

**U.S. EPA Responses to Questions for the Record - December 2023**  
**House Energy and Commerce Committee**  
**Subcommittee on Environment, Manufacturing, and Critical Materials**  
**March 28, 2023 hearing on**  
**“Government Response to East Palestine:**  
**Ensuring Safety and Transparency for the Community”**

**The Honorable Bill Johnson**

1. The residents of East Palestine have been repeatedly told that the air in the community is safe to breathe and the water in the area is safe to drink. Can you explain how the U.S. EPA, Ohio EPA, and the Columbiana County Health District reached that conclusion?

***Response:*** The U.S. Environmental Protection Agency (EPA)’s highest priority since day one of the disaster has been to ensure the health and welfare of the affected communities. EPA has been closely coordinating with state and local federal agencies, including the Ohio EPA, Pennsylvania Department of Environmental Protection, and Columbiana County Health Department, to monitor outdoor and indoor air, groundwater, and surface water for potential contamination from the derailment site since the derailment occurred. EPA deployed an extensive network of air monitoring and sampling equipment that has been collecting data on air quality throughout East Palestine and in the area near the derailment site. Air quality data continue to show that chemicals of concern in the community have remained below screening levels.

EPA has deployed numerous technical resources to East Palestine to sample and monitor air, water, and soil, and to ensure the health and welfare of the affected communities. Key components include:

- EPA’s Portable High-Throughput Integrated Laboratory Identification System (PHILIS), which is a suite of mobile laboratories accredited by the National Environmental Laboratory Accreditation Program. PHILIS is providing chemical analysis of soil and water samples. The mobile laboratories were mobilized and located at the Incident Command Post in Columbiana, Ohio, from March 2, 2023, to June 8, 2023, in order to provide quicker turnaround times for results than might otherwise be obtainable with off-site analysis. Since demobilizing from Ohio, the laboratories have been providing equivalent off-site chemical analyses, with no break in service, from their home bases in Edison, New Jersey, and Castle Rock, Colorado
- EPA’s Trace Atmospheric Gas Analyzer (TAGA) mobile laboratory performs real-time air monitoring and sampling analyses. Working in coordination with local, state, and federal public health agencies, the real-time data has allowed EPA to ensure that removal of wastes occurs in a manner that protects people’s health

during the cleanup phase. TAGA has conducted mobile monitoring during the East Palestine cleanup activities to monitor for emissions from the work area so that engineering controls can be established if or when those emissions exceed established thresholds. It includes a global positioning system that supplies accurate, real-time, locational data during mobile monitoring and also includes a geographic information system that maps and presents the TAGA's position in real time; and

- EPA's Airborne Spectral Photometric Environmental Collection Technology (ASPECT) is an airborne real-time chemical and radiological detection, infrared, and photographic imagery platform. Weather conditions prevented EPA from flying the ASPECT plane to provide support during the active fires and controlled vent and burn of the vinyl chloride cars. However, ASPECT provided two flight missions the following day, on February 7, 2023. Spectral data collected downwind of the derailment showed no significant detections with only standard components of combustion noted.

Ohio EPA has been conducting weekly monitoring of East Palestine's municipal water and five raw water wells that are the source of the municipal drinking water; to date, no chemicals associated with the derailment have been detected in either raw or treated water. The Columbiana County Health Department and Pennsylvania Department of Environmental Protection have collected hundreds of samples from private wells. Similarly, no chemicals associated with the derailment have been detected in private well water.

While the air and water test results to date are reassuring, the agencies are continuing to conduct air and drinking water monitoring to ensure there are no risks to the community.

2. Is the U.S. EPA planning on doing any toxicological studies on the complex mixtures that currently are and were in the air from the time of the controlled combustion to today?
  - a. How is EPA planning on conducting such studies?

**Response:** EPA has deployed an extensive network of air monitoring and sampling equipment that has been collecting data on air quality throughout East Palestine and in the area near the derailment site. The data continue to show that air quality in the community is normal and that chemicals of concern have remained below screening levels. EPA's scientists are continually reviewing and studying the available data.

The Centers for Disease Control and Prevention (CDC) and the Agency for Toxic Substances and Disease Registry (ATSDR) also collaborated with local and state partners to conduct an Assessment of Chemical Exposures (ACE) investigation of impacted communities and responders in both Ohio and Pennsylvania and worked with the health departments to analyze the data. Federal and state health officials released the ACE investigation results at a public meeting on June 6, 2023, and information sheets and

reports have been posted on State (PA) and County (OH) websites. In addition, on June 1, 2023, EPA facilitated an information session with the National Institutes of Health (NIH). At the information session, NIH spoke about how they are sponsoring, with CDC and ATSDR, a workshop being held by the National Academies of Sciences, Engineering and Medicine (NASEM). Commissioned by CDC/ATSDR and NIH, this workshop was held on November 6-7, 2023. It aimed to be inclusive of the communities' concerns and input, and to explore potential surveillance and research priorities to inform the government's understanding of the exposures, health risks, and opportunities for additional health investigations that could further the well-being of those impacted by the East Palestine train derailment and similar disasters going forward. NASEM will prepare a proceedings-in-brief from the workshop (aimed to be released by January 2024), in accordance with NASEM guidelines, based on the presentations and discussions. More information can be found at: [https://www.nationalacademies.org/event/40970\\_11-2023\\_public-health-research-and-surveillance-priorities-from-the-east-palestine-ohio-train-derailment-a-workshop?medium=email&source=calendar&eventID=133441&ID=#sectionWebFriendly](https://www.nationalacademies.org/event/40970_11-2023_public-health-research-and-surveillance-priorities-from-the-east-palestine-ohio-train-derailment-a-workshop?medium=email&source=calendar&eventID=133441&ID=#sectionWebFriendly).

3. I have heard that one plausible explanation for the health symptoms residents are experiencing is acute exposure to airborne, complex chemical mixtures like what occurred at Ground Zero from 9/11.
  - a. Do you consider the human health risk from exposure to airborne complex chemical mixtures to be significant?
  - b. What lessons has the U.S. EPA learned from its air monitoring experience at Ground Zero?
  - c. How is EPA applying those lessons now in its air sampling and detection?

**Response:** Improvements to EPA's organizational structure and national emergency response program over the past two decades have helped to ensure that EPA responded to the East Palestine derailment quickly and effectively to protect the health of residents in East Palestine and surrounding communities. Since the September 11, 2001, attacks, EPA has made broad, national improvements to its emergency response program, which have changed how we respond both to homeland security issues and complex accidents, like train derailments and hurricane response. By increasing staffing and improving coordination among leadership and experts, EPA is better positioned to respond to environmental emergencies and conduct effective air monitoring to understand potential public health impacts.

By early 2004, EPA had reorganized its emergency response functions under a single office, the Office of Emergency Management, to focus on emergency planning, preparedness, and response. In addition to strengthening its organizational structure, EPA strengthened its policy. EPA's National Approach to Response was established in June 2003 to complement the government-wide National Response Plan and National Incident Management System. This policy ensures efficient use of emergency response assets within the Agency, creates the necessary consistency across the regions, and highlights priorities for further policy development and coordination.

**EPA assesses the total risk from incident-related contaminants under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), including the potential for additive or cumulative effects from carcinogens and non-carcinogens. As mentioned above, an extensive network of air monitoring and sampling equipment has been collecting air quality data throughout East Palestine and in the area near the derailment site. Air quality data continue to show that chemicals of concern in the community have remained below screening levels.**

4. In instances like the derailment in East Palestine, would EPA and other emergency agencies benefit from a “reachback” capability where they could send information about complex mixtures or samples of complex mixtures for quick analysis to determine potential safe exposure levels?
  - a. If not, how will EPA obtain information about the safety of complex mixtures that have not been studied?

***Response:* Please refer to the response to Question 3 above regarding EPA’s process for assessing the additive or cumulative risks of incident-related contaminants. EPA is a data-driven organization with world-class scientists and engineers. Our experts have years of experience identifying chemicals of potential concern at a site and creating multilayered monitoring networks to identify potential threats. Under EPA’s comprehensive air monitoring and sampling strategy, the Agency has collected hundreds of laboratory-analyzed air samples at the site and in the surrounding communities and has included the following types of equipment: EPA’s TAGA bus, summa canisters, sorbent tubes, roaming teams, and stationary and hand-held monitors. The data from this testing have shown and continues to show that there have been no sustained levels for contaminants of concern above screening levels in the community since the derailment.**

5. Paragraph 36(e) of the Unilateral Administrative Order requires Norfolk Southern to have a plan for the containment and remediation of groundwater, including for agricultural uses and private wells.
  - a. How long does the Order require this plan to be in place?
  - b. How does the requirement apply to private wells?
  - c. Does Norfolk Southern have a duty to test or monitor private wells under the Order?
  - d. Is it normal to update and Order to include this requirement?

***Response:* EPA’s February 21, 2023, Unilateral Administrative Order directs Norfolk Southern to conduct necessary cleanup actions to remediate contamination, including all releases that may pose an imminent and substantial endangerment to public health or the environment. Through the February 21, 2023, Order, EPA has required Norfolk Southern to take a number of actions, including to develop and implement a plan for the containment and remediation of contaminated surface and sub-surface soils, surface waters and sediments, groundwater and drinking water sources (including private, municipal, and agricultural wells). Further, on October 18, 2023, EPA issued a Clean Water**

**Act (CWA) § 311(c) Order to Norfolk Southern requiring the company take removal actions to remove contaminated sediments in culverted areas of Sulphur Run and further delineate, characterize, and, as necessary, remove oil and hazardous substances from the sediments in Leslie and Sulphur Runs. This CWA Order requires Norfolk Southern to implement its approved workplan for further investigation and submit its findings by December 2023.**

**Pursuant to the February 21, 2023, Order's requirement that Norfolk Southern establish a plan for the containment and remediation of groundwater, in June 2023, Norfolk Southern developed and EPA approved the Groundwater Characterization Work Plan. Norfolk Southern must perform all work under the plan and must submit a summary report within eight weeks after it completes the required work. Pursuant to the Order, Norfolk Southern also developed and EPA approved the Sentinel Monitoring Well Installation and Groundwater Sampling Work Plan, which is intended to provide methodologies used to monitor potential migration of contaminants of concern in groundwater at sentinel wells prior to reaching potential receptors that include private potable wells in Ohio and Pennsylvania, and the Village of East Palestine municipal water supply wells. The Groundwater Characterization Work Plan and Sentinel Monitoring Well Installation and Groundwater Sampling Work Plan do not involve the monitoring of private wells. However, the Columbiana County Health Department and Pennsylvania Department of Environmental Protection have been monitoring private wells in Ohio and Pennsylvania.**

**An administrative order requiring that the responsible party have a plan for the containment and remediation of groundwater is a common and appropriate requirement to address potential groundwater contamination.**

6. We discussed Administrator Regan having sent letters to Norfolk Southern to encourage it to vigorously enforce its disposal contracts and to the States to remind them it is unconstitutional to refuse the disposal of out of state waste based upon origin.
  - a. What would be the result if states continue to decide they no longer want to allow waste to be imported from out-of-state for disposal?
  - b. Is this situation serious enough that EPA should consider waste acceptance a condition of a federal primacy delegation?

***Response:* Norfolk Southern is responsible for identifying where to transport waste from the East Palestine site for disposal, subject to EPA's approval that the receiving facility is on EPA's CERCLA Off-Site Rule list of acceptable facilities. EPA's March 17, 2023, letter to Norfolk Southern outlined EPA's expectation that Norfolk Southern consider all options to comply with disposal requirements set forth in the February 21, 2023, Order and in EPA-approved work plans to secure disposal of wastes from the East Palestine Derailment Site. This includes seeking performance of contracts that Norfolk Southern has or will enter into with disposal facilities to accept wastes from the East Palestine Derailment Site and**

payment of increased contract costs associated with waste shipment and disposal from the Site.

On March 17, 2023, EPA issued a 50-state alert advising states that they cannot unilaterally stop shipments of out-of-state hazardous waste material from the Site. Pursuant to the Supremacy Clause of the U.S. Constitution, state actions are preempted when they are an obstacle to executing Congress's purpose and objectives. Here, blocking waste shipments could impede Norfolk Southern's ability to comply with CERCLA and EPA's Unilateral Administrative Order and potentially contravene the objectives of the Resource Conservation and Recovery Act. Also, interference with the movement of hazardous waste from one state into another could raise concerns with the Constitution's Commerce Clause, which limits the power of states to discriminate against interstate commerce.

Under EPA's oversight, Norfolk Southern has shipped a significant amount of liquid and solid waste off site to permitted disposal facilities in Ohio, Texas, Indiana, and Colorado. As of November 16, 2023, about 175,000 tons of solid waste and over 38 million gallons of liquid waste had been shipped off site. There are currently no issues with states declining to accept waste from the site.

7. When EPA says that it is moving out of the "emergency" cleanup phase to the "long-term" cleanup phase, it can be jarring for residents to hear that.
  - a. Please explain the difference between these two types of cleanups, why EPA is making that transition, and what it means for the community?
  - b. What is a "hazard ranking"?
  - c. Do you expect EPA to do a hazard ranking for this Site?
  - d. If so, when?
  - e. If the Site doesn't become a National Priorities List site, will this site transition to a Corrective Action cleanup under the Solid Waste Disposal Act?
  - f. If it becomes a Corrective Action site, how different are US EPA and Ohio EPA's roles in the cleanup?

**Response:** During the initial phases of an emergency response, state and/or local response officials are typically the first responders. After the East Palestine train derailment, during the initial emergency phase, Ohio EPA was the lead agency in conjunction with the Fire Department and Norfolk Southern. On February 21, 2023, EPA issued a Unilateral Administrative Order to direct Norfolk Southern to clean up the contamination. As part of the EPA-led cleanup, EPA is overseeing work performed by Norfolk Southern to address immediate threats to human health and the environment. After the immediate threats to human health and the environment are addressed (in the "emergency" cleanup phase), EPA will evaluate whether any remaining risks will need to be addressed under CERCLA (as part of the "long-term" cleanup phase).

8. How does EPA assess the safety of the air to breathe when there are multiple chemicals in the air, especially when the concentrations of the chemicals in the air can change over time, like a complex mixture?

**Response:** Please refer to EPA's responses to Questions 3 and 4 above.

9. Is EPA planning on doing any toxicological studies on the complex mixtures that currently are, and were in the air, from the time of the controlled combustion to today?
  - a. If so, how is EPA planning on doing these studies?
  - b. How is EPA going to identify the complex mixtures?

**Response:** Please refer to EPA's responses to Questions 3 and 4 above.

10. Has EPA been able to establish which contaminants got on to objects, in and around homes and yards?

**Response:** Air monitoring in homes was conducted for total volatile organic compounds, which includes the current contaminants of concern (vinyl chloride, n-butyl acrylate), but the measurement is not specific to a single chemical. Based on air monitoring and air sampling conducted at and around the East Palestine Derailment site, contaminated creeks, and in the surrounding communities, the primary contaminants of concern (vinyl chloride, n-butyl acrylate) have not been detected at sustained levels that increase risks to human health in the community. Because contaminants of concern have not been detected at sustained levels in the outdoor air, EPA would not expect to find contaminants of concern in the indoor air either. In addition, EPA required Norfolk Southern to test directly for dioxins in the soil. EPA's review of the dioxin sampling data indicates that, for the vast majority of properties in and around East Palestine, the levels of dioxins and volatile organic compounds in the soil were similar to typical background levels.

11. It seems like dust remains a reasonable route of exposure for many of these chemicals.
  - a. Is EPA considering all routes of exposure to the chemicals released as result of the train derailment and the controlled combustion?
  - b. Is EPA considering dermal (skin), ingestion/oral, and inhalation exposure in aggregate when considering chemical exposures?
  - c. Has EPA performed physiologically-based pharmacokinetic modeling to calculate what the aggregate, or total, chemical exposure is?
  - d. If not, how does EPA know that the aggregate, or total, exposure to the chemicals generated from the train derailment and controlled combustion are actually safe?

**Response:** EPA's extensive air monitoring network has not detected sustained levels of any contaminants of concern in the air in and around East Palestine since the evacuation

order was lifted on February 8, 2023. Ohio EPA has been testing the municipal drinking water and has not detected any contaminants of concern associated with the derailment in drinking water. The Columbiana County Health Department and Pennsylvania Department of Environmental Protection, along with Norfolk Southern, have been sampling private residential wells. In August, Norfolk Southern, with EPA oversight, began offering indoor cleaning of eligible homes and businesses to address potential dust emissions generated as part of the derailment and cleanup work.

On February 17, 2023, staff from the CDC and ATSDR began arriving in East Palestine and surrounding communities to assess the public health impact of the train derailment, among other activities. CDC and ATSDR collaborated with local and state partners to conduct an Assessment of Chemical Exposure (ACE) investigation of impacted communities in both Ohio and Pennsylvania and worked with the health departments to analyze the data. Federal and state health officials released the ACE investigation results at a public meeting on June 6, 2023, and information sheets and reports have been posted on State (PA) and County (OH) websites.

12. In response to a question from Rep. Dingell, you stated that the U.S. EPA did not decide where to transport the liquid and solid waste from East Palestine, and “We just provide [Norfolk Southern] with a list of approved sites.” However, Rep. Dingell asserted that the U.S. EPA intervened in the transportation of contaminated waste, “working with us to prevent further material from going to a non-certified site.”
  - a. Can you clarify your comments and explain how the U.S. EPA did or did not intervene in the transportation of waste from East Palestine to facilities in Michigan?

**Response:** EPA did not halt out-of-state waste shipments. EPA temporarily paused shipments for about two days, from February 24—26, 2023, after EPA took over oversight of the waste disposal process from Ohio EPA. This brief pause was done so that EPA could conduct its due diligence, including ensuring that the receiving disposal facilities were on the list of acceptable facilities under the CERCLA Off-Site Rule, and provide notifications to appropriate state officials. Since that time, waste has been steadily moving off-site for treatment and disposal and continues to be shipped off-site.

#### **The Honorable August Pfluger**

1. I have been told that the U.S. EPA only has established toxicity levels for 16 of the 39 chemicals implicated in the derailment. Is this true?
  - a. How can we be sure that the community is safe in the long-term?

**Response:** With limited exceptions, EPA has established toxicity values for the chemicals associated with the derailment. There is a limited subset of chemicals associated with the derailment for which EPA does not have established toxicity values. For those chemicals, EPA and ATSDR worked collaboratively to derive toxicity values for contaminants associated with the site. EPA deployed an extensive network of air monitoring and



sampling equipment that has been collecting data on air quality throughout East Palestine and in the area near the derailment site. Air monitoring and sampling data have shown and continue to show that air quality in the community is normal and that chemicals of concern have remained below screening levels. Ohio EPA has been conducting weekly monitoring of East Palestine's municipal water and five raw water wells that are the source of the municipal drinking water; to date, no chemicals associated with the derailment have been detected in either raw or treated water. While the test results to date are reassuring, the agencies are continuing to conduct air and drinking water monitoring to ensure there are no risks to the community.

The goal of the current removal action in East Palestine is to ensure that the entire site area is cleaned up so that the selection of a long-term remedial action is not necessary. The health of the residents in East Palestine remains EPA's highest priority.

2. I understand that EPA lacks safe exposure levels for most of the chemicals measured in the sampling. Is that correct?
  - a. How did EPA make a safety determination for the air when it lacks safe exposure levels for most of the chemicals measured in the sampling?

**Response:** Please refer to EPA's response to Question 1 above.

3. Many people believe that children's environmental exposure to the chemicals from the train derailment and controlled combustion are higher than adults, in part because kids respond differently than adults to these exposures and they have additional exposures from soils and dust due to hand-mouth activity.
  - a. Has EPA or the State of Ohio measured levels of these chemicals in the soil outside homes, at parks, and at school playgrounds?
  - b. If so, has EPA or the State of Ohio determined that the total aggregate exposure for children to be safe?
  - c. If so, how did they make that determination? Has EPA Region 5 deployed its Health Impacts Assessment to perform a community wide assessment of cumulative risk?

**Response:** EPA has collected soil samples through its Phase 1 Soil Sampling program. EPA's findings were that the controlled "vent and burn" did not measurably impact soil away from the derailment site. The summary and technical memo is publicly available on EPA's website.<sup>1</sup> Based on analysis of soil samples gathered and evaluated in this assessment, EPA recommends that residents can continue to use their properties for normal use, including recreation and gardening.

The Phase 1 Soil Sampling assessment was not conducted to determine risk at individual properties. Rather, the goal was to determine if impacts from the "vent and burn" significantly impacted off-site locations most impacted by ash and soot. EPA's conclusion

---

<sup>1</sup> <https://www.epa.gov/east-palestine-oh-train-derailment/phase-one-residential-commercial-and-agricultural-soil-sampling>.

is that there were no measurable impacts. There were no known spills to residential properties from the derailment incident. As such, there is no plan to conduct additional residential assessment activities unless the full-site characterization plan, which began implementation in September 2023 and will continue into 2024, identifies migration of contaminants toward residential properties. If this occurs, EPA and its partners will evaluate potential impacts to those properties.

### The Honorable Russ Fulcher

1. Disposal of solid and liquid waste from East Palestine has become an issue in several states.
  - a. Before the Unilateral Administrative Order (Order) was put in place, was Norfolk Southern responsible for identifying and entering into contracts with licensed facilities to accept the waste?
  - b. After the Order was imposed, did Norfolk Southern give the U.S. EPA a list of sites that the company had existing contracts with for waste disposal?
  - c. Is it true that EPA's on-scene coordinator must release any truck making a waste disposal run to ensure that it goes to an EPA approved facility using an EPA approved route?
  - d. Please submit a copy of Norfolk Southern's list of contracts for waste disposal and EPA's approved site and route list.
  - e. In late February, EPA paused site waste removal shipments, because you told the press that EPA had heard from states and residents that other locations did not want to accept the waste, is that correct?
  - f. If correct, please list those states and residents that informed the EPA that other locations did not want to accept the waste.
  - g. What actions did the U.S. EPA take based on the complaints that the Agency heard from states and residents?

***Response:*** Norfolk Southern is responsible for identifying where to transport waste from the East Palestine site for disposal and for entering into contracts with those facilities. Under EPA's Unilateral Administrative Order, prior to shipping waste, Norfolk Southern must obtain a determination from EPA that the receiving facility is on the list of facilities that EPA has determined to be acceptable to receive cleanup wastes under EPA's CERCLA Off-Site Rule. The purpose of the Off-Site Rule is to avoid having wastes from CERCLA-authorized or -funded response actions contribute to present or future environmental problems by directing these wastes to management units determined to be environmentally sound. Under the Off-Site Rule, CERCLA wastes may only be shipped to facilities without relevant unresolved violations and without relevant releases of hazardous substances or pollutants or contaminants.

EPA's Order does not require Norfolk Southern to ship waste using an EPA-approved route. The UAO provides that, before shipping waste, Norfolk Southern must obtain a determination from EPA that the receiving facility is on EPA's Off-Site Rule list of acceptable facilities. Before shipping waste to an out-of-state facility, Norfolk Southern

must also provide notification to EPA's on-scene coordinator and the appropriate state environmental official in the receiving state that includes: the name and location of the facility, the type and quantity of waste material to be shipped, the schedule for the shipment, and the method of transportation. This notification requirement does not apply if the total quantity of the off-site shipments to an out-of-state facility is less than ten cubic yards.

EPA did not halt out-of-state waste shipments. EPA temporarily paused shipments for about two days, from February 24-26, 2023, so that EPA could conduct its due diligence, including ensuring that the receiving facilities were on the list of acceptable facilities under the CERCLA Off-Site Rule, and provide notifications to appropriate state officials. Since that time, waste has been steadily moving off-site for treatment and disposal and continues to be shipped off-site. As of November 16, 2023, about 175,000 tons of solid waste and 38 million gallons of liquid waste had been shipped off-site for disposal.