters spokeswoman Ana Maria Tanase said the Danube water had a pH of 8.5, within normal levels, but tests were checking for heavy metals.

The huge reservoir, more than 1,000 feet (300 meters) long and 1,500 feet (450 meters) wide, was no longer leaking and a triple-tiered protective wall was being built around its damaged section. Guards have been posted to give an early warning in case of any new emergency.

Still, Kolontar Mayor Karoly Tili noted that the disaster occurred only a week after Hungarian environmental authorities had declared the reservoir safe.

"People are scared," he told the AP. "People no longer trust or believe what is said about the reservoir."

Etel Stampf, 76, was in her backyard in Kolontar when the first waves of the flood hit. She climbed on the roof of her pigsty to survive, but the flooding was so high that one of her legs dangled in the cold red water for an hour and was left badly burned.

"If I don't die now, I never will," Stampf said she thought while clinging to the pigsty's main beam.

"We worked so hard for years to have something for ourselves and now it's all gone," Stampf said. "I don't want to stay here. Ten years from now there will be nothing left of this town."

Herwit Schuster, a spokesman for Greenpeace International, described the spill as "one of the top three environmental disasters in Europe in the last 20 or 30 years."

The International Commission for the Protection of the Danube, which manages the river and its tributaries, said the sludge spill could trigger long-term damaging effects for both wildlife and humans.

Red sludge is a byproduct of the refining of bauxite into alumina, the

basic material for manufacturing aluminum. Treated sludge is often stored in ponds where the [water](#) eventually evaporates, leaving behind a dried red clay-like soil.

Alumina plants are scattered around the world, with the 12 largest concentrated in Australia, Brazil and China.

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