TIME

SPECIAL REPORT

The site of the East Palestine train derailment, about three months after the disaster.

A Town Derailed

A hazardous chemical accident takes place almost every day in the United States.

The worst in recent history occurred on Feb. 3, 2023, when a train carrying toxic substances crashed and burned in a small Ohio town on the Pennsylvania border, setting off a chain of effects that tore a community apart.

Photographer Rebecca Kiger spent a year documenting the aftermath of the tragedy in East Palestine.

PHOTOGRAPHY AND REPORTING BY REBECCA KIGER FOR TIME
STORY BY ALEJANDRO DE LA GARZA

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Lisa Mahoney's science lab, as her husband Dave jokingly calls it, isn't much to look at: about a dozen black garbage bags slumped in a basement corner beneath their sturdy, 110-year-old home in East Palestine, Ohio. She picks one up and dumps it at her feet. Inside are hundreds of ziplock bags, each marked with a date and description in black sharpie. Mostly, they contain bloody tissues.

"It is gross," Lisa admits. "My poor children, when I'm no longer, they'll use my bloody tissues and clone me, so they'll never have to be without their mom."

Last February, a Norfolk Southern freight train carrying 11 tanker cars of hazardous chemicals derailed and caught fire a half mile from Lisa's home. Emergency responders, worried about the potential for some of the tank cars

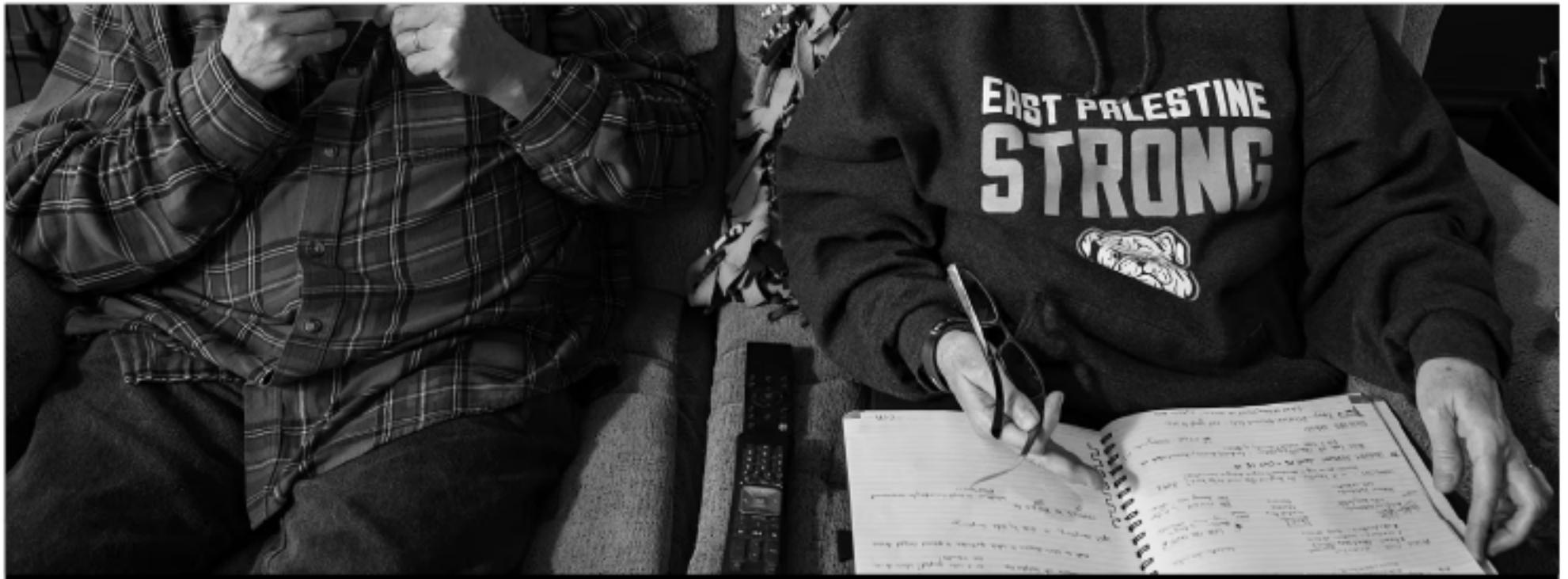
to explode, evacuated much of the town. Within a few days, the evacuation order was lifted, as federal and state officials assured residents that it was safe to return.

Many residents soon began experiencing [redacted]: nausea, headaches, digestive problems, rashes, and cysts around their mouths. Lisa Mahoney hadn't had a nosebleed since she was 3 years old, but upon returning to her home, which now reeked of burnt plastic, she started getting them multiple times a week. She also began experiencing a host of other ailments: nausea, headaches, diarrhea, tingling in her hands and fingers. Walking home from his job as a substitute teacher at the local public school, Dave would often get headaches and have trouble breathing as he passed Sulphur Run, a creek that runs through the site of the derailment. One night in March, he felt a sharp pain in his lungs and struggled to catch his breath. Lisa rushed him to the hospital. Doctors were unable to determine if his symptoms were connected to the derailment. They advised him to take a Tylenol and come back if it got worse.

Lisa started keeping a daily tally of her symptoms on old worksheets from her job as an art teacher. She consulted a lawyer, who advised her to save her furnace filters in case they carried evidence of chemical contamination that could be used in future litigation. Lisa went far beyond the suggestion; she began keeping everything related to the aftermath of the disaster that she could: paper towels she used to wipe down her kitchen, a few strands of Dave's leg hair, some dirt from their yard, and dozens upon dozens of used

tissues from the endless nosebleeds. She hoped her samples might be used in future research, perhaps for a study that could help victims of future chemical accidents. And keeping records helped her feel more in control, calming the anxiety that, since the fire, arose every time she heard a siren go past her house. "It's part of my therapy, if you will," she says.

State and federal agencies have continuously reassured residents that the town is safe. But many people here say it feels like they are being gaslighted by their own government, intent, for some reason, on covering up the extent of the disaster. Yet many locals were not sickened, and some resent the resident groups calling for more chemical testing and health screenings, which they think has driven away potential visitors and impeded East Palestine's economic recovery after the disaster. Some have even accused neighbors of making up medical symptoms for attention.

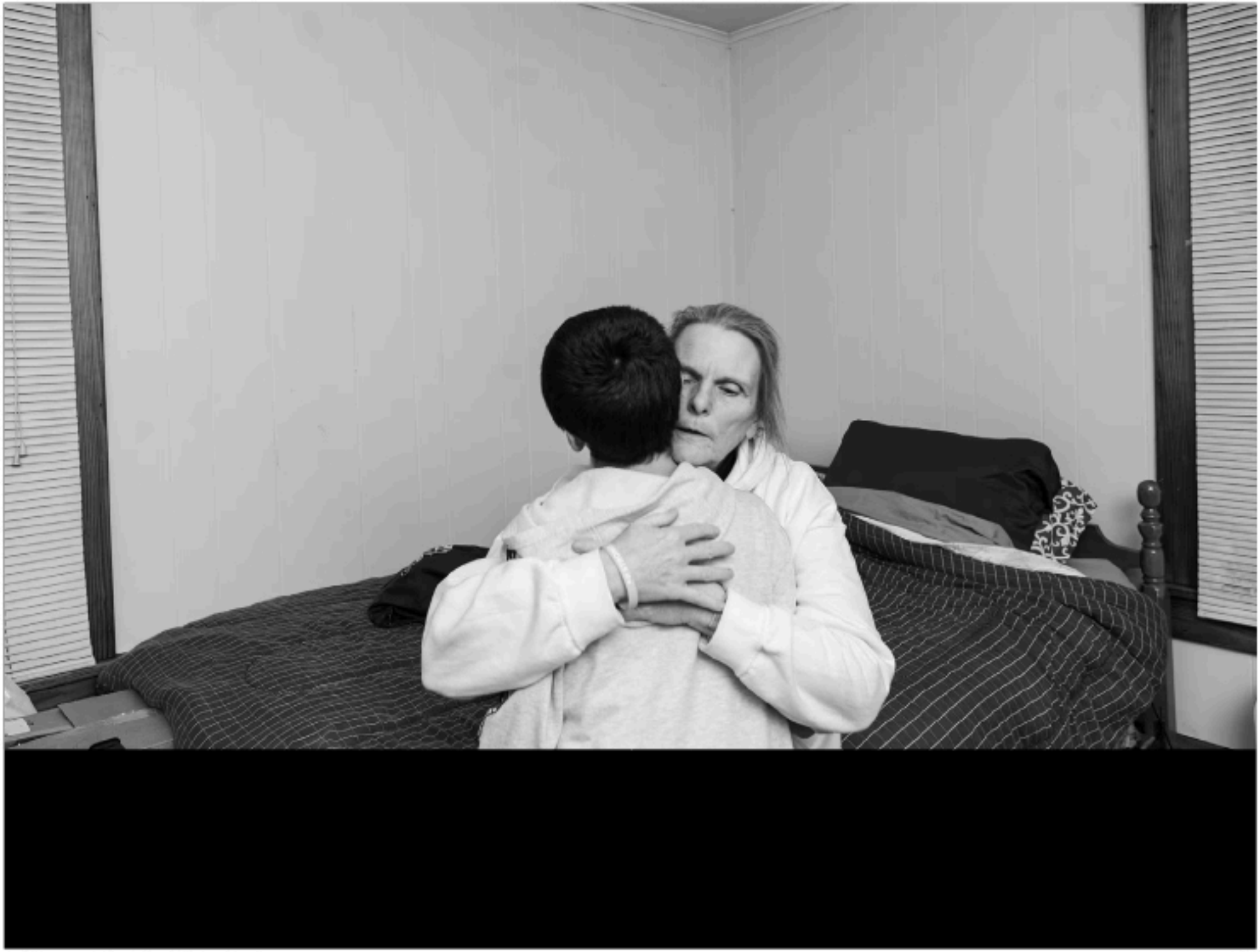


"It's exhausting. I want it to be gone. But I'm smart enough to know it's not going to go away."

Lisa Mahoney (right) looks at a binder where she records her health symptoms every day. Her husband Dave examines real estate listings, looking for a fishing cabin.

"My poor children, when I'm no longer, they'll use my bloody tissues and clone me, so they'll never have to be without their mom."

Mahoney's collection of bloody tissues and other samples from her year after the derailment.



"There's a lot of people who are saying this place is ruined, but you have to participate in it. You have to make it come back."

Mahoney hugs her 12-year-old grandson.

The result for this rust-belt town of 4,700 has been a permanent, surreal feeling, as if the derailment fire that lit up the night sky last February also fractured the town's sense of reality. A spring Easter-egg hunt, sponsored by Norfolk Southern, is either evidence that things are getting back to normal, or else was an unconscionable threat to childrens' health and safety. Contractors working in the culverts under the town's municipal building are an indication of the train line's thoroughness, or else a sign that it has something to hide. The town is perfectly safe, with a few loud mouths intent on scaring away business, or else the people here are living in a delusion, blithely ignoring the danger.

In the midst of all the confusion, it's easy to understand why some residents need something solid to hold onto. "There has to be evidence," Lisa says of her specimen collection. "I don't know what to do, so this is what I'm doing."

FEB. 12, 2024

TIME

A TRAIN CARRYING HAZARDOUS MATERIALS CRASHED IN A SMALL TOWN IN OHIO. ONE YEAR LATER, THE IMPACT CONTINUES

A TOWN DERAILED

SPECIAL REPORT

Robin Seman and four of her children during a moment of silence at an event marking the six month anniversary of the train derailment, as featured on the cover of TIME's special report on the aftermath of chemical spill.

Around 3 A.M. on Feb. 4, 2023, Zsuzsa Gyenes realized that her living room smelled like a nail salon. A screech of metal on metal from the train derailment had torn through town earlier that night, and Gyenes had been kept awake for hours by an endless wail of fire engines from the more than 70 local departments responding to the resulting blaze. Now this strange smell had permeated her house, and Gyenes suddenly felt nauseous and dizzy. Her eyes burned, and her head started to pound. Feeling disoriented, she heard something in another room, and went to check on her then-nine-year-old son Maddik. His bedroom was the draftiest room in the house, and its windows faced east, toward the 60-foot flames roaring over the treetops on the edge of town. When Gyenes opened the door, the nail polish smell was overwhelming. The sound she had heard was Maddik vomiting and gasping for breath.

Gyenes's mind went blank. "You go into survival mode," she says. "You just know you have to leave."Gyenes rushed out to their car. The smell was even more powerful outside. It was around 9°F, and the whole town was awash in a flickering, orange glow. There was a strange chemical taste in her mouth. Gyenes put Maddik into her car and drove east across the border to Chippewa, Penn.

A Unity Council meeting on Aug. 30, 2023 at Rick Tsai's chiropractic office in Darlington, Pa.

Members of the local media visit the derailment site at an event announcing the reopening of the second Norfolk Southern track in East Palestine on June 26. The first track was reopened within days after the derailment.

Zsuzsa Gyenes speaks outside the Ohio Statehouse on June 14. Gyenes and other East Palestine residents went to Columbus to ask Governor Mike DeWine to request a federal disaster declaration. Though the governor did follow through, President Joe Biden has still not issued the declaration—the Administration argues it is not necessary, as Norfolk Southern is responsible for the costs of the derailment.

From left, East Palestine Volunteer Fire Department Deputy Chief Rick Gorby, Chief Keith Drabick, and Lieutenant Johnathon Seabrook. Theirs was one of the dozens of local departments that battled the derailment fire for hours. "I have to go home every night and go to bed knowing that because my volunteers did what they did that we may have shortened their lifespan," Drabick says. "Could one of them have something related to this? Will they see their children go to prom and graduate? Will they see their grandchildren?"

Among the flaming railcars were tankers of toxic chemicals like butyl acrylate, used to make plastics and glues, and ethylene glycol monobutyl ether, a known carcinogen used to make enamels. There were also four cars containing PVC plastic, which can form highly toxic dioxins when burned, as well as five cars filled with vinyl chloride, a carcinogenic gas used in the production of PVC. As the fires raged, government officials worried that those tanks could explode, hurtling shrapnel and releasing a cloud of deadly gas, and they ordered residents within a one-by-two-mile area around the derailment site to evacuate. Attempting to stave off an explosion, the local fire chief on Feb. 6 gave a go-ahead for emergency hazmat contractors hired by Norfolk Southern to blast holes in the sides of the tankers and burn the escaping gas. The Ohio state government released a map showing the projected path of chemical plume. "Anyone who remains in the red affected area is facing grave danger of death," the notice read. "Anyone who remains in the yellow impacted area is at a high risk of severe injury, including skin burns and serious lung damage."

The process, known as a vent-and-burn, produced an enormous flame and a column of smoke laced with hydrogen chloride, which was visible from miles away. Soon, reports of sickened residents and lingering signs of chemical contamination began trickling out. Within a couple of weeks, former President Donald Trump was in town for a visit that was part condolence, part campaign stop. Residents were being plucked out of obscurity and placed on evening news slots. "The entire country has your back," Fox News

host Jesse Watters told East Palestine residents on Feb. 14. "We're going to make this rail company or this EPA or [Transportation Secretary Pete Buttigiege] do the right thing."

"I wanted to prove to her that everything was OK."

Rick Tsai, an East Palestine resident, walks in Sulphur Run near the train derailment site. He first waded in the creeks running from the derailment site in an attempt to assuage his wife's fears of chemical contamination. He was ill for weeks afterward. He began revisiting the creeks regularly, wearing protective gear and disturbing the sediment with a stick to film the oily sheen that would emerge, posting the videos to his YouTube channel. He believes the EPA has misled East Palestine residents about the town's safety. In December, he announced he was running for congress in Ohio's 6th district.

"You wake up every day and ask yourself 'Is it safe here?'"

Jess Conard and her husband Chad with their 4-year-old son Rhys. After weeks of constant coughing, Rhys began to have difficulty breathing one day in May, and Jess rushed him to the hospital. He was diagnosed with mild persistent asthma, and now uses the inhaler twice a day. Jess became the Appalachia Director for the environmental group Beyond Plastics in August.

"It's frustrating that I don't get a lot of answers, because nobody really knows."

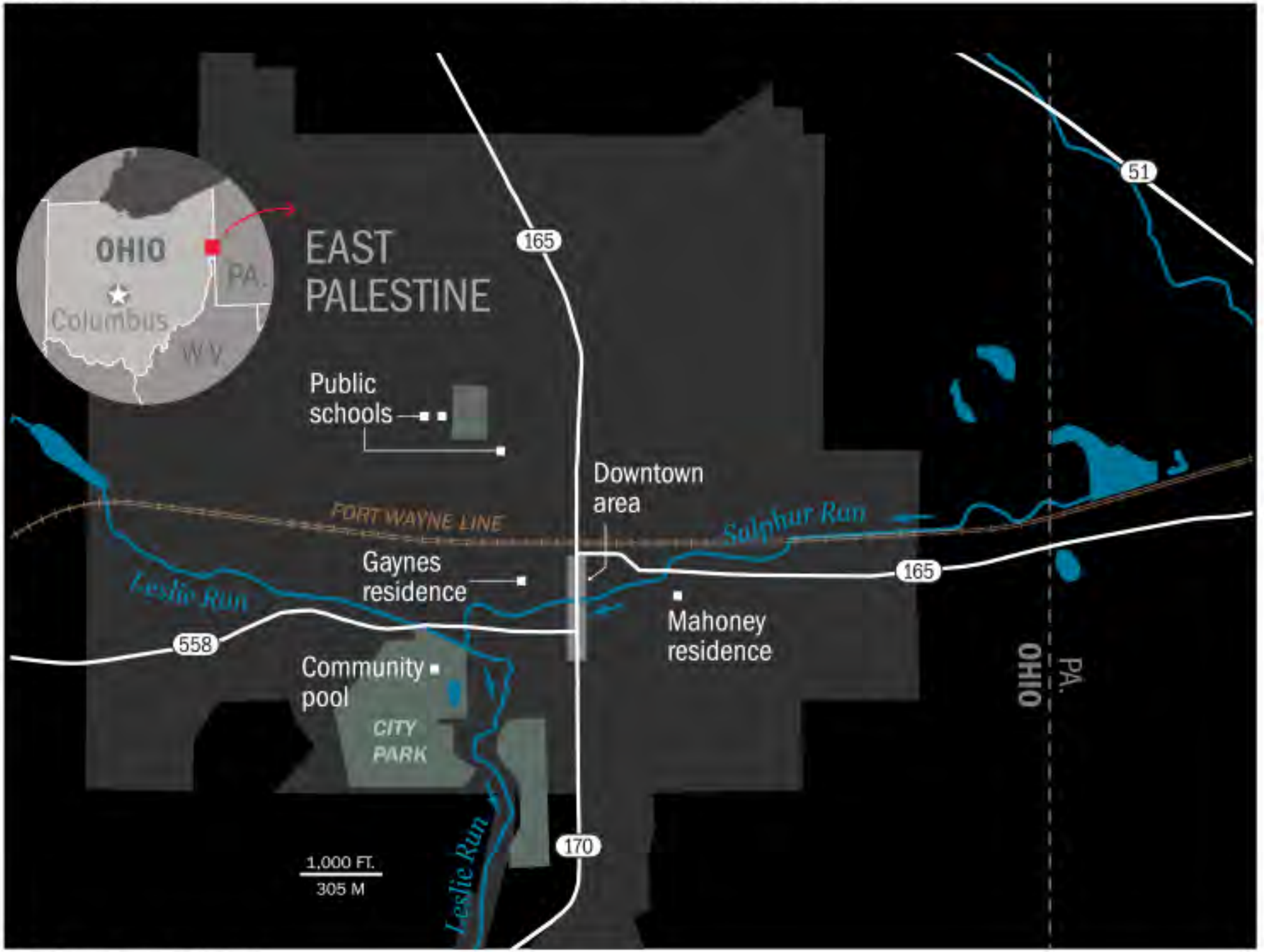
Firefighter **Casey McEwen** visits with an ear, nose, and throat specialist, one of many doctors he's seen attempting to treat his post-derailment symptoms. His department in New Waterford, about four miles west of East Palestine, fought the initial fire for five hours without hazmat gear. He worries that there could be long term effects like cancer that could prevent him from providing for his family; he and his wife Debbie have five adopted children.

Under a February administrative order, the U.S. Environmental Protection Agency had the ability to force Norfolk Southern to pay to clean up its mess in East Palestine, and the agency promised to keep the company on a tight leash. But among residents, unclear on whether the town was really safe, anger at both Norfolk Southern and federal and state authorities was

growing. Hundreds of thousands of gallons of toxic chemicals had just been burned or released next to their homes: now residents wondered if it was really safe to let their children play outside. What about the strange smells that lingered all over town? And what about their home values, if they had to move away, and no one wanted to move in?

The East Palestine village government arranged to hold [redacted] on Feb. 15. Then, hours before the event, Norfolk Southern declared that it had become "increasingly concerned about the growing physical threat to our employees," and would not be attending. Around 800 residents showed up to the high school gymnasium to find themselves waiting in lines to speak with state and federal officials at job fair-style booths, with no railroad executives in sight.

To local tattoo artist Lenny Glavan, it was a bait and switch. Residents wanted to confront the corporation that had brought this chemical catastrophe; instead, they were being fobbed off with pamphlets. There were international media at the event, and Glavan worried that angry residents would create a scene. "They want us to look like these blue-collar backwoods people that can't have a sit-down, normal conversation," Glavan says. "It's going to fit their narrative." Glavan approached East Palestine's Mayor Trent Conaway, and the two men, shouting over the crowd, herded the residents into the bleachers and reorganized the event into a more traditional town hall, which went off without incident.


OHIO
PA.
Columbus
WV
EAST PALESTINE
165
51
Public schools
Downtown area
FORT WAYNE LINE
Sulphur Run
Gaynes residence
Leslie Run
165
558
Mahoney residence
Community pool
CITY PARK
PA.
OHIO
170
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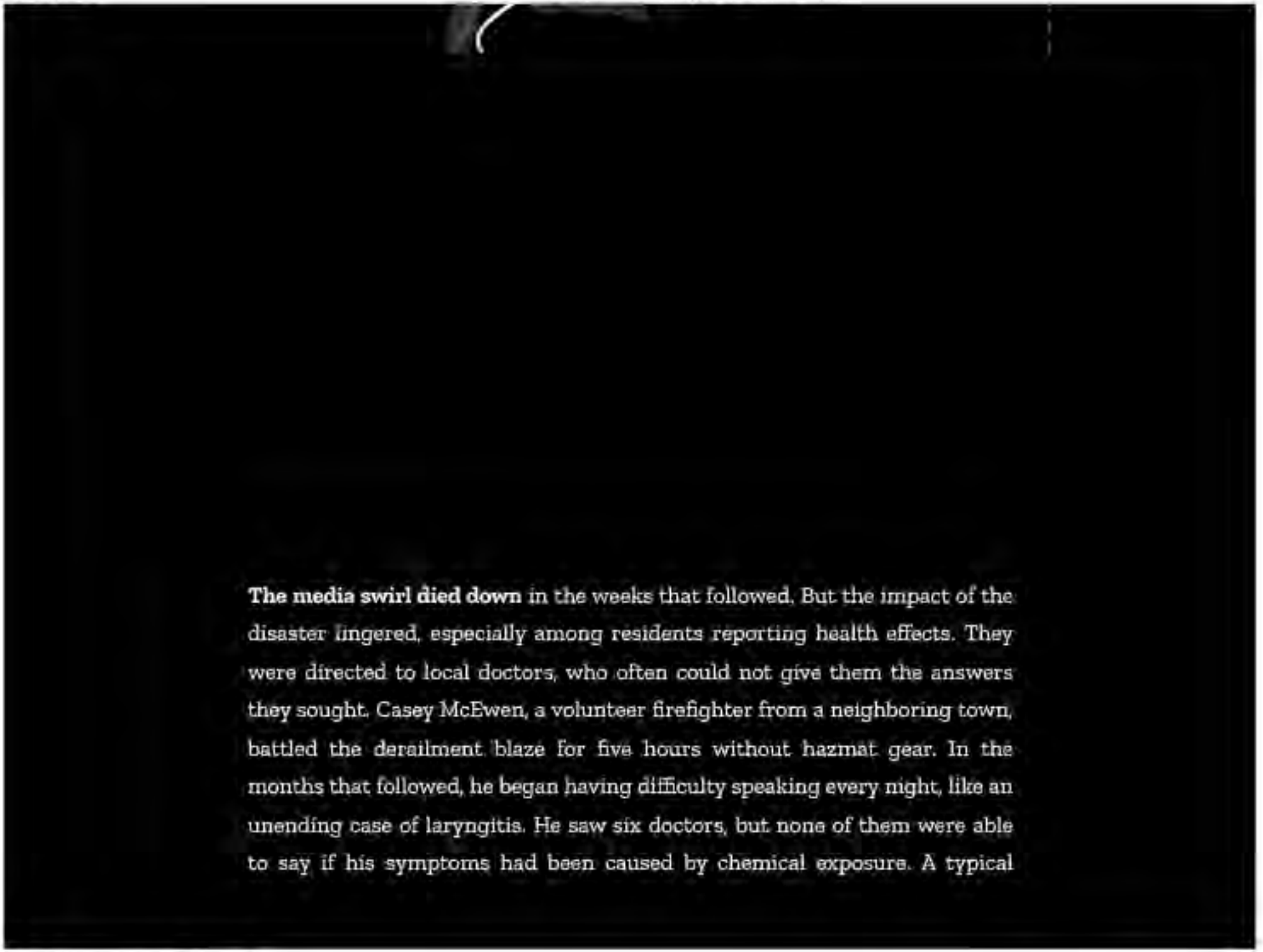


The media swirl died down in the weeks that followed. But the impact of the disaster lingered, especially among residents reporting health effects. They were directed to local doctors, who often could not give them the answers they sought. Casey McEwen, a volunteer firefighter from a neighboring town, battled the derailment blaze for five hours without hazmat gear. In the months that followed, he began having difficulty speaking every night, like an unending case of laryngitis. He saw six doctors, but none of them were able to say if his symptoms had been caused by chemical exposure. A typical

diagnosis was acid reflux. "With long-term effects, I just worry about caring for my family," he says.

Researchers both inside and outside the EPA raised alarms over lack of testing for dioxins in particular. Nearly a month after the derailment, the agency finally ordered Norfolk Southern to test local soil for the chemicals. The agency says the tests didn't show concerning levels of dioxins, though some outside experts say the long wait for the tests could have enabled rain and snow to wash away much of the dioxin evidence. (An EPA spokesperson disputes that contention, and says it took a while to get the testing plan up and running, and that the agency's air monitoring didn't indicate that dioxins would be produced in large quantities from the derailment fire and the vent-and-burn.)

Another controversy emerged over indoor air screening. Many residents were concerned about whether the air in their homes was safe, and for those who asked, Norfolk Southern sent contractors to test the air in people's homes using handheld devices—devices which, it later came to light, weren't capable of detecting one of the chemicals released in the train crash, butyl acrylate, at levels that, according to the Pennsylvania Department of Health, could potentially cause symptoms. The EPA says that if there were dangerous butyl acrylate levels, the testing crews would have been able to smell it.

Jessica Albright and her family lived in a motel for four months following the derailment. When they returned home in July 2023, she threw out everything she thought might be contaminated, from mattresses to children's toys to household flooring.

Gyenes and her son Maddik have been living in hotel rooms paid for by Norfolk Southern since the derailment. "I'm just so worried that everyone is just going to put their blinders on and keep going until it happens again. But I mean, that's what we do."

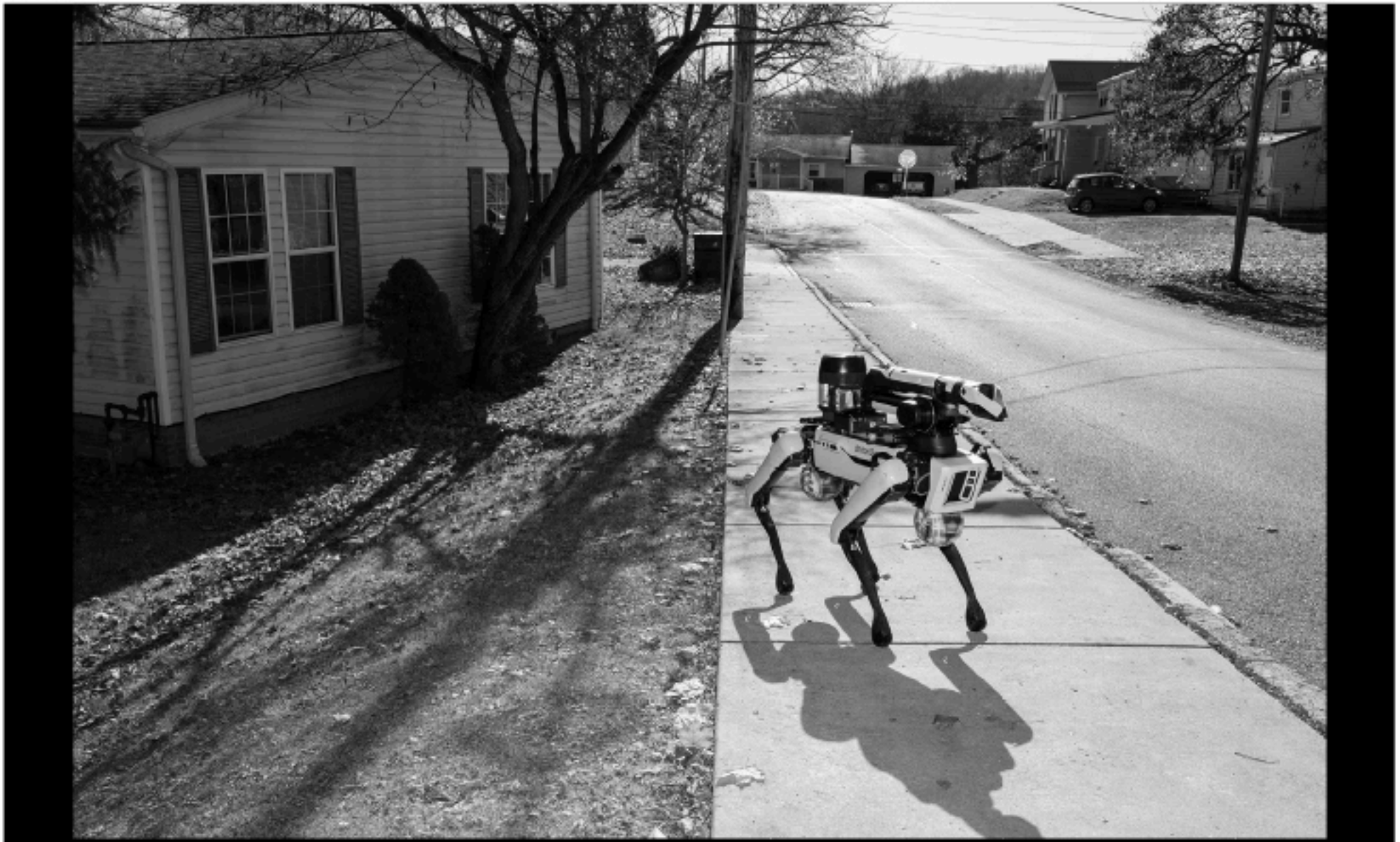
East Palestine resident Misti Allison (right) places an indoor air monitor in Krissy Hylton's home on Aug. 18. After a local charity donated air monitors to the community, Allison, who is a member of Moms Clean Air Force and has a master's degree in public health, designed an indoor air quality study to use them. "This was my way to give back to my community," says Allison. She narrowly lost a race for East Palestine mayor in November. Krissy and her family, who live over a stream flowing from the derailment site, have still not returned to their home for fear of contamination.

For the past year, the EPA has been supervising a massive cleanup operation, with contractors hauling out 174,000 tons of contaminated soil from around the derailment site, as well as dealing with millions of gallons of contaminated water. The agency is also overseeing a town-wide chemical testing program, though the fact that many of the tests are carried out by contractors reporting to Norfolk Southern has generated suspicion. To some observers, the arrangement amounts to a conflict of interest, since those carrying out tests are employed by the entity that would have to pay to clean up whatever they find.

EPA local response coordinator Mark Durno says that during the train fire, some locals were exposed to chemical contamination that could be causing longer-term aftereffects, and that post-evacuation, low-level exposures that the agency doesn't consider dangerous persisted. He does not believe that there are currently any chemical exposures in residential areas. Many residents continued to complain of chemical smells in the months afterward —but smelling chemicals, Durno says, isn't the same as sustaining a harmful exposure. And people react to low concentrations of chemicals in different ways—Durno compares it to the way his mouth goes numb when he eats pineapple. "All the monitoring and sampling done indicated, based on the science, that [long term and acute health risks] weren't present," Durno says. "But, you know, everybody's different."

Some experts outside the EPA disagree. Andrew Whelton, an engineering professor at Purdue University who studies chemical disasters, says Durno's

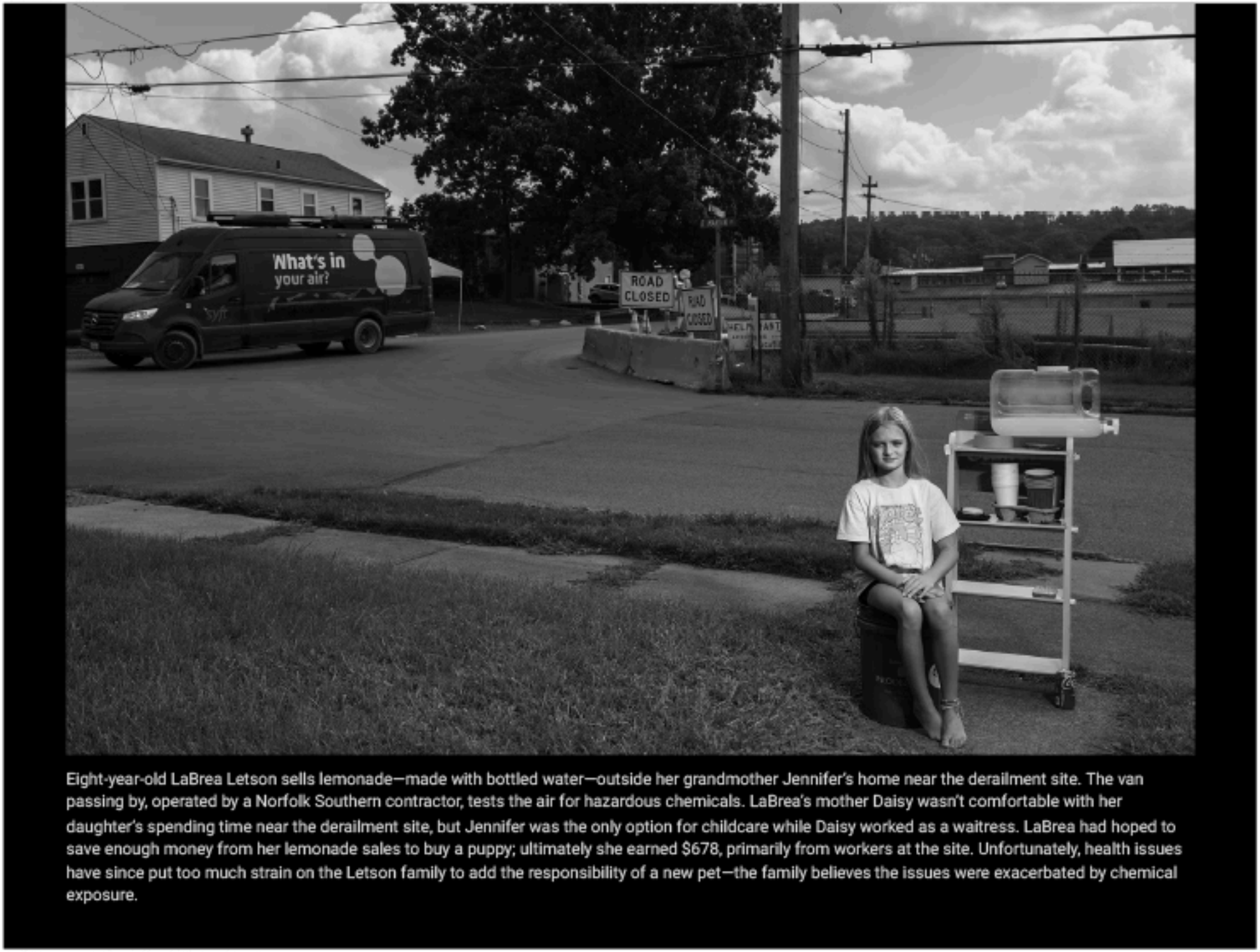
framing on odors is "what people say when they don't know what they're talking about." Whelton accuses state and federal agencies of bungling the response, with improper testing allowing residents to be exposed to toxic chemicals, and continuous reassuring statements that contradicted the evidence of chemical contamination in front of them. He and a team of researchers made multiple visits to East Palestine to conduct their own tests and interviews with residents; his findings are due out in a paper in the coming weeks. Whelton points to one particularly illustrative incident, when seven workers from the U.S. Centers for Disease Control and Prevention (CDC) fell ill [illegible] in East Palestine in early March. "They did such a terrible job that they injured their own workers in the government agencies," Whelton says. "That just underscores how critically messed up the response was."



A robotic dog used by contractors to measure air quality in culverts under East Palestine's downtown prior to sending in workers to remove sediment and debris, on Nov. 12.

Railroad executives and local leaders break ground for a $25 million regional first responder training center being constructed by Norfolk Southern on Sept. 21. From left: Monica Robb Blasdel, Ohio state representative; Trent Conaway, mayor of East Palestine; Alan Shaw, president and CEO of Norfolk Southern; Keith Drabick, the town's fire chief; Mike Rulli, Ohio state senator; and John Fleps, Norfolk Southern's VP of safety.

A worker hoses down the tires of a truck hauling contaminated soil before it leaves the derailment site on Oct. 16.



Eight-year-old LaBrea Letson sells lemonade—made with bottled water—outside her grandmother Jennifer's home near the derailment site. The van passing by, operated by a Norfolk Southern contractor, tests the air for hazardous chemicals. LaBrea's mother Daisy wasn't comfortable with her daughter's spending time near the derailment site, but Jennifer was the only option for childcare while Daisy worked as a waitress. LaBrea had hoped to save enough money from her lemonade sales to buy a puppy; ultimately she earned $678, primarily from workers at the site. Unfortunately, health issues have since put too much strain on the Letson family to add the responsibility of a new pet—the family believes the issues were exacerbated by chemical exposure.

For Christmas, LeBrea received a snow-cone machine. She hopes to use it this summer to try again to raise money for a puppy.

Some of the chemicals released in the train derailment have abundant data to back up what constitutes a dangerous exposure. For others, though, the science is very limited, according to Weihsueh Chiu, a former EPA scientist who studies human health risk assessment as a professor at Texas A&M, and has undertaken research in East Palestine. Some exposures in the early months after the derailment fell into what Chiu describes as a "gray area" between definite safety and definite hazard. "We can't assure people that it's safe, but we can't say if you're experiencing symptoms that it is definitely caused by that [chemical] either," Chiu says. "We're just in that unknown region." (Durno says the EPA's chemical "action levels" are based on CDC recommendations, and that they take into account particularly sensitive populations and the fact of persistent low-level exposure.)

Additional uncertainty stems from the fact that research on how mixtures of chemicals affect the human body is even harder than studying the impact of a single compound. Dr. Beatrice Golomb, a professor of medicine at the University of California San Diego, has been studying the health issues of the residents of East Palestine. She believes that the symptoms they are showing look a lot like Gulf War Illness, a multisymptom affliction linked to compounded exposures to multiple chemicals suffered by a third of U.S. Gulf War veterans.

It could take researchers years to determine what, if any, cancers or other illnesses could crop up down the road. Health researchers say the town needs a long-term health monitoring system—giving residents access to frequent free check ups by doctors who, as potential illnesses appear, would be able to screen other residents for those conditions early. Asked in January, a Norfolk Southern representative declined to confirm any plans on paying for such medical monitoring.


USA

Edward Siceloff, 4, stands near a contaminated creek during a moment of silence held by a community group on the six-month anniversary of the train derailment. His mother Christina had him wear the mask. "I don't feel like kids should be near the creeks because of what could be in there," she says.

Faced with multiplying unknowns, residents have been divided over how to respond. To Gyenes, it feels as if the railroad company and federal authorities are intent on projecting a false reality that everything is fine. "I feel like I'm living in the twilight zone," she says. When she attempted to return home in the weeks and months after the derailment, Gyenes continued to smell a chemical odor in her house, and would begin feeling ill when she spent time at home. Norfolk Southern contractors did a walkthrough of her home in mid-February: they reported that there was no sign of contamination, a verdict that left Gyenes in tears. Frustrated by the official response, she helped form the Unity Council, a vocal community group that demanded, among other things, access to more rigorous indoor air monitoring and long-term health screening services.

Barb Kliner, a local retiree, is focused on finding a silver lining. She says that no one in her social circle had health problems related to the derailment. Norfolk Southern has made a series of financial gifts to the East Palestine

community over the past year, including a $25 million renovation to the city park, and Kliner sees the funding as a much-needed stimulus for a struggling community. The company has also helped support numerous community events—a summer kickoff, a 5-km-race fundraiser—and Kliner views growing attendance at such gatherings as evidence that the community is recovering. "Some people [say] they're just trying to buy us off," she says. "Well, they are. But how foolish would it be to turn the money down?"

Other residents go further, accusing the more vocal environmental organizers of tanking local commerce. Don Elzer, a local business owner, says he has a problem with East Palestinians who left town and continue to decry the environmental response. "To try to destroy the community while not living here is just wrong," he says. In October, one outside art collective called Not an Alternative posted a billboard featuring residents wearing ghoulish masks by one of the roads leading into town. To many other locals, it seemed as if the group was trying to warn visitors away.

Elzer isn't too worried about the health concerns those groups keep bringing up—he cites the local wildlife as evidence. "If our birds are okay, we're probably okay," Elzer says. "The robins showed up in the spring, had babies, and everybody was fine."

Zella Blythe, 3, plays with bubbles at the Summer Kickoff sponsored by Norfolk Southern at East Palestine City Park on June 11. Zella's father was elected to Village Council that November.

Lisa Mahoney holds three dead baby birds she found on a walk around East Palestine. She almost never found dead baby birds around town in previous years; she and her husband Dave found about 20 this year.

Lisa Mahoney is worried about the birds. She and her husband often go on long walks, and in the spring after the derailment, they kept coming across dead baby birds lying on the ground; they counted about 20 in all. Lisa took a few of them to the temporary EPA headquarters in town, but she later learned that the officials had thrown them out. When she found more, she kept them in a jar of alcohol and added them to her evidence collection. (An EPA spokesperson says the agency has no record of receiving the birds.)

Sometimes the disagreements among residents get ugly. Local Facebook groups have sometimes devolved into arguments and personal attacks—there have been accusations, for example, that certain residents are making up their health symptoms. Some residents think the arguments can cross the line into harassment. Local meetings can get heated as well. For instance, a town hall in December to discuss a proposed move for Norfolk Southern to pay East Palestine to process wastewater from the derailment site at the town's sewage treatment plant devolved into a shouting match. "Money is not worth our kid's lives!" shouted Jami Wallace, the Unity Council head, before storming out of the session.

Members of the Stick to It fitness group, led by Barb Kliner (not pictured) exercise at East Palestine's municipal pool. Norfolk Southern is now building a new aquatic complex as part of a $25 million renovation to East Palestine City Park. "In any group of people, there's going to be people who are never going to be satisfied no matter what you offer them," Kliner says. "The majority of the people that I am exposed to, they're doing fine now."

Children on an amusement ride at the East Palestine Street Fair on May 27. In partnership with the local Chamber of Commerce, Norfolk Southern sponsored the event, making all rides and entertainment free to the public.

Spectators watch Fourth of July fireworks in East Palestine City Park, sponsored by the fire department. Assistant Chief Rick Gorby, who initially managed the response on the night of the toxic train derailment, oversaw the event. "East Palestine is not a dying city," he said. "There are more people present here tonight than we've ever had."

Alan Shaw, the CEO of Norfolk Southern, is something of an avatar of the division among residents. He makes semi-regular visits from the company's Atlanta headquarters to survey the progress of the massive, privately funded cleanup, meet with locals, and attend East Palestine town functions. To Elzer, those visits are evidence of his commitment to the town. "He's been great." Elzer says. "He's put more time and effort into the business community here than anyone ever has."

To Zsuzsa Gyenes, meanwhile, the railroad executive oozes scumbaggery. "He has a very punchable face," she says.

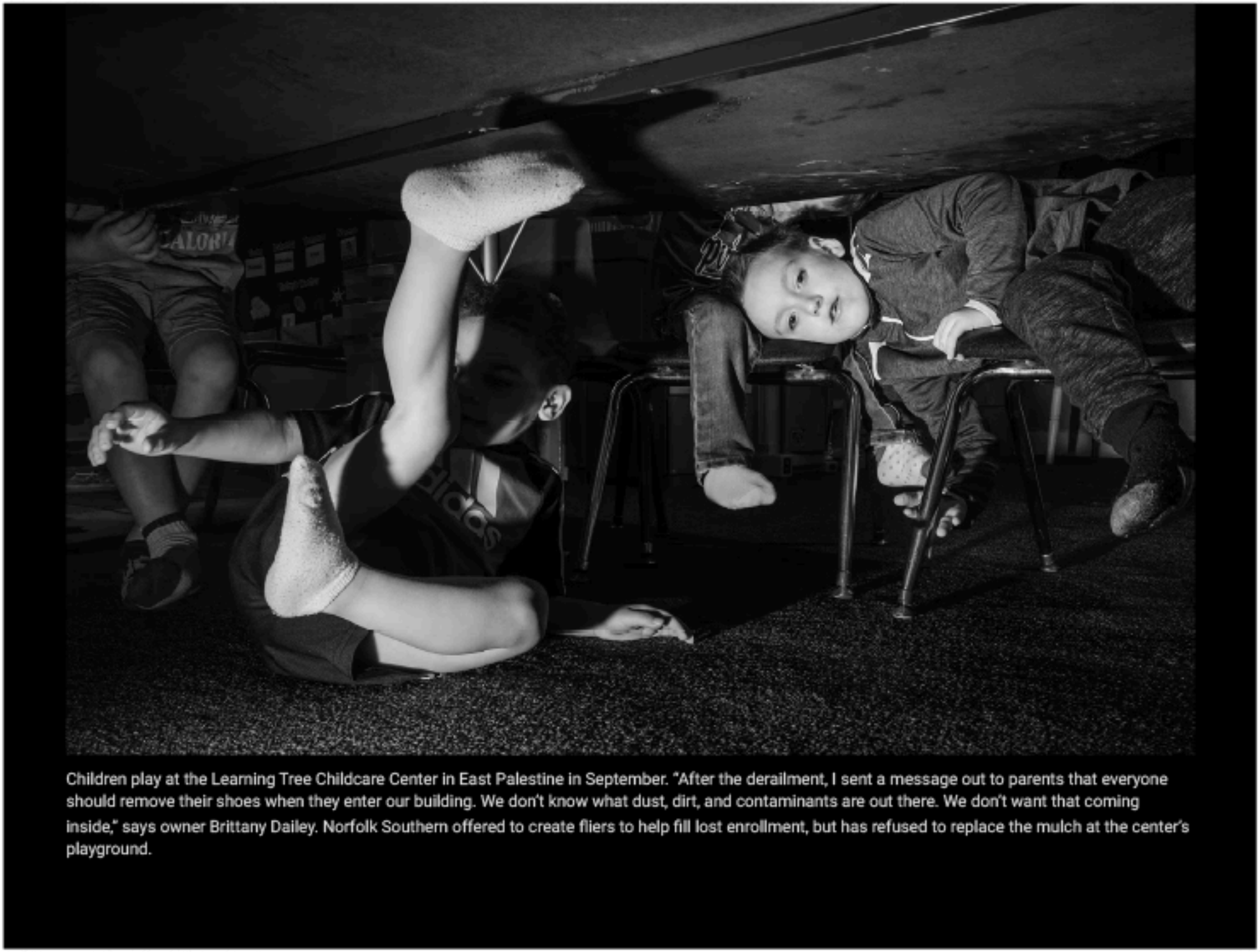
The night Lenny Glavan and his family evacuated, he wrote an impassioned email to Shaw explaining the deep importance this town held for its 4,700 residents (to his surprise, Shaw replied, saying East Palestine could count on his company). A few weeks later, after the no-show town hall, Glavan was at a funeral when a friend called and said he needed to get down to the local municipal building. Shaw was meeting with a group of East Palestine business owners, but really he was just steamrolling their concerns with vague promises and niceties. They wanted Glavan, and his loud, imposing presence, to back them up. "It was somewhat of a Walking Tall moment," Glavan says. "I was so infuriated."

Glavan and his father, Len Glavan, were known around town for something called the "Big Len Handshake," an iron hand-grasp that pulled its recipient into a one-arm bear hug against the men's broad chests. Glavan grabbed Shaw's hand and yanked him into the embrace. Then Glavan started crying. "These tears in my eyes, Mr. Shaw, are the tears of everybody in my community," Glavan said to Shaw. "I've lost nights of sleep thinking of your face. I hope you lose one night of sleep remembering mine."


Hold It Together

James McMillan uncaps a honeycomb at Steve Davis' Hilltop Honey Farm in East Palestine in September. After the train derailment, Davis lost all of his nearby hives, and had to throw out his brand-new equipment due to chemical contamination. Another nearby honey operation helped out by supplying him with honey to sell. "Friends are friends, and we are there for each other," explains Betsy Raub of Our Farm Honey.

Davis says that Norfolk Southern reached out to him, but discontinued the conversation when they realized he was working with a law firm. "The best thing that Norfolk could come up with was they wanted to buy a surplus of our honey [from the previous year], which, well, if they did that, I wouldn't have honey to sell to our customers," he says. "I do feel that Norfolk Southern is trying to clean things up. But is it enough?"



Children play at the Learning Tree Childcare Center in East Palestine in September. "After the derailment, I sent a message out to parents that everyone should remove their shoes when they enter our building. We don't know what dust, dirt, and contaminants are out there. We don't want that coming inside," says owner Brittany Dailey. Norfolk Southern offered to create fliers to help fill lost enrollment, but has refused to replace the mulch at the center's playground.

In person, Shaw is tall, round-faced, and power-vested, with an agreeable affect: a former engineer who gives the sense of having worked his way up through the Norfolk Southern ranks largely by avoiding rubbing people the wrong way. "I love this room," he said in December, sitting down in a chair in a church basement the company has been using as a local base of operations, and gesturing to a wall bedecked with pictures of his employees and people from town. "What it shows is the pride and the enjoyment that the [Norfolk Southern] team has being here." He vigorously defends the company's response in East Palestine: it's spending about $1.1 billion addressing the accident, including cleaning up the derailment site, renovating the town park, and building a $25 million first-responders training center, with another $21 million going directly to pay expenses for affected residents. (The $1.1 billion figure also includes the cost of dealing with regulatory penalties and [redacted]). "We made a lot of promises," he says in discussing the company's early response, "and we've kept every single one."

Shaw had already rolled out the "promises" line almost word-for-word a few minutes earlier. And there were additional signs of media coaching: the conspicuous repetition of his interlocutor's name and other key phrases like "making it right." That's nothing unusual for big-city types; many executives have far more apparatus around them than Shaw's single Barbour-clad public relations rep. But here in East Palestine, with an $8 liver-and-onions dinner on the local diner menu, the slick surface feels bizarrely out of place. Such linguistic defenses are intended to keep executives from accidentally tanking

their stock price. Here, though, it's made him a derailment Rorschach test, where anyone can reproduce their feelings in the muddled blankness of his speech. It also makes him come across a bit slippery. When, at the end of the interview, a hard question came his way—about whether he regrets pulling out of the town hall back in February—the CEO dodged, pulling out his tried-and-true line.

"We've made a lot of promises," he repeats. "And we've kept every single one of them."

A panel of witnesses from academia, labor, and the railway industry is sworn in at the National Transportation Safety Board hearings in East Palestine's high school gymnasium on June 23.

Residents line up to vote at First Church of Christ in East Palestine on Nov. 7.

In June, the National Transportation Safety Board held two days of hearings as part of its investigation into the derailment and the subsequent vent-and-

burn, making the unusual choice of holding the sessions in East Palestine's sweltering high school gymnasium instead of Washington, D.C. The testimony went through the timeline of the disaster minute by minute—how an overheated wheel bearing, seen sparking and on fire 20 miles west of East Palestine, had finally failed just outside town, causing the derailment and the massive ensuing response. Several other interesting facts about the disaster emerged, including testimony that cast doubt on the necessity of blowing open the vinyl chloride tank cars and precipitating a second chemical contamination event. The contractors that Norfolk Southern had brought in to handle the accident had recommended such a drastic action because they were convinced that the rail cars might explode, but they appeared not to have understood what would actually cause such an explosion. Norfolk Southern, meanwhile, had not passed along crucial information to the local fire chief, who was responsible for making the ultimate decision—namely, that the vinyl chloride manufacturer, Houston-based OxyVinyls, had told the rail line that it didn't believe such an explosion was imminent.

Robin Seman was among the residents who attended the sessions at the gym, taking notes on a clipboard and plowing through a small trove of sharpened pencils. Accompanying her was a rotating delegation from among her six children, then ages nine to 17, also scribbling. Much of Seman's family experienced health effects after the derailment: her children had cold-like symptoms for three months, and Seman, who had asthma that was mostly under control, was forced to rely on daily sessions with her nebulizer and

needed an inhaler for months whenever she went downtown. Over the past year, she has attended dozens of EPA update meetings and other derailment informational events, often bringing her children; she's also read dozens of academic papers, consulted scientists, and watched hours of video lectures.

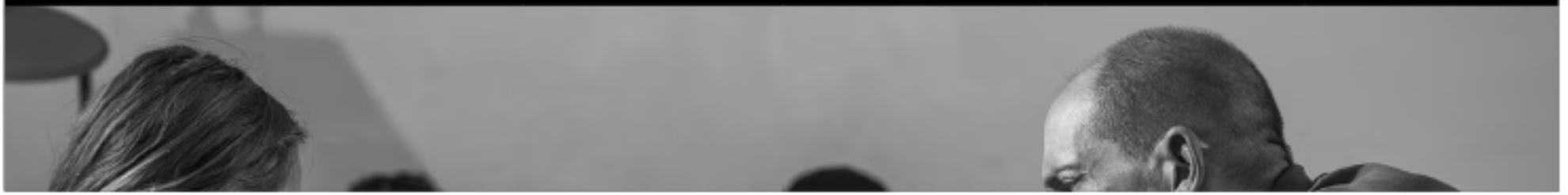
Seman, a devout Catholic, homeschools her children, and she incorporated study of the derailment accident, the cleanup, and potential health hazards into her curriculum. The goal of the lessons, she says, is to give her children some sense of control over the disaster that upended their lives. Not that there hasn't been some resistance. At one point, her 14-year-old got frustrated—he didn't want to hear anything more about toxic chemicals. "Honey, you don't have a choice," she told him. "We have to know if we're living here safely. Life is not a spectator sport."

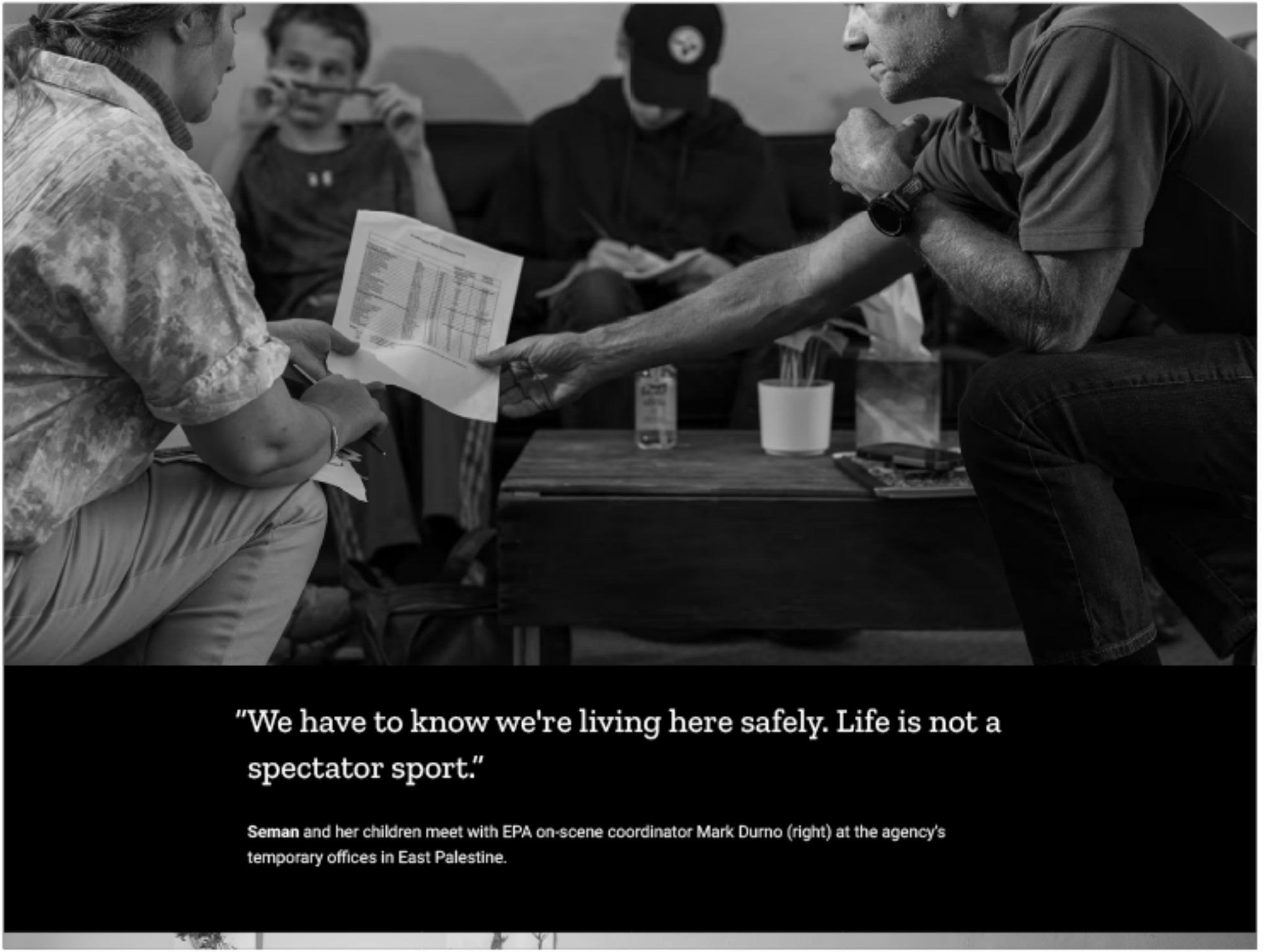
"There's going to be suffering in life, so we have to help each other through it."

Robin Seman and her children outside their East Palestine home, with a newborn litter of kittens, in August. From left: Aaron, 14, Caleb, 16, Michael, 12, Robin, and Joseph, 9.

"It was very traumatic for the kids, you know, to have to run and find mom's nebulizer."

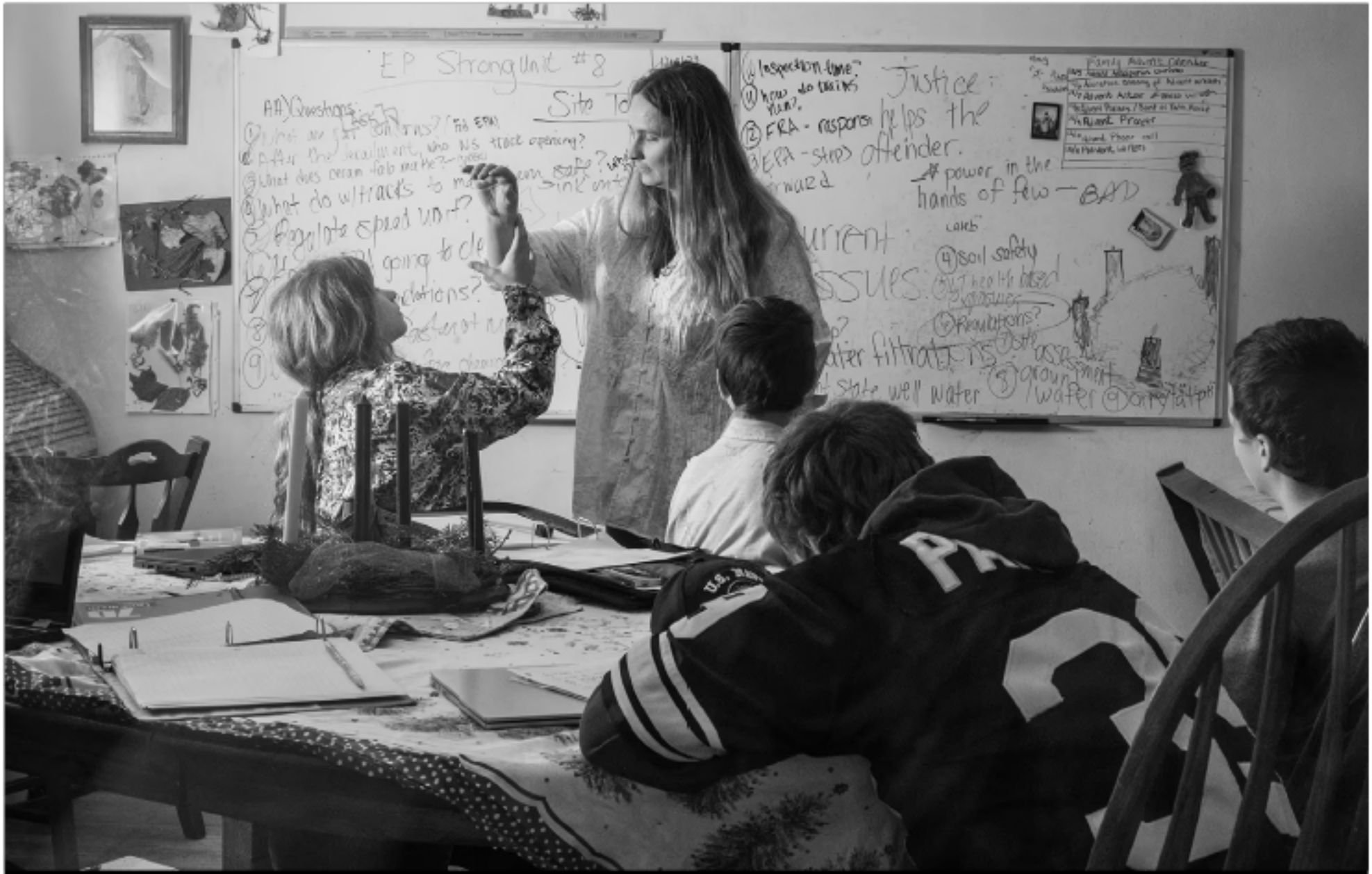
Seman's asthma flared up in the first six months after the derailment.





"We have to know we're living here safely. Life is not a spectator sport."

Seman and her children meet with EPA on-scene coordinator Mark Durno (right) at the agency's temporary offices in East Palestine.



"One of my questions going forward is 'How do we fix this, for our community, for our neighbors?" Seman

says to her children in their living room classroom.

"A lot of prayer?" one answers.

"Right. What are we called to do with our prayers?"

"We act."

On a mild December morning, I accompanied the Seman family on a field trip: an EPA-guided tour of the derailment site (Norfolk Southern believes it has removed all the contaminated material from the site—tests to prove it though are due to be completed in May). Mark Durno, the EPA local response coordinator, greeted the family at the agency's temporary offices in town, explained the equipment they would be seeing, and then loaded the family into his minivan and drove them around an area the size of of several football fields, which, these days, looks less like a disaster zone than the construction site of a Walmart superstore. All the while, Seman peppered him with questions, which the official answered obligingly and in detail.

"What do we say to Mr. Mark?" Seman said to her children as Durno bid them farewell in front of the EPA offices.

"Thank you," came a reply in chorus.

Seman was not satisfied, though. She doesn't dismiss the government agents as frauds, yet neither does she completely trust their assurances. At one point in their meeting, Durno had said he would have to check what contaminants they were testing for in the untreated water from the derailment site—afterwards, Seman told me she would also check the EPA reports herself. "I'm curious. Maybe it'll be in the data," she said, standing on the sidewalk after Durno left. "I just want to verify."

Durno was on his way to yet another meeting with residents. As the face of the EPA response here, he has an unenviable job: in the aftermath of the disaster, he's been working 12- to 14-hour days, often straight through the weekend. Mistrust of the government in this largely conservative region of the Appalachian foothills has complicated the agency's work. Durno says that unlike in responding to other disasters, some vocal community groups have refused to work with the EPA—he says this is the hardest job he's ever done, and that he hasn't slept well in a year. "To hear and see the constant negative information being put out about our program and our agency is frustrating. It weighs on me," Durno says.

Sometimes, though, what Durno says can seem to contradict plain experience. The day after the tour with Seman, I walked down to a stream that leads off the derailment site and into town with Rebecca Kiger, a documentary photographer who has been working in East Palestine for the past year. Suddenly, we both began to feel lightheaded and have difficulty breathing, as if we were experiencing simultaneous asthma attacks. Asking

Durno about the experience later, he was stumped. The EPA's data, he said, didn't appear to show how such a thing was possible.

"Honestly, it's perplexing to me," he says. "You have to put this in the head scratcher category." (An outside expert said it was clear that we were exposed to chemical contaminants that had seeped into the stream bed, and were being released over time.)

For Mahoney, though, the situation sounded all too familiar. "Welcome to our world," she says.

Phil Gurley (left) of the EPA gives a presentation on the remediation process to Bonnie Sansenbaugher's (center) biology class at East Palestine High School. "The kids wanted to be a part of this because there's nothing worse than feeling helpless," Sansenbaugher says. "I wanted them to take a part in understanding."

The bleachers at the East Palestine High School homecoming dance on Sept. 30.

Students celebrate at the high school graduation on May 27.

The high school's homecoming football game on Sept. 29.

We hope always that in time, difficult, complicated situations become resolved, that facts are eventually settled, compensation agreed upon,

settlements signed, and the whole sticky thing laid to rest. Through the past year in East Palestine, though, it seems that the opposite has occurred. The uncertainty that accompanied residents' first sight of that towering train derailment fire has metastasized, seeping into the soil, threatening to make itself a part of the landscape—a pervading, creeping feeling that things are not right among these green, rolling hills.

Even on the basic question of whether the town is safe or not, there's less agreement than in the early months after the spill. Opposing camps of residents have only drawn farther apart and become more militant. "It's so sad to hear my fellow community members fighting to the death and being so unkind to each other," Seman says, "not realizing that this is exactly the division that Norfolk Southern needs to come out on top."

Gyenes stepped back from her work with the Unity Council in September, partially due to escalating rancor on social media, and partially due to her unstable living situation: unwilling to return home, she has been living in a hotel room paid for by Norfolk Southern. She says the company has repeatedly threatened to revoke her lodgings, then backed down without explanation. The company now says it will stop paying for the room this month. "I was hoping that my work [for Unity Council] would give us a home and everyone else a big happy ending," she said in December, sitting in her hotel room next to an artificial Christmas tree decorated with multicolored lights and candy canes. "Maybe one day we'll get that help. But it's not going to be in the time I need it before I'm homeless."

Alan Shaw is having a rough go of it as well: on Jan. 31, the Wall Street Journal reported that an activist investor group, critical of the CEO's handling of the train derailment and other alleged failures, was attempting to take control of the Norfolk Southern board and fire him.

Barb Kliner leads a beach ball drumming performance at a retirement home, one of the many activities for older residents that she organizes. She says people in town are coming together as a community more than ever before. "There wasn't a whole lot of pride before this," Kliner says. "We're definitely improving, challenging ourselves to put on a better atmosphere and have more fun. And it's working."

Lenny Glavan with his daughters and nieces after his swearing-in ceremony for the East Palestine Village Council on Dec. 28. He ran for the position to have a larger part in the town's recovery, and to help direct the funds Norfolk Southern is funneling into village improvements. "People in this town need a voice," Glavin says. "God has a weird way of working things into people's lives."

Jonathan Strazinsky, a member of the Gold Spike Garden Railroad Club, at the club's annual train display at East Palestine's First Church of Christ on Dec. 2. This year, Norfolk Southern helped pay for the display along with local businesses. "Some people didn't want to support it because it's train-related," says the club's founding member and president David Peters. "As far as Norfolk Southern is concerned, they're going above and beyond to do what's right."

Perhaps predictably, there's also no consensus over how to mark the one-year anniversary of the disaster. Town officials considered hosting a celebration with help from Norfolk Southern, but decided to push the plan back to the spring. The Unity Council plans to hold a somber commemoration by the derailment site, which was merged with a Not an Alternative plan for residents to "renew our vows to each other" and to erect a wooden monument near the train line. It was supposed to be invitation-only, but other residents found out and became alarmed by what they saw as the ceremony's demonic overtones (members of the group have worn their masks in past gatherings). In protest of the protest, the neighbors are holding a prayer vigil nearby.

There may be progress out of all of this though. In December, the EPA announced that vinyl chloride, a source of so much grief in East Palestine, would begin a long administrative and scientific review process that could eventually end in it being banned. Environmental advocates hailed the move as one of the most important such reviews ever undertaken by the agency.

Lisa Mahoney looks forward to that day. But she worries that a three-year review process could stretch out longer: to five years, or to 30. After a year living in what East Palestine has become, the impatience is understandable.

"[They have to] determine if they're dangerous chemicals. Like, hell yeah they're dangerous, but whatever," Mahoney says. "It's going to take them three years to do the study."

She raises her voice half-jokingly.

"Can we just decide right now?"

Colby Hostetter, 3, used to play in Leslie Run, steps away from his home, before the stream was contaminated in last February's train derailment. Here, he plays in Bull Run instead, during a family outing to Middletown, Ohio in August. There's still no timeline for when it will be safe to wade in Leslie Run again.

Correction, Feb. 3: *The original version of this story misstated the number of children Lisa Mahoney has. She has two children, not four.*

Correction, Feb. 12: *The original version of this story mischaracterized a project by the art collective Not an Alternative. "We Refuse to Die" is a project of theirs, not the name of their group. In addition, the article has been updated to reflect that their planned anniversary commemoration was ultimately conducted in cooperation with the Unity Council.*

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