

A Texas Drainage District Walked Its Ditch on a Routine Inspection. They Found a Pipe They Didn't Recognize Discharging Black Liquid From Tesla's \$1 Billion Lithium Refinery



By: Luis Reyes

Drainage district workers in Nueces County, Texas, were doing routine maintenance on a ditch outside Robstown in January 2026 when they noticed something they had not seen before. A pipe they did not recognize, stretched across an easement they oversee, was discharging dark liquid into the ditch they manage. "Very dark and murky," is how [Steve Ray](#), a consultant for the drainage district, [described it to KRIS 6 News](#). "I would say it was actually black. We're used to seeing good running water, and so we didn't know exactly what it was."

The pipe belonged to [Tesla](#). The dark liquid was wastewater from the company's nearly \$1 billion lithium refinery, which began operations in December 2024 and was, at the time, the first commercial-scale [spodumene-to-lithium-hydroxide](#) refinery in North

America. [Tesla](#) had marketed the plant for years as an "acid-free clean process," promising sand and limestone as the main byproducts. The drainage district had not been told that 231,000 gallons of treated wastewater per day would be flowing through its infrastructure.

What happened next, across the four months that followed, is one of the more uncomfortable storylines in the American electric vehicle supply chain right now, and almost no mainstream US automotive press has touched it.

How the drainage district found out about the pipe

The Texas Commission on Environmental Quality, the state environmental regulator known as TCEQ, had quietly issued Tesla a wastewater discharge permit on January 15, 2025. The permit, a Texas Pollutant Discharge Elimination System authorization known as TPDES, allowed up to 231,000 gallons of treated wastewater per day to be discharged into an unnamed ditch that flows into Petronila Creek and from there into Baffin Bay, a longtime South Texas saltwater fishing destination.

What it did not do, explicitly, was grant Tesla the right to use public or private property for wastewater conveyance. The drainage district that manages the ditch the pipe was discharging into was never notified that the permit existed. Its workers found out the way drainage district workers in any small Texas county find out about things: by walking the ditch and seeing something new.

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They filed two complaints with TCEQ in January and February 2026. A state investigator visited on February 12, sampled the water flowing from Tesla's outfall pipe, ran the standard panel of conventional pollutants: dissolved solids, chlorides, sulfates, oil and grease, temperature, dissolved oxygen. Everything in that panel came back inside the bounds of Tesla's permit. TCEQ approved its [investigation report on March 20](#), finding no permit violation.

TCEQ did not test for heavy metals. Aref Mazloum, a volunteer engineer consulting for the drainage district who has also recently joined TCEQ's

water supply division, later explained to the Houston Chronicle that heavy metals were not tested because they had not been part of the original complaint the district filed. The permit also did not require any monitoring of lithium itself, which, as the Texas Tribune later noted, is the primary material the facility was built to process.

What the drainage district's lab actually found

By the time TCEQ closed its investigation, the drainage district had already hired its own attorney and commissioned its own independent test. Frank Lazarte, an attorney representing Nueces County Drainage District No. 2, contracted Eurofins Environment Testing, an internationally accredited environmental lab with a San Antonio facility, to put a sampling machine in the ditch for 24 hours and analyze what it caught. The unnamed drainage ditch sits less than a mile upstream of Tesla's discharge pipe.

The sample was collected on April 7. Eurofins issued its results on April 10. **According to the lab report**, the 24-hour composite found:

- Hexavalent chromium at 0.0104 milligrams per liter, just above the lab's reporting limit of 0.01 mg/L. Hexavalent chromium is classified as a known human carcinogen by the US National Toxicology Program. It is the substance the Erin Brockovich case was built around.

- Arsenic at 0.0025 mg/L. That is below the federal drinking water standard of 0.01 mg/L, but present.

- Strontium at 1.17 mg/L. Mazloun's technical report on the findings noted that long-term exposure can affect bone density and kidney function in humans and wildlife.

- Lithium and vanadium at concentrations Lazarte's letter described as abnormally high relative to rainwater or normal groundwater.

- Elevated levels of manganese, iron, phosphorus, calcium, magnesium and potassium consistent with industrial discharge. Manganese, a battery process tracer, can have neurological effects at chronic doses. Excess phosphorus can cause algae blooms that strip oxygen from waterways.
- Ammonia in the form of nitrogen at 1.68 mg/L, amplifying the algae bloom risk.

Neither hexavalent chromium nor arsenic appears in Tesla's TCEQ discharge permit as an allowable pollutant. Neither was tested for during TCEQ's February investigation.

Mazloun, whose technical report has since been distributed to Texas state legislators, describes the lithium signature in the wastewater as a "fingerprint at a crime scene," and recommends that Tesla design and fund an on-site multi-stage treatment plant using industrial reverse osmosis to strip heavy metals out of the discharge. He has also **told the Texas Tribune** that the elevated salt content is killing the grass that holds the drainage ditch walls together, with the bare soil washing away in rain and reducing the ditch's capacity to carry stormwater. Mazloun recommends Robstown residents stay away from the ditch.

Lazarte's **cease-and-desist letter** to Tesla's associate general counsel, sent in mid-April, asked the company to halt wastewater discharge pending a meeting to discuss the lab results. He called the findings "quite disturbing" and wrote that the combination of lithium, strontium and vanadium in the sample acted like "a chemical signature pointing back to the battery processing facility."

What Tesla says

Tesla disputes the framing. Jason Bevan, Senior Manager of Site Operations at the Robstown plant, said in a written statement that the company "routinely monitors and tests its permitted wastewater discharge" and "remains in complete compliance with all requirements of

its state-issued wastewater discharge permit, including applicable water quality standards.” Bevan added that Tesla is “currently reviewing the letter from Nueces County Drainage District #2 and looks forward to working cooperatively with the district to address their concerns.”

Tesla also argues that the Eurofins sampling methodology was inappropriate, because the lab placed its sampling equipment in the ditch downstream of the outfall pipe rather than at the outfall itself. The permit requires monitoring at the outfall point, and the company has pointed out that ditch samples can pick up contaminants from sources that have nothing to do with Tesla’s wastewater. This is a real argument, and a court considering the data will have to weigh it. The drainage district’s response, as expressed by Lazarte’s letter, is that the chemical fingerprint in the sample matches the facility’s process, not a random environmental background.

Notably, no party has alleged that Tesla is in violation of any law. TCEQ has not found one. Tesla is operating under a permit the state agency issued. The dispute, instead, is about what the permit was supposed to cover, and what got left out of it.

Why South Texas, and why now

The timing is what makes this story sting. Corpus Christi, sixteen miles east of the Tesla refinery, is preparing to declare a water emergency. The city’s reservoirs have been described in public meetings as facing “imminent depletion” if rainfall does not arrive, and emergency water-use restrictions are expected to be enacted in September if conditions do not improve. The state, more broadly, is in the middle of severe drought conditions across most of the affected basins.

The plant in Robstown is supposed to be part of the solution to the United States’ lithium supply problem. Battery-grade lithium hydroxide is the bottleneck in the domestic EV battery supply chain that Tesla, Ford, GM

and every other US automaker is racing to scale. Tesla's Robstown facility, if it performs at design capacity, would be the first major piece of that supply chain to come fully online on US soil. Elon Musk has repeatedly cited the refinery as evidence that lithium production does not have to be the dirty, acid-intensive process it has historically been everywhere else in the world.

That argument now has trace concentrations of hexavalent chromium and elevated lithium sitting in a drainage ditch sixteen miles from a coastal city about to ration drinking water. The substances may or may not exceed any individual regulatory threshold. The combination of them, leaving a refinery that was marketed as the cleanest in the world, in a county that is running out of water, is the story.

What an American driver should take away from this

The cease-and-desist letter has not yet been answered. TCEQ has not reopened its investigation. Tesla is still operating the plant. The pipe is still discharging. None of this is illegal as currently constituted, because the permit that was written does not require monitoring for the things the independent lab found.

What it should do, for any American driver whose next EV is going to be built around domestically refined lithium, is force a real conversation about what "clean lithium" actually means and who gets to define it. Tesla called its process acid-free. The wastewater leaving the facility, on the day Eurofins sampled it, contained a known carcinogen above a detection threshold, an environmental poison below the drinking water standard but present, and abnormally elevated levels of the very metal the plant was built to produce. None of those facts are in dispute.