

Flooding in central Michigan exposes decades of Dow Chemical's environmental crimes

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A major health crisis threatens residents of central Michigan after last week's flooding that displaced more than 10,000 people and destroyed thousands of homes. There have been widespread concerns about potential chemical leakage from the flooded containment ponds at the Midland Dow Complex and the spread of dioxin by the flood from a Superfund cleanup site downriver to larger areas.

In response, Dow Chemical announced last Wednesday that there were "no reported product releases," and the state of Michigan announced on May 27 that it would begin testing soil sediments taken from the Tittabawassee River this Thursday. However, the statement from Dow and the small-scope testing proposed by the state are woefully inadequate and in no way reassuring. The potential environmental and health crisis triggered by this flooding is a long time in the making and rooted in Dow's decades-long criminal practice of dumping chemicals, failure to ensure safe working conditions, and above all, disregard for the health and well-being of the population.

In Dow's reporting of its flooded containment ponds, the contents of these ponds were left unmentioned, and their real purpose was glossed over. Dow's containment ponds collect chemical run-offs from a large cement trench running throughout the Midland Dow complex. As explained to the WSWs by a former Dow employee, the company "had trucks come in that would take the containers [of various chemicals], but they didn't have a reservoir to collect any residual chemicals" besides the containment ponds, "which would overflow" with ground level chemicals when it rained.

Because almost anything on the Dow complex could end up in the containment ponds, the flooding of these ponds could mean a plethora of leaked chemicals. The former employee also mentioned that during her time at the company less than 15 years ago, she didn't feel Dow had any flood protection plans or programs.

On top of the possibility of chemical leaks, the flooding's destruction of the dioxin cleanup work in progress at the Superfund site downriver also has far-reaching environmental and health implications.

Dow has been disposing dioxin into its surroundings through airborne emissions and direct release into the Tittabawassee River for decades, polluting at least 50 miles along the river.

Dioxin, the major toxic pollutant at the Superfund site, is a common industrial by-product from combustion or pesticide manufacture. Dioxins can persist in the human body for lengthy periods and may lead to cancer, skin diseases, reproductive and developmental issues, and immune system damage.

Abnormally high levels of dioxin already exist both in the environment and the circulation systems of residents. The University of Michigan Dioxin Exposure Study in 2009 reported that dioxin levels in the soil around homes in the Tittabawassee River floodplain and in the city of Midland are more than three and 16 times higher respectively than in soil samples from Jackson County, 120 miles to the south. The increase in dioxin concentrations in the serum of floodplain residents is also statistically significant compared to the population of Jackson County. In a 2008 study by the Natural Resources Defense Council, a cluster of breast cancer cases emerged in Midland County and was related to this region's dioxin contamination.

Even though the Environmental Protection Agency (EPA) has worked with Dow to clean up the contaminated region along the river since 2012, their work had not reached large sections of the Superfund site when the flooding occurred. This uncleaned area includes more than 28 percent of the contaminated Tittabawassee River, floodplain, and Middleground Island in the Saginaw River.

Dioxin precipitating in the sediments at these uncleaned regions is very likely to be carried away and spread out to a much larger area by the flood. As explained in multiple research reports published in *Environmental International*, journal of *Soils and Sediments*, and *Environmental Health Perspectives*, contaminants accumulated in river sediments over a long period, like dioxin, could be transferred into agricultural lands and other flooded areas through river flooding. Climate change has further exacerbated this transfer process. Humans are more likely to be exposed to agricultural contaminants due to the increasing number and scale of flooding events, which release contaminated sediments.

There are also risks to food safety brought by flooding in a contaminated river system. The same study in *Environmental International* shows that dioxin in river sediments can be transferred into farm animals, like cows and sheep, and thus

animal products like milk. Since animal source foods are a primary source of dioxin intake for humans, dioxin contamination will reach populations much larger than that of Midland.

To properly treat this chemical disaster, all residents in the flooded areas and near water sources connected to the Tittabawassee River must have medical examinations to test for chemical exposures, and tracing must be conducted to monitor any arising medical issues. Testing for chemicals must be done in the entire flooded area, not just around the Superfund site. Cleanup from the flooding and chemical leaks must be immediate and thorough.

But who is entrusted with this urgent and critical task right now? The EPA has not received any requests from the state of Michigan to assess the flooding's impact on public health and the environment. When asked during a press conference last week about the state's response to the flooding in Midland, Michigan Governor Gretchen Whitmer made no concrete proposals while thanking Dow Chemical "for all of the incredible resources they're working to make available for people in the community." Other than the limited testing around the Superfund site that will be performed by the Department of Environment, Great Lakes, and Energy (EGLE) of Michigan, Dow alone appears to be in charge of this task.

Dow cannot be trusted to carry out a thorough cleanup, especially given its history of subjugating public health to profits. The company has a notorious record stretching over decades of hazardous working conditions and the manufacturing of weapons of destruction, all for the sake of boosting profits. The state and federal officials who have left Dow to its own devices have only created the conditions for a cover-up, not a cleanup.

The working conditions within Dow's complexes themselves are dangerous. The former employee at the Midland complex told the WSWs that employees working in a warehouse where pesticides—principally Dursban, Lorsban, and Telone C-17, the former tied to neurological development issues in children exposed to it—are packaged and stored, need to have their blood tested regularly. "We had to do them [finger prick blood tests] every day to see if our red blood cells were under the normal level; we referred to it as the diet plant. One of the side effects of Lorsban/Dursban was severe congestion with loss of appetite and weight loss."

If test results show heavy exposure to the chemicals, Dow responds by transferring workers to other sections of the plant temporarily. The company never gave the exposed workers paid time off, choosing instead to wait for toxin levels in these workers to lower to levels the company felt were adequate before forcing them back into the warehouses.

She continued to describe bizarre common occurrences like noxious gas clouds. "When arriving for my shift, I would see what looked like a cloud on the ground. In my memory, they were almost like isolated clouds. Thick and cloudy, almost

grey. They might only be 20-30 feet in diameter, maybe 10 feet tall. Usually, they would come out of a drain when they were overflowing. There would be signs telling us to use a detour. We could never leave [the plant] with the same clothes we worked in because that was evidence. We had to sign secrecy documents about what we saw [in the plant]. They covered their ass. It was a city within a city that had its own jurisdiction."

Dow's handling of its employees' exposure to toxic chemicals demonstrates that the company is completely indifferent toward the health of workers and the surrounding population. By no means, however, is this indifference to human health and lives limited to its workplace and the local environment. Dow has rewarding and long-standing ties to US imperialism, notoriously playing a leading role in the production of napalm and Agent Orange that scarred the landscape, population, and future generations of Vietnam during the US war. The company also manufactured mustard gas, incendiary flares, and explosives for the US military in both world wars.

In situations when the corporation's disasters have brought it into court, Dow has been able to walk away without much trouble. In 1998, Dow Corning, a 100 percent subsidiary of Dow Chemical and the largest silicone product producing company in the world, paid \$3.2 billion to settle a lawsuit involving breast implants manufactured by the company. Nearly 170,000 women charged that Dow breast implants tended to rupture and led to illnesses including lupus and rheumatoid arthritis. The legal battle lasted over half a decade and only amounted to roughly \$30,000 in damages for each plaintiff suing Dow Corning. Given the length of the case and the long-term nature of the illnesses linked to the implants, most women involved in this case had no choice but to take this exploitative deal.

Dow Chemical has poisoned residents and workers of Midland County and surrounding areas daily for over a century while playing some of the most insidious roles in assisting US imperialism. This flooding event has brought the atrocities of Dow out into the open again. But Dow is only one example of the capitalist system, which is exposed in the collapsed dams, the flooded homes, the contaminated soils and the disastrous response to the ongoing pandemic.

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