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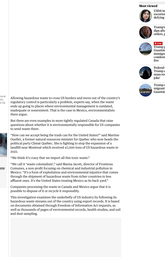
A trash can for the US: anger in Mexico and Canada over toxic waste shipments

Exclusive: US companies are increasingly sending their waste to other countries, whose some argue it poses a risk

Sara Aronowitz in Guadalupe, Chihuahua



A Continental plant in Guadalupe, Mexico, which produces refined hard potential scrubbing, with the Chihuahuan desert at the center of staging. Photograph: Sara Aronowitz for the Guardian

Exclusive: US companies are increasingly sending their waste to other countries, whose some argue it poses a risk

Sara Aronowitz in Guadalupe, Chihuahua

US companies ship more than six tons of hazardous waste to other countries in which environmental regulations are less stringent than those in the environment, an investigation by the Guardian and Mexico's Contralinea has found.

Exports of toxic waste, most of which is shipped to Mexico and Canada, have climbed 17% since 2017. Of certain chem. And while sending it away for recycling and disposal is legal, some experts are concerned that more and more waste is being shipped to countries with less oversight.

In the Northern metropolitan area in Mexico, the investigation has uncovered high levels of lead, cadmium, and arsenic in homes and schools near a lead-acid battery recycling plant, which exceeded Mexican limits. Other high quantities of waste go to Mexico to battery recycling plants that have been cited for violations of Mexican environmental laws, including in Guadalupe.

In Quebec, Canada, children and adults who live near a number that recycling plant have been found to have high levels of arsenic in their urine. Of locations, have been found to have high levels of arsenic in their urine. Of locations, and another site, some of the toxic waste is buried or given off into air. Lead.

Related: Revealed: US hazardous waste is sent to Mexico – when a toxic cocktail of pollution results

Allowing hazardous waste to cross US borders and move out of the country's regulatory control is particularly a problem, experts say, when the waste is not properly handled, and it can contaminate surrounding communities and ecosystems in unknown. That is the case in Mexico, environmentalists and residents say.

But there are even examples in more stringent regulatory countries that raise questions about whether it is environmentally responsible for US companies to ship their waste abroad.

"How can we accept being the trash can for the United States?" said Martha Sandra, a former natural resources inspector in Chihuahua who helped lead the political party Global Greens. She is fighting to stop the expansion of a Spanish firm Reciclos which is located in a protected area of Chihuahua's desert.

"We think it's crazy that we import all this toxic waste."

Dr Tania Ramírez Ramírez, a toxicologist at the Autonomous Institute of Frontiers Contreras, a non-profit focusing on chemical and industrial pollution in Mexico. "It's a form of exploitation and environmental injustice that come from the US and other countries, and it affects the most vulnerable in the affected areas. It's the United States treating Mexico as its back yard."

Companies processing the waste in Canada and Mexico argue that it is safer than keeping it in the environment or burying it.

This investigation examines the unfamiliar of US industry by following its hazardous waste streams out of the country, and the consequences that have followed. It is based on more than 100 documents, including emails, as well as thousands of pages of environmental records, health studies, and call and their sampling.

Hazardous waste exports from US to Mexico and Canada, 2017-2022

The data shows that the total quantity of hazardous waste exports has increased by 17% percent from 1,160,000 to 1,360,000 in 2022.

US hazardous waste exports have spiked in recent years

Hazardous waste exports from US to Mexico and Canada, 2017-2022

Source: Contralinea and Guardian analysis of US Environmental Protection Agency (EPA) Resource Conservation and Recovery Act (RCRA) Biennial Reports data

Mexico and Canada have raised the concern that waste exports could result in "toxic dumping" in their countries, because it is going to places with less environmental oversight.

"The waste trade seeks the path of least resistance. They find the cheapest place to dump it," said Ana Lucía Ortiz Ramírez, a lawyer with the Mexican Environmental Protection Agency (EPA) who now runs the non-profit Public Employees for Environmental Responsibility. "Mexico is a country that wants to grow, and it often ends up where the regulations are the weakest."

'Cradle to grave' regulations end at the border

US law requires companies that ship hazardous waste to be legally responsible for managing it "cradle to grave", meaning they must handle it safely from the time it is generated, through its disposal, and have financial responsibility for any pollution it causes.

But this responsibility essentially stops at the border. Cross-border treaties, which allow the US to export its waste to Canada and Mexico, require only that the US's closest trade partners – as long as the receiving country consents and the company receiving the waste consents to handling it safely.

Once a hazardous waste is exported, the US no longer has the authority to regulate it.

Former EPA office director Barnes Johnson, who once oversaw the unit that regulates hazardous waste exports, said the agreements were made in order to oversee the extension or safety of plants processing exports in receiving countries the way it does at factories in the US. So it is difficult for regulators to know exactly what happens to hazardous materials after they leave US borders.

"Nobody knows what's going on with the emissions from the various plants that are receiving this waste," said Johnson. "Nobody knows what's being dumped or what kind of exposure risk anyone will face that may be coming. You have anecdotes about significant public health concerns."

Hazardous waste exports from US to Mexico and Canada, 2017-2022

Source: Contralinea and Guardian analysis of US Environmental Protection Agency (EPA) Resource Conservation and Recovery Act (RCRA) Biennial Reports data

As regards Mexico, some reporting companies that ship the waste perceive that they face the products of the waste from their "cradle to grave" responsibility.

"It may be hard to imagine, but transporting hazardous waste to Mexico is safer than keeping it in the US," said Ricardo Sandoval, a former US environmental impact than other forms of disposal," pollution or pollution." Sandoval, who now runs the non-profit Mexico Cleanup Project in Tucson, Arizona, the US government' liability for the waste ends at the US border.

Tamayo's business advisers and other experts chemicals that range from dry cleaning fluids to aviation fuel, lubricants, such as paint thinner, are chemicals that are "very dangerous" and require special handling. Tamayo said he can kind of hazardous waste that is shipped from the US to Mexico is not causing concerns.

Tamayo's business occupied approximately 1,000 tons of toxic solvents and chemical mixtures in 2022, saying in its advertising that it accepts waste from US companies and distills it into clean solvents or combustible fuel energy sources, which it sells back to US companies.

But the company's problems have been well publicized. Tamayo's Environmental, LLC filed that Joseph Tamayo in 2021, alleged in a court filing that the company's former owner, Ricardo Sandoval, had "conspired to hide, and/or and proceed" to make a bad proposal to handle. It also alleged that its employees witnessed the former director of the company "dumping" waste into a sewer. It was an unauthorized discharge of chemicals and dump it into an open pit.

El Foro Ecónomo, an advocacy for the Tamayo's former director, Abel Vargas, and Sandoval, who now runs the Mexico Cleanup Project, said the allegations were an attempt to defend against breach of contract claims that Tamayo's business had failed to pay them.

Tamayo's plant near the California border in Tecate, Mexico, was shut down for two months in 2022, after a chemical reaction resulted in the release of strong smelling chemicals into the air around the community, a municipal official said. The company's US parent company, Clean Harbors, has been cited for handling dangerous spills and for failure to properly label its chemicals, according to US Occupational Safety and Health Administration records.

A 2015 investigation of Tamayo by the non-profit news organization California Watchdog noted a history of environmental violations and reports from former employees that the company was "a ticking time bomb".

Company officials declined to comment to the Guardian and Quinto Elemento Lab, or the issue of the chemical release, saying in a statement that Tamayo's Environmental, LLC "is committed to operating in compliance with the standards of safety and environmental protection", according to Jim.

Still, accusations like this example why some experts are concerned about the lack of oversight of US waste exports.

Any standards that regulate industrial emissions in Mexico are so far, or haven't been updated to cover how two decades to some cases. Environmental experts say this is problematic because the standards do not reflect the latest scientific research on the health impacts of industrial pollution.

The agency in charge of environmental inspection and enforcement, Semarnat, lies in scientists. Profaus, has had a budget cut of almost 30% over the past decade. Its staff, which is responsible for inspecting and enforcing environmental capacities, Nuevo Leon Mexico environmental non-profit research Project, said Semarnat's budget cut has left it with only 1 inspector for every 1,000 motor vehicles, which only yields inspectors in Nuevo Leon are so overwhelmed that they can't even keep up with the number of complaints.

In addition to pollution, two other major hazardous waste streams in Mexico are the subjects of concerns. One is toxic steel dust. The steel industry produces a hazardous waste called "electric arc furnace dust" (EAFD) that is extraordinarily contaminated and left behind when steel is pulled out of a scrap metal in a plant in Monterrey, which recovers iron from it.

Dr Ramírez Ramírez, the toxicologist, said that the steel dust and slag contains many heavy and toxic metals that are dangerous to plant and animal life, high levels of lead, cadmium, arsenic and zinc.

Eduardo Aguilar Gil, an environmental lawyer with Del Sayrand, the company that ships the steel dust to Mexico, said that the company provides information to customers on the findings, but that the company was "complying with the regulations" in Mexico. Mexico's regulations, he said, Mexico's top environmental regulator, Semarnat, has not been, however, and it would seek an investigation based on the findings.

The other major hazardous waste stream being shipped to Mexico is a half-million tons of used lead batteries, such as those used in cars, that are sent each year for reclamation of lead.

Mexico's environmental laws are cited "there is no safe level" of exposure, according to the US Centers for Disease Control and Prevention. Even small exposures to lead can affect childhood brain development and contribute to miscarriage, stroke, and kidney disease in adults, according to the CDC.

Mexico's lead-acid battery recycling plants have been cited for violations in two one-hundred, 10% data shows that US companies exported nearly are tons of lead-acid batteries to Mexico in 2022 alone – nearly 1 in 10 of the US is in a growing trend, by Scott Pierce.

The lead is exponential in secondary smelters and children and into over the environment, of which are then transported into the United States and sold to US consumers.

The fact that the vast majority of the lead needed to make car batteries now comes from recycled rather than mined lead, which is a significant change, has the environmental and trade groups warn that workers are exposed to the countries receiving discarded US batteries aren't getting the same protections as workers in the US.

"Mexico has less stringent occupational and environmental standards for the lead battery recycling industry than in the US," and a 2013 report by the non-profit Occupational Health and Safety Administration (Osha) and Mexico's Secretary of Labor and Social Welfare, Pierce said. Mexico's Secretary of Labor and Social Welfare, "in addition," it said, "little investment is made in enforcing occupational health and safety laws."

"The US must not export that allowing used lead batteries that are classified as hazardous waste to be exported to Mexico and other countries is environmentally responsible," said Pierce, who now lives in Mexico.

Luis Fernandez, a former worker at Electrica Automotriz Omega, one of of battery recycling companies handling US batteries in the Saltillo metropolitan area, said workers at the plant were given "a few rags" to clean shifts at the plant, where he worked for almost 20 years. He said he was fired in 2021, after he started talking about unpaid overtime.

Fernandez said he developed a chronic respiratory condition, and he job at the plant was to prepare the lead mixtures from broken down batteries to be loaded into the furnaces, the sand the workers had to wear masks and have their blood tested regularly for lead.

But he said workers would frequently remove their masks to remain comfortable. He said his blood lead levels sometimes climbed to as much as twenty times the limit set by US and Mexican occupational standards.

Officials at Electrica Automotriz Omega did not reply to a request for comment.

Former workers have noted that the amount of batteries being sent for recycling in Mexico has surged since the early 2010s, as the United States made its own laws more stringent and expensive for lead recycling companies within its own borders.

Lead-acid battery exports from US to Mexico and Canada, 2017-2022

Source: Contralinea and Guardian analysis of US Environmental Protection Agency (EPA) Resource Conservation and Recovery Act (RCRA) Biennial Reports data

Trade records show that the number of lead acid batteries imported by Mexico jumped by 13fold between 2010 and 2021.

"We've been coming down to Mexico to recycle lead batteries recycling in the country," said Sow Williams, executive director of California-based Environmental Health Coalition.

"Essentially, what we're doing is sending regulations the same issues by taking it to Mexico," she said.

A threat to public health in Canada

The US also exports high and growing quantities of hazardous waste to its northern neighbor, Canada, which has been cited for violations of its laws, including towards the Canada, contaminated soil, batteries and other metal containing wastes, have increased by 25% over that time period, according to US EPA data.

While Mexico only accepts materials headed for reclamation or recycling, Canada accepts waste for disposal as well.

That means that a non-exempt waste generator's ability to manage the waste from the US to a recycling facility in Canada is limited, and that the imports are contributing to pollution.

"Why are Americans so eager to send their waste outside of the US?" asked Dr Ramírez Ramírez. "Is it because they know it's going to be dumped in the poorest of Canada's lower parts." We understand that the lens tends to be their "sacrifice zones" and that the impacts are felt most by the poorest. Many of these US companies say, "If we get rid of the waste, you get rid of the factory."

Where the US exports hazardous waste

Lead-acid battery exports from US to Mexico and Canada, 2017-2022

Source: Contralinea and Guardian analysis of US Environmental Protection Agency (EPA) Resource Conservation and Recovery Act (RCRA) Biennial Reports data

Two sites in Quebec have Nuevo Republicano of environmental issues.

One is a former lead smelter in the city of Rouyn-Noranda, near the Quebec border, where the mining of children's fingernails has raised fears about the safety of toxic waste processing.

The other is a former asbestos mine in Thetford, which has been cited for violations in such cases in South Africa. Mill tailings in the area dwarf the city's hall, by larger smelting-discarded electronic waste for copper, which is increasingly being sent to Canada from Mexico, according to a recent report by Radio Canada.

Residents have long worried about the toxic emissions from the smelter.

"We've been coming down to Mexico to recycle lead batteries," said Sow Williams, executive director of California-based Environmental Health Coalition. "Essentially, what we're doing is sending regulations the same issues by taking it to Mexico," she said.

"We don't know the health risk that these numbers represent, but we know that there are very, very, very,

between the US, Canada and Mexico, and a 2020 treaty that updated those provisions, said Simone Müller, a professor of global environmental history at the University of Augsburg in Germany.

"Part of the issue with waste is that it's 'out of sight, out of mind'," said Müller, who is also the author of a 2023 book on the United States' history of dumping its waste on other countries.

"If we were forced to find solutions to our hazardous waste - and not think 'I'm going to pay this company and they're going to take it away' - we would finally start talking about ways to reduce waste production," she said.

Carey Gillam contributed reporting

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