



OFFICE OF INSPECTOR GENERAL
U.S. ENVIRONMENTAL PROTECTION AGENCY

September 25, 2023

MEMORANDUM

SUBJECT: Results of Inquiry into the East Palestine Derailment
Project No. [OSRE-FY23-G-0058](#)

FROM: Laretta Joseph, Director 
Programs, Offices, and Centers Oversight Directorate
Office of Special Review and Evaluation

TO: Debra Shore, Regional Administrator
EPA Region 5

The U.S. Environmental Protection Agency Office of Inspector General has completed the subject inquiry into the EPA's response to the February 3, 2023 train derailment in East Palestine, Ohio. We initiated this inquiry as a preliminary step to determine whether additional oversight work was needed. In this memorandum, we highlight observations that we identified during the inquiry. No additional oversight work is planned at this time, but we will continue to monitor developments and reassess as necessary.

Our primary observation is that the EPA could enhance its risk communication methods to clearly communicate to the public which chemicals are being sampled or monitored, why they are being sampled or monitored, and when and why sampling or monitoring stopped. We note that the EPA's work related to the East Palestine incident is ongoing, and we intend our observations to inform the Agency's future response actions. We plan to meet with Agency staff to discuss our observations in detail.

We will post this memorandum on our public website at www.epaoig.gov.

Background

At approximately 8:55 p.m. EST on February 3, 2023, a freight train derailed in East Palestine, Ohio, about a quarter mile west of the Ohio–Pennsylvania state line. The train company reported the incident to the National Response Center at 10:53 p.m. The EPA arrived on-site by 2 a.m. on February 4, 2023. Of the 150 railcars on the train, about 50 derailed. Twenty of the affected railcars contained hazardous materials, including vinyl chloride, ethylene glycol, ethylhexyl acrylate, butyl acrylate, and isobutylene. Some railcars caught fire, and some spilled their loads into an adjacent ditch that eventually feeds into the Ohio River. To prevent a potential explosion, the train company performed a controlled burn of five rail cars containing vinyl chloride on February 6, 2023. As of August 2023, the EPA was still conducting its response activities at the East Palestine site and, according to EPA staff, was supporting its local and state partners that were leading the on-the-ground response efforts.

Observations

We initiated our inquiry based on concerns regarding how effectively the EPA was addressing air and water emissions from the East Palestine crash and subsequent fire and whether the shipment of hazardous waste and wastewater from the incident site followed established procedures, such as adhering to federal hazardous waste requirements when shipping hazardous waste off-site for disposal. The EPA’s activities resolved many of our concerns. However, during our inquiry, we identified ways the EPA could improve future disaster responses, including better risk communication about sampling and monitoring efforts.

Hazardous Waste and Wastewater Shipments

One of the EPA’s responsibilities when responding to a disaster is conducting removal actions to protect human health and the environment, such as shipping hazardous waste and wastewater from the disaster site to permitted hazardous waste facilities. There were some initial procedural issues with shipments of hazardous waste from the East Palestine site. The EPA said that it was informed that some states were seeking to block shipment of hazardous waste to their states from the East Palestine site. On March 17, 2023, the EPA sent a letter to all 50 states informing them that, if they blocked hazardous waste shipments, they would likely be violating not only federal law but the Commerce Clause of the U.S. Constitution, which the Agency said limits the power of states to stop the movement of hazardous waste. As of August 2023, hazardous waste continued to be shipped without incident from Ohio to at least three other states. Another procedural issue involved the shipment of wastewater from the East Palestine site. According to EPA staff, they initially explored shipping wastewater to permitted sewage treatment plants. However, due to public opposition, this option was not pursued, with all wastewater instead being shipped off-site as hazardous waste.

Risk Communication

When responding to disasters that involve hazardous chemicals and pollutants, the EPA coordinates and implements a range of activities, including sampling the air, soil, and water at the disaster sites to monitor the levels of such chemicals and pollutants. The EPA is also responsible for communicating its sampling and monitoring efforts, as well as the resultant data, to the public. In East Palestine, the EPA held public meetings, distributed a newsletter every two weeks, and created a Community Welcome Center where residents could speak with EPA team members and get their questions answered. However, we observed that the EPA did not clearly communicate why it sampled for or monitored certain chemicals. The EPA also did not communicate when and why it stopped sampling or monitoring, such as when concentrations fell below minimal risk levels. And while the EPA’s East Palestine [website](#) contains raw air sampling data, as of August 2023 it did not state or indicate whether measured pollutant concentrations exceeded screening levels or even what those screening levels are.

Key Terminology	
<i>Minimal Risk Levels:</i> “[E]stimate of the amount of a chemical a person can eat, drink, or breathe each day without a detectable risk to health. MRLs are developed for health effects other than cancer.” –Agency for Toxic Substances and Disease Registry website, “Minimal Risk Levels (MRLs)”	<i>Screening Levels:</i> “Chemical-specific concentrations for individual contaminants in air, drinking water, and soil that may warrant further investigation or site cleanup when exceeded.” –EPA, Regional Screening Levels (RSLs) - User’s Guide, May 2023

We also noted multiple instances of inconsistencies in the air monitoring and sampling data on the EPA's East Palestine website, including:

- The number of monitors on the EPA's website not matching the number on an internal Agency map of monitors.
- A data cell with a footnote number without a corresponding footnote.
- Screening level results that appear to be off by one decimal place.
- Exceedances and missing data on the concentrations and public health impact of acrolein, a hazardous air pollutant that was presumably created by the burning of other chemicals during the incident. We will continue to monitor developments regarding acrolein and consider, as necessary, the need for additional oversight.

While minor when taken individually, these inconsistencies could, when taken together, erode public trust in the data communicated. In past reports, we have stressed the importance of accurate and easily understood risk communication by the Agency:

- In a 2021 [report](#) on communicating health risks at contaminated sites, we concluded that the "EPA needs to improve its risk communication efforts and deliver accurate, timely risk messages that are appropriate for the affected communities."
- In a 2023 [report](#) on the closure of the Red Hill facility in Hawaii, we concluded that the EPA should ensure that groundwater monitoring information communicated to the public is easy to understand.
- In our [report](#) detailing the EPA's top management challenges for fiscal years 2020 and 2021, we noted that one of the Agency's challenges is communicating risk to allow the public to make informed decisions about its health and environment. We also identified risk communication as a top management challenge for the Agency in fiscal years [2022](#) and [2023](#), although it was incorporated into the broader challenge of "integrating and leading environmental justice across the Agency and government."

The EPA's "Seven Cardinal Rules of Risk Communication," which the Agency issued in April 1988, states that one rule of risk communication is to accept and involve the public as a legitimate partner. We continue to stress the importance of the Agency providing accurate, comprehensible, and timely information to the public.

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