Select Committee on Rail Safety Report

September 13, 2023

Contents

I. Committee Membership

II. Background Information

III. Public Testimony

IV. Final Recommendations

V. Documents Submitted To The Committee

I. Committee Membership

The President of the Senate appointed the following members to serve on the Select Committee on Rail Safety:

Senator Bill Reineke*, Chair*	R-Tiffin
Senator Michael Rulli, *Vice-Chair*	R-Salem
Senator Nickie Antonio, *Ranking Member*	D-Lakewood
Senator Louis W. Blessing III	R-Colerain Township
Senator Paula Hicks-Hudson	D-Toledo
Senator Frank Hoagland	R-Mingo Junction
Senator Catherine Ingram	D-Cincinnati
Senator Stephanie Kunze	R-Dublin
Senator Al Landis	R-Dover
Senator Kristina Roegner	R-Hudson

II. Background Information

Select Committee on Rail Safety

On February 3, 2023 at 8:55pm a Norfolk Southern train derailed in East Palestine, Ohio. Thirty-eight cars derailed from the tracks, some were carrying hazardous chemicals which spilled in the nearby area. The chemicals released during the crash caused a fire, leading emergency crews to take action to begin and maintain a two-day controlled burn of certain cars to ensure that those cars containing chemicals did not explode. Residents in the area within one mile were evacuated during the time of the controlled burn.

Since February 3, 2023, the United States Environmental Protection Agency, the Ohio Environmental Protection Agency, the Ohio Emergency Management Agency, local first responders and Norfolk Southern have been on the scene clearing the area of debris and hazardous materials caused by the accident.

The Select Committee on Rail Safety was formed on February 24, 2023 to gain a better understanding of why the derailment in East Palestine occurred, where the recovery stands, and to determine how the Ohio General Assembly can help the people of East Palestine recover, and how to best prevent and respond to future accidents. Over the course of five meetings, and a site visit, the members heard testimony from thirteen individuals who reviewed and deliberated the events that happened during and after the derailment in East Palestine, Ohio.

III. Public Testimony

Date	Presenter	Agency/Organization
3.1.23	**Anne Vogel**	Director, Ohio Environmental Protection Agency
	Mark Johnson	Assistant Director, Ohio Environmental Protection Agency
	Sima Merick	Director, Ohio Emergency Management Agency
Date	**Presenter**	**Agency/Organization**
3.8.23	**Jack Marchbanks**	Director, Ohio Department of Transportation
	Dr. Bruce Vanderhoff	Director, Ohio Department of Health
	Lori Criss	Director, Ohio Department of Mental Health & Addiction Services
Date	**Presenter**	**Agency/Organization**
3.22.23	**Andy Wilson**	Director, Ohio Department of Public Safety
	Jenifer French	Chair, Ohio Public Utilities Commission
	Brian Baldridge	Director, Ohio Department of Agriculture
Date	**Presenter**	**Agency/Organization**
4.18.23	**Alan Shaw**	CEO, Norfolk Southern
	Art Arnold	Ohio Rail Association
Date	**Presenter**	**Agency/Organization**
4.26.23	**John Esterly**	Brotherhood of Locomotive Engineers and Trainmen
	Clyde Whitaker	Director, Smart Transportation Ohio State Legislative Board

First Hearing, March 1, 2023

Anne Vogel, Director, Ohio Environmental Protection Agency and Mark Johnson, Assistant Director, Ohio Environmental Protection Agency (OEPA)
Director Vogel spoke on the continued removal of hazardous materials in East Palestine, providing an update to the committee from the site. At the time of her testimony on March 1, all of the train cars had been removed aside from those being held by the National Transportation Safety Board. The Ohio EPA had begun to wash sediments, chemicals on the creek beds and were in the planning process for the removal of contaminated soil from under the railroad tracks.

Sima Merick, Director, Ohio Emergency Management Agency (OEMA)
Director Merick gave a detailed timeline of events surrounding the train derailment and subsequent clean-up. Local fire, EMS, law enforcement, and the State Highway Patrol were first on the scene. There was robust cooperation between state and local Columbiana County officials and Pennsylvanian officials at the scene. There was an agreement to conduct a controlled burn of the chemicals to avoid explosion. No elevated air quality concerns were observed after the burn. The decision was made to activate the Ohio National Guard, which proceeded with an evacuation of the nearby residents as a precaution. The burn was conducted on 5 tankers. Additionally, partial activation of EMA responders occurred for the Ohio EMA's resources to be utilized. A unified command was established by the local fire chief, local and state law enforcement, OEPA, OEMA, and USEPA to oversee the clean-up and recovery process.

Second Hearing, March 8, 2023

Jack Marchbanks, Director, Ohio Department of Transportation (ODOT)

Director Marchbanks detailed ODOT's coordination with clean-up efforts following the derailment at East Palestine. He expressed support for the $125M railroad crossing safety grant program within HB 33 (FY24/FY25 Main Operating Budget). The Director was joined by Thomas Corey, District 11 Director, who discussed the details of the clean-up efforts. These efforts involved over 900 hours of work. Tasks included snow and ice control assistance for East Palestine; setting barricades to assist the clean-up crews; and closing off roads to control traffic. ODOT cooperated with local law enforcement and the National Guard for evacuation efforts, including communication to the public. Ongoing

communication efforts are occurring in the community through the use of message boards. Daily situational awareness reports are also produced.

Dr. Bruce Vanderhoff, Director, Ohio Department of Health (ODH)

Director Vanderhoff discussed setting up the health clinic in East Palestine, the agency's planned long-term involvement in the community, as well as water sampling efforts. ODH is working with local and federal partners and agencies. They are working on air and water safety, using appropriate thresholds for testing and making test results transparent to the public. ODH identified the need for on the ground health support and are providing that through a partnership with the Columbia County Health Department. The Director encouraged anyone with health concerns to call their hotline at (330) 383-6020 to receive health check-ups. After Chemical Exposure (ACE) surveys are being used to gather information from the community. 93 patients had completed the ACE survey, and over 200 patients have visited the clinic. At the clinic, anxiety and respiratory issues were reported. The Department of Ohio Mental Health and Addiction Services is prioritizing mental health services for people in the community. Water testing is encouraged for people living within the priority zone. ODH is scheduling private water sampling for those individuals. ODH is doing their own sampling alongside Norfolk Southern to review the results side by side. Results so far have been identical. Moreover, trace detections in well testing show no evidence of correlating with the train derailment. All results have been posted online for transparency. Water testing will go on for years in order to observe any potential changes. This is a proactive measure in case anything is discovered in the water.

Lori Criss, Director, Ohio Department of Mental Health and Addiction Services (OHMAS)

Director Criss gave the committee a briefing on OMHAS' work in East Palestine and on understanding the emotional response after a disaster. Trauma and its impact on individuals goes through phases. Resiliency building is essential for the community. Ongoing signs of emotional stress are common and a concern in these situations. Monitoring friends and neighbors is key. OMHAS is providing resources for individuals to reach out for help. Signs of stress include difficulty sleeping, nightmares, and substance abuse. At the clinic, mental health screening is provided. 77% of those screened reported worsening mental health conditions. 56% reported anxiety, which was the most reported condition. OMHAS is working with first responders to support them as well. Hotlines for emotional support, and crisis response professionals are available to the public. Director Criss discussed

grant dollars to afford additional support. One grant is for first responders and another is for the community. The grants provide funding for a year. Rebound trauma concerns are there for the long-term.

Third Hearing, March 22, 2023

Andy Wilson, Director, Department of Public Safety (DPS)

Director Wilson initially spoke about the immediate response to the derailment from the emergency response teams from the Columbiana County region and from the Beaver County, Pennsylvania area. Director Wilson then referenced Ohio Revised Code Section 3737.80, which states the chief of the fire department in whose jurisdiction the emergency is occurring is responsible for on scene activities of all agencies of the state, the federal government, and political subdivisions that are responding to the emergency situation until the chief relinquishes that responsibility to a representative of a responding agency and notifies that representative. Based on this section of code, Chief Keith Drabick of the East Palestine Fire Department was the local incident commander, and he assumed this responsibility on the night of the derailment. They fought the fire from a defensive position. While this was underway, the Ohio EPA, the U.S. EPA, and many other agencies were also onsite dealing with the environmental aspect of the emergency response. The Columbiana County EMA was also onsite, reporting on the situation to the State EMA, who was continuing to monitor any additional resources that might be necessary. This overall plan was the plan that everyone had agreed to and that Chief Drabick implemented. Several days after the derailment, Chief Drabick was notified that there was an imminent risk that one of the tankers on the train could explode and then create a chain of explosions with underground tankers. The well-being of the nearby citizens was the most important piece that was considered when deciding how to respond to this imminent threat, as up to 500 people were likely still in the evacuation zone. The Ohio State Highway Patrol sent troopers from various regions to assist. The Ohio State Highway Patrol also mobilized their Mobile Field Force and utilized available aviation assets, such as helicopters. This allowed aerial video to be taken of the derailment site, which was then downloaded to the Mobile Command Center, and provided crucial information. Lastly, they mobilized the Command and Control Center onsite, which was staffed by the Field Ops Major. The State Highway Patrol went door-to-door and knocked on every door in the evacuation zone to alert people that they needed to evacuate. The Ohio National Guard was also mobilized to assist with the derailment containment, and

they were onsite within two and a half hours. Roadblocks were also set up by the National Guard to prevent anyone from getting too close to the derailment site. Ohio Governor Mike DeWine arrived early onsite the morning after the derailment.

Jenifer French, Chair, Public Utilities Commission of Ohio (PUCO)
Chairwoman French discussed the role of the PUCO in the regulation of railroads in Ohio. Much of the railroad regulation in the country is conducted by the federal government through the U.S. Department of Transportation's Federal Railroad Administration (FRA). The U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (FMSA) establishes regulations surrounding the transportation of hazardous materials by any means of transportation. The FRA has jurisdiction to enforce regulations of hazardous materials being transported by rail. Additionally, federal law prohibits state regulations on the same subject that is already regulated by the FRA, which gives the FRA exclusive jurisdiction over hazardous materials being transported by rail. The PUCO has jurisdiction over Ohio's public highway and railway crossings, and for certain matters including: administering programs for improving the safety of railroad crossings, conducting state safety inspections of public railway crossings, the transportation of hazardous materials, structures and railroad equipment and facilities in Ohio, conducting federal inspections on behalf of the FRA, and assisting in incident investigations as requested by the FRA. The PUCO employs nine rail inspectors, who are certified by the Federal Railroad Administration. There are also two hazardous material specialists who are certified by the FRA for rail inspections. The PUCO responds to rail incidents at the direction of the FRA and assists the FRA in their work when necessary. In this way, the PUCO facilitates federal oversight of Ohio's railways.

Brian Baldridge, Director, Ohio Department of Agriculture (ODA)
Director Baldridge spoke about the Department of Agriculture's role in the East Palestine response. The Department of Agriculture was a secondary agency in terms of the response to the derailment, and their response was focused on how the agricultural community in the area would be affected. Through local partners, they monitored soil and water contamination levels. They also reached out to their Ohio Farm Bureau members in the area to investigate how they could be of help. They reached out to the Department of Agriculture in Pennsylvania to coordinate their response with them as well, since the derailment was so close to the border

between Ohio and Pennsylvania. Meat inspectors conducted meat testing as well in the counties surrounding the derailment. So far, they have not found anything in soil, water, or meat testing that has concerned them in terms of chemical levels.

Fourth Hearing, April 18, 2023

Alan Shaw, CEO, Norfolk Southern

Mr. Shaw elaborated on the progress being made cleaning up the derailment site, including a long-term plan for testing at the direction of US EPA. He emphasized the need for transparent test results. Clean-up teams contained, diverted, and treated affected nearby waterways, flushed a mile of surface waterways, and continue to capture rainwater for temporary storage and removal. More than 12.3 million gallons of potentially affected water had been recovered and transported from the site for disposal at EPA-approved sites. Crews had also removed more than 25,000 tons of affected soil from the site as well. Continued testing shows air and water are safe, but Norfolk Southern is committed to further monitoring as needed. Mr. Shaw noted Norfolk Southern's initial investment of over $30 million to East Palestine. He said the company is working with Attorney General Yost on a final resolution. Norfolk Southern wants to create a healthcare fund that addresses long-term health concerns for residents, funds to protect local property values, water protection funds, and are reimbursing local first responder organizations for the cost of the response and clean-up.

Mr. Shaw has pledged full cooperation of the company in the NTSB investigation. In the meantime, the company is making its early-warning sensors stronger. Norfolk Southern is also prioritizing preparing first responders for incidents with new training facilities and programs, including some in Ohio. The company believes an industry-wide approach is needed to increase safety. Mr. Shaw detailed the company's new approach using precision scheduled railroading (PSR). PSR has become associated with cost cutting, but Mr. Shaw states the company has moved from a focus on operating ratio to one on service, productivity, and growth. Finally, Mr. Shaw ended his testimony echoing his support for legislative efforts to enhance rail safety, outlining specific provisions in federal legislation the company supports. He also made other suggestions for Congress on rail car design, fine and penalty increases for tampering, codifying and enhancing the confidential close call reporting system (C3RS), and new requirements for utility installations in rights-of-ways.

Art Arnold, Ohio Railroad Association (ORA)

Mr. Arnold stated the Association represents 28 railroads, with Norfolk Southern and CSX being the largest members with the biggest footprint in Ohio. Both are also Class I railroads. According to the Ohio State Rail Plan, Ohio has the fourth most active rail lines in the country and arguably the most concentrated due to geography. This shows the close tie between rail and Ohio's economy. Rail contributes $2.8 billion to the state's economy annually and provides crucial service to a variety of industries. Most railroads in the ORA are short line railroads that provide first mile and last mile service to customers, making them important to the economy. All railroads are required to follow the many federal regulations that impact them. These are overseen by the Federal Railroad Administration's Office of Railroad Safety. Since the derailment, every railroad in Ohio has reviewed their operating practices and safety measures. Both the FRA and Association of American Railroads have issued advisories on rail operations as well. Over 99% of trains operate safely from their origin to their destination according to Mr. Arnold; moreover, since the 1990s, derailments have been down 85% due to better operation rules, investments, and applied technology. He maintained that rail is the safest way to transport hazardous materials. More improvements are occurring but it takes time, money and resources to do so. The rail industry is committed to Ohio by providing thousands of rail-dependent jobs that culminate in lifelong careers as well.

Fifth Hearing, April 26, 2023

John Esterly, Brotherhood of Locomotive Engineers and Trainmen

Mr. Esterly explained rail transportation regulations involving hazardous waste. Regulators include 4 federal bodies: the Surface Transportation Board, the Federal Railroad Administration, the Pipeline and Hazardous Materials Safety Administration, and the Department of Homeland Security. The Surface Transportation Board has jurisdiction over matters of interstate commerce and manages rail operators' obligations as common carriers. The Federal Rail Administration governs rail safety and general operations. The Pipeline and Hazardous Materials Safety Administration (PHMSA) establishes regulations for the safe handling of hazardous materials and their transportation on rail. The Department of Homeland Security (DHS) handles safety and security as it applies to rail transportation, specifically the transportation of hazardous materials. He stated this breakdown allows for expertise, but can lead to difficulty navigating the

regulations. Hazardous materials are classified into eight different groups using material type and the hazards they pose with a ninth category for miscellaneous materials. The PHMSA defines several specific types of shipments in their regulations, and each has specific requirements for operation. The strictest regulations are for high-hazard flammable trains. General shipments of hazardous materials are not regulated any differently than standard shipments by rail. The rail industry has additional guidelines for transporting hazardous materials (e.g., key trains), but none are enforceable by any regulatory agency and have no compliance requirement. DHS defines High-Threat Urban Areas (HTUAs), which are geographic areas that have further requirements for hazardous material shipments due to their population density and potential to be threats for attack. DHS also manages information about hazardous shipments with the TSA for emergency response and for timing of shipments.

Clyde Whitaker, Director, Smart Transportation Ohio State Legislative Board
Mr. Whitaker first gave a breakdown of the Federal Railroad Administration's four railroad classes: industrial, Class I (Norfolk Southern), Class II, and Class III. Class III railroads state they cannot afford two-person crews or wayside defect detectors, but Mr. Whitaker believes they can, as companies that should have Class I status own them. Before Precision Scheduled Railroading began at Norfolk Southern, the company had more employees who received more training. Now, there are fewer trains and more derailments. Mr. Whittaker also pointed out that Norfolk Southern has a 23.71% retention rate among new conductors and that people are leaving the industry due to the hours, job security, etc. He urges that a stronger effort is made to ensure new hires are comfortable in their work environment, and that employees receive more training and greater understanding of rules to prevent derailments. Mr. Whitaker provided locomotive incidents he is aware of that had one-man crews and asserted the issue with wayside detectors is their thresholds and utilization. He also stated that railroad companies set the rules and do not have to comply with them. Moreover, the industry wants to minimize or eliminate railcar expansions, which allows defects to be detected to prevent derailments and that they want to grow trains to astronomical lengths. In closing, Mr. Whitaker recommended railroad companies support the Rail Safety Act, encourage the Confidential Close Call Reporting System (C3RS) program, work on better training programs, and focus on safe zones. He also believes the Ohio Rail Development Commission needs funding for grade crossing projects as included in the budget bill.

IV. Recommendations:

- Encourage the passage of the Railway Safety Act of 2023, S.576 (S. Brown, J.D. Vance) in Congress and urge improved coordination between state and federal governments to better convey their respective oversight and responsibilities of trains and rail safety to the general public.
- Establish a clear and concise chain of command when emergencies occur. In East Palestine, state and local officials worked together to create an effective chain of command led by the local fire chief.
- Provide additional resources for training for volunteer fire and EMS personnel.
- Consider emerging technology that can quickly identify rail cars and the materials in them to assess how to manage the accident and limit the damage that occurs due to a derailment.
- Continue long-term testing of soil and water at and near the derailment in East Palestine.
- Encourage improved communication between rail companies and local EMAs to better equip local communities with necessary information to improve their response to potential emergencies, such as what kind of materials pass through their jurisdiction, who operates the rail lines, and emergency contact information for each rail line operator.
- Consider funding a report on agriculture in the East Palestine region in the next operating budget.
- Encourage research on alternative resources that may be utilized by first responders to put out hazardous material fires such as soil and sand.
- Advocated for provisions enacted in H.B. 23 (FY24/FY25 Transportation Budget): requiring two person crews (O.R.C. 4999.99), requiring the use and installation of more wayside detectors by train companies (O.R.C. 4955.50 and 4955.51), and completion of a study by the PUCO regarding the effectiveness of wayside detectors (O.R.C. 749.20).

V. Documents Submitted to the Committee:

Ohio Environmental Protection Agency

Mike DeWine, Governor
Jon Husted, Lt. Governor
Anne M. Vogel, Director

March 7, 2023

The Honorable Bill Reineke
Ohio Senate District 26
Chair, Senate Select Committee on Rail Safety

Dear Chairman Reineke,

Thank you for the opportunity to testify in front of the Senate Select Committee on Rail Safety on March 1, 2023. The health and safety of the East Palestine community has been, and will continue to be, a top priority for the Ohio Environmental Protection Agency.

Attached to this letter is additional monitoring and sampling information related to the train derailment to share with committee members. This information is in response to questions from committee members during the hearing.

Please do not hesitate to contact Ohio EPA with any additional questions or concerns. Ohio EPA is committed to supporting the East Palestine community for as long as it may take.

Thank you for your interest in this matter.

Sincerely,

Anne M. Vogel
Director
Ohio Environmental Protection Agency

Enclosure:
East Palestine Train Derailment – Monitoring and Sampling Information

Director's Office
March 2023

East Palestine Train Derailment – Monitoring and Sampling Information

The below information is in response to questions from the Ohio Senate Select Committee on Rail Safety regarding monitoring and sampling related to the East Palestine train derailment. All information is publicly available on websites of the leading agencies.

Air Monitoring and Sampling

U.S. EPA oversees air monitoring in East Palestine and the surrounding area. U.S. EPA's air sampling involves the collection of air samples over a period of time that are then sent to a laboratory to identify and quantify specific compounds. Electronic devices are used to provide real-time readings of airborne contaminants**.** *The air quality measurements that are obtained in the area are being evaluated against established short-term health-based standards set by the federal government.*

Air Monitoring

U.S. EPA collected field measurements for lower explosive limits (LEL), total volatile organic compounds (VOCs), hydrogen sulfide, benzene, hydrogen cyanide, hydrogen chloride, phosgene, and particulate matter. Those monitors, which have not detected contamination from the derailment, are moved throughout the area to collect samples from various locations. Twenty air monitors are strategically located throughout the community by U.S. EPA and an independent contractor, that continue to monitor outdoor air. Air monitoring locations were selected at schools, residential areas, government buildings, and upwind, downwind, and in the derailment area, as well as general readings throughout the community by mobile teams. U.S. EPA is also deploying another mobile laboratory that performs real-time air-monitoring and sampling analyses during the cleanup phase.

Air Sampling

U.S. EPA is collecting outdoor air samples for VOCs (target contaminates of concern list and tentatively identified compounds), including vinyl chloride, n-butyl acrylate and ethyhexyl acrylate. Air sampling locations were selected upwind of the train derailment area, work area and downwind areas. U.S. EPA has assisted indoor air screening of more than 578 homes under a voluntary screening program offered to residents within the evacuation zone. No contaminants associated with the derailment have been detected. All of this information can be found on U.S. EPA's website.

Public Drinking Water Monitoring

East Palestine's treated drinking water and five supply wells are being tested weekly for a large number of contaminants. Tests of the public drinking water have shown that the water supply is safe to drink, and samples have been collected using U.S. EPA approved sample collection and analysis methods. Ohio EPA is independently collecting samples of the public drinking water wells, that are securely shipped to an independent laboratory to be analyzed. A third-party contractor is also collecting samples of the drinking water and sending them to a different lab for analysis. *The drinking water results are being evaluated against federal health-based standards and guidance.*

Public Drinking Water Source Monitoring

Four groundwater monitoring wells have been installed between the East Palestine wellfield and the contaminated areas, so that any movement of contamination towards the public drinking water supply is detected early before it reaches the East Palestine's wells. These monitoring wells are being tested weekly. This information can be found at Ohio EPA's website. Ground water to the municipal supply wells comes from the northwest and flows to the east, meaning any ground water at the derailment site is not likely to reach the municipal wells.. Additional monitoring wells are planned near the derailment site.

East Palestine Train Derailment – Monitoring and Sampling Information

Private Drinking Water Sampling

The Columbiana County General Health District and Norfolk Southern's contractor have been testing private wells. The Columbiana County Health Department reports it has sampled over 140 private wells in the East Palestine area. More information on this sampling can be found at Ohio Emergency Management Agency's website. Ohio Department of Health recommends drinking bottled water until a residence has the private well testing results.

Surface Water Sampling

The water in Sulfur Run near the derailment site is grossly contaminated. A containment area was created on February 8, 2023. Clean water from upstream is being pumped around the containment area to isolate any grossly contaminated water and sediments. This minimizes the amount of contaminants that could flow downstream. Contractors are working to remove the contaminants in the containment area.

Sulfur Run flows into Leslie Run, which flows into Bull Creek, which flows into North Fork Little Beaver Creek, which flows into Little Beaver Creek, which empties into the Ohio River. The latest water sample results of the Ohio River by the Ohio River Valley Water Sanitation Commission (ORSANCO) indicate no detection of butyl acrylate. In addition, no vinyl chloride has been detected in the surface water outside the containment areas. This information can be found at Ohio EPA's website.

Soil/Sediment Sampling

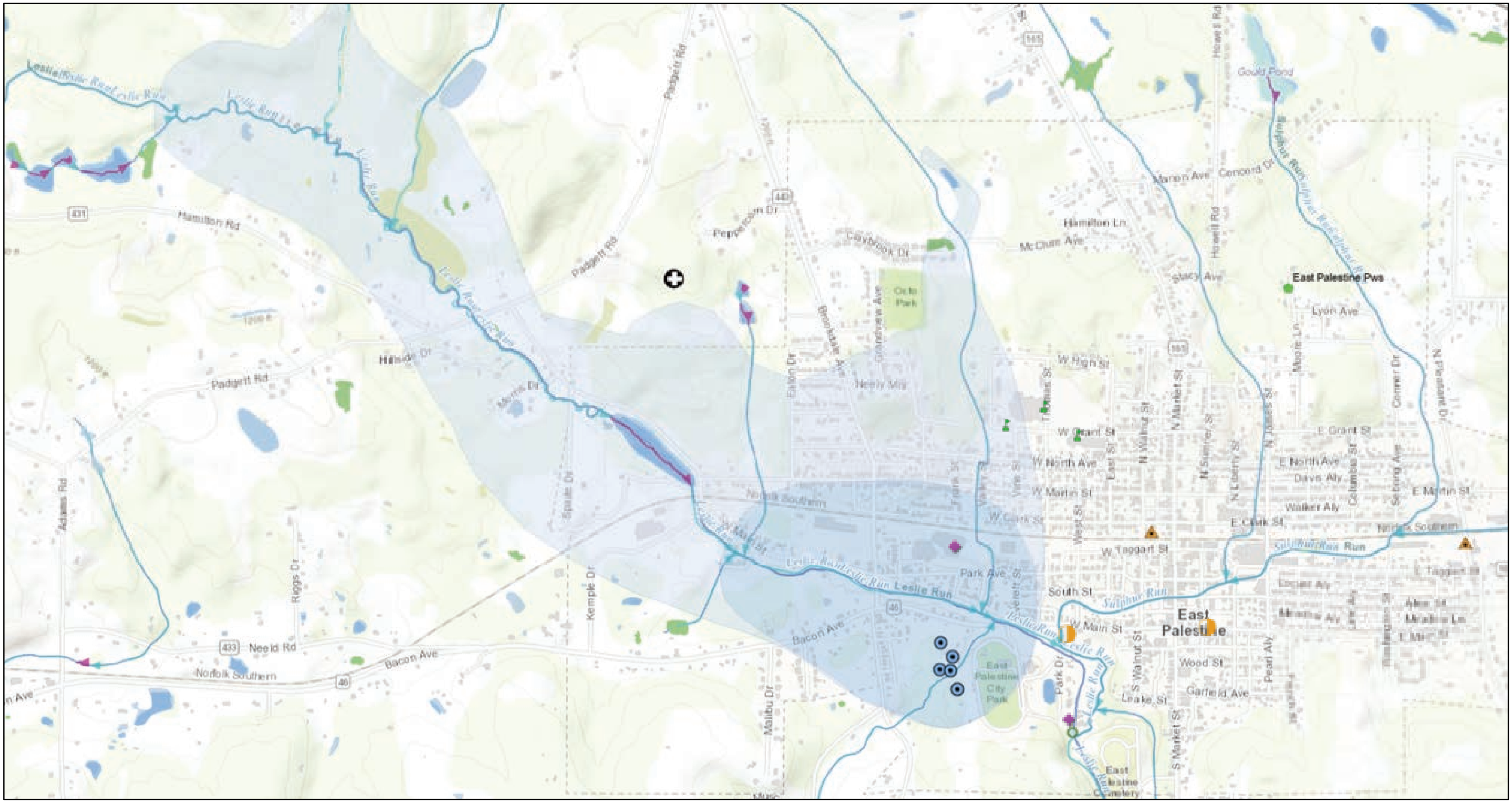
U.S. EPA has developed a public dashboard for soil sampling. This dashboard shows soil sampling locations, the contaminants being sampled for and the reporting limit for those contaminants. The dashboard can be accessed at U.S. EPA's website. As part of the Comprehensive Environmental Response, Compensation, and Liability (CERCLA) 106 orders issued by U.S. EPA on February 21, 2023, Norfolk Southern must develop and implement a plan that includes mediation of contaminated surface and sub-surface soils. The plan will be approved by U.S. EPA with Ohio EPA input and concurrence.

Long-Term Monitoring and Sampling

In coordination with U.S. EPA, the Ohio EPA is tasked with reviewing, commenting and approval of the comprehensive Removal Work Plan (for multi-media investigation and clean-up) and the subsidiary plans for quality assurance, post-removal site controls and community involvement for East Palestine after the train derailment. Ohio EPA will also provide regulatory, investigation and clean-up oversight support, as appropriate.

Ohio EPA will remain engaged in site investigation and clean-up activities for as long as it takes to ensure air, water and soil at the site have been thoroughly sampled and tested to ensure the safety of the residents and the local environment. It will require months to conduct the initial investigation and remediation work, followed by an additional period of long-term monitoring to verify that the clean-up goals have been achieved.

Environmental Response Situational Awareness Tool



3/1/2023, 2:03:24 PM

Schools
NPDES Permits - Small Dischargers
Major Air Facilities
Counties
Water Treatment by Plant
Community, Groundwater
Active Wells
Tier II Facilities (Ohio)
Nursing Home
Hospital
Waterbody - Large Scale
Estuary
Ice Mass
Lake Pond
Playa
Reservoir
Swamp Marsh
Ohio Wetlands (NWI)
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Riverine
Source Water Protection Area
Inner Management Zone

1:18,056

0 0.15 0.3 0.6 mi

0 0.28 0.55 1.1 km

Division of Air Pollution Control, Ohio EPA, Division of Drinking and Ground Waters, Ohio EPA, Ohio Department of Agriculture, Livestock Environmental Permitting, U.S. Department of Health & Human Services

Ohio EPA

Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA | ODNR Aquifer Maps. Groupings developed by Chris Kenah, Ohio EPA-DDAGW | Division of Drinking and Ground Waters, Ohio EPA | USGS TNM – National Hydrography Dataset. Data Refreshed January, 2023. | U.S. Department of Health &


2023-02-24 17:56:00
-80.52249 +40.83682

Issued: February 23, 2023 Preliminary Report RRD23MR005

This information is preliminary and subject to change.

Norfolk Southern Railway Train Derailment with Subsequent Hazardous Material Release and Fires

East Palestine, Ohio
February 3, 2023

On February 3, 2023, about 8:54 p.m. local time, eastbound Norfolk Southern Railway (NS) general merchandise freight train 32N derailed 38 railcars on main track 1 of the NS Fort Wayne Line of the Keystone Division in East Palestine, Ohio.[1] (See figure.) The derailed equipment included 11 tank cars carrying hazardous materials that subsequently ignited, fueling fires that damaged an additional 12 non-derailed railcars. First responders implemented a 1-mile evacuation zone surrounding the derailment site that affected up to 2,000 residents. There were no reported fatalities or injuries. At the time of the accident, visibility conditions were dark and clear; the weather was 10°F with no precipitation.

[1] (a) All times in this report are local time. (b) Train 32N was traveling from Madison, Illinois, to Conway, Pennsylvania.

Figure. Aerial photograph of derailment site.

Train 32N comprised 2 head-end locomotives, 149 railcars, and 1 distributed power locomotive located between railcars 109 and 110. The consist included 20 placarded hazardous materials tank cars transporting combustible liquids, flammable liquids, and flammable gas, including vinyl chloride.[2] Train 32N was traveling about 47 mph at the time of the derailment, which was less than the maximum authorized timetable speed of 50 mph.[3] Train movements near the derailment site are authorized by cab signals and wayside signal indications with an overlaid positive train control system and are coordinated by the NS Cleveland East train dispatcher located in Atlanta, Georgia. The positive train control system was enabled and operating at the time of the derailment.

Train 32N was operating with a dynamic brake application as the train passed a wayside defect detector on the east side of Palestine, Ohio, at milepost (MP) 49.81.[4] The wayside defect detector, or hot bearing detector (HBD), transmitted a critical

[2] (a) *Vinyl chloride* is a flammable petrochemical used in the manufacture of polymer polyvinyl chloride, or PVC. When exposed to heat, vinyl chloride can undergo a rapid polymerization reaction, an exothermic chemical process that can pose an explosion hazard. (b) Residues of some hazardous materials are considered flammable liquids; in this case, two placarded tank cars contained benzene residue.

[3] The train crew was governed by the rules and instructions in the NS Pittsburgh Division, Northern Region, Timetable No. 1.

[4] On a diesel-electric locomotive, *dynamic braking* uses electric traction motors as generators, slowing the train and dissipating mechanical energy as heat.

audible alarm message instructing the crew to slow and stop the train to inspect a hot axle. The train engineer increased the dynamic brake application to further slow and stop the train. During this deceleration, an automatic emergency brake application initiated, and train 32N came to a stop.[5]

On the Fort Wayne Line of the Keystone Division, NS has equipped their rail network with HBD systems to assess the temperature conditions of wheel bearings while en route. The function of the HBD is to detect overheated bearings and provide audible real-time warnings to train crews. Train 32N passed three HBD systems on its trip before the derailment. At MP 79.9, the suspect bearing from the 23rd car had a recorded temperature of 38°F above ambient temperature. When train 32N passed the next HBD, at MP 69.01, the bearing's recorded temperature was 103°F above ambient. The third HBD, at MP 49.81, recorded the suspect bearing's temperature at 253°F above ambient. NS has established the following HBD alarm thresholds (above ambient temperature) and criteria for bearings:

- Between 170°F and 200°F, warm bearing (non-critical); stop and inspect
- A difference between bearings on the same axle greater than or equal to 115°F (non-critical); stop and inspect
- Greater than 200°F (critical); set out railcar

After the train stopped, the crew observed fire and smoke and notified the Cleveland East dispatcher of a possible derailment. With dispatcher authorization, the crew applied handbrakes to the two railcars at the head of the train, uncoupled the head-end locomotives, and moved the locomotives about 1 mile from the uncoupled railcars. Responders arrived at the derailment site and began response efforts.

On February 5, responders mitigated the fire, but five derailed DOT-105 specification tank cars (railcars 28–31 and 55) carrying 115,580 gallons of vinyl chloride continued to concern authorities because the temperature inside one tank car was still rising. This increase in temperature suggested that the vinyl chloride was undergoing a polymerization reaction, which could pose an explosion hazard. Responders scheduled a controlled venting of the five vinyl chloride tank cars to release and burn the vinyl chloride, expanded the evacuation zone to a 1-mile by 2-mile area, and dug ditches to contain released vinyl chloride liquid while it vaporized and burned. The controlled venting began about 4:40 p.m. on February 6 and continued for several hours.

While on scene, National Transportation Safety Board (NTSB) investigators examined railroad equipment and track conditions; reviewed data from the signal

[5] An *automatic emergency brake application* is the full application of a train's main air brakes. An automatic emergency brake application can occur when a train experiences a separation that disconnects the air brake hoses between railcars.

system, wayside defect detectors, local surveillance cameras, and the lead locomotive's event recorder and forward-facing and inward-facing image recorders; and completed interviews. NTSB investigators identified and examined the first railcar to derail, the 23rd railcar in the consist. Surveillance video from a local residence showed what appeared to be a wheel bearing in the final stage of overheat failure moments before the derailment. The wheel bearing and affected wheelset have been collected as evidence and will be examined by the NTSB. The vinyl chloride tank car top fittings, including the relief valves, were also removed and examined by the NTSB on scene. The top fittings will be shipped to Texas for testing under the direction of the NTSB.

The hazardous material tank cars have been decontaminated. NTSB investigators returned to Ohio on February 21, 2023, to examine each hazardous material tank car, document damage, and secure evidence for laboratory analysis.

The NTSB's investigation is ongoing. Future investigative activity will focus on the wheelset and bearing; tank car design and derailment damage; a review of the accident response, including the venting and burning of the vinyl chloride; railcar design and maintenance procedures and practices; NS use of wayside defect detectors; and NS railcar inspection practices.

The NTSB is not involved in air monitoring, testing of water quality, environmental remediation, or evacuation orders. Questions on environmental issues should be referred to the Environmental Protection Agency.

Parties to the investigation include the Pipeline and Hazardous Materials Safety Administration, the Federal Railroad Administration, Ohio State Highway Patrol, the Village of East Palestine, Norfolk Southern Railway, Trinity Industries Leasing Company, GATX Corporation, the Brotherhood of Railway Carmen, the International Association of Sheet Metal, Air, Rail and Transportation Workers, the Brotherhood of Locomotive Engineers and Trainmen, and the International Association of Fire Fighters.

DISTRICT 11 | AFTER ACTION REVIEW
EAST PALESTINE TRAIN DERAILMENT | MARCH 27, 2023

The following information summarizes an After-Action Review for the Northfolk Southern Train Derailment in East Palestine on February 3, 2023. The meeting was held at the Columbiana County Full-Service Maintenance Facility, in Lisbon, Ohio, with the Ohio Department of Transportation (ODOT) Highway Management, Highway Technician Workforce, and the ODOT Statewide Emergency Response Coordinator.

- **What did ODOT expect to happen?**
  - ODOT was contacted for Maintenance of Traffic (MOT) support by the Columbiana County Emergency Management Agency. Additional support included:
    - Salt treatment of roadways
    - Interior road barricade placement at designated village streets
    - MOT of state roadways entering and exiting East Palestine
    - Setting Detour route for State Route 165

- **What actually occurred?**
  - ODOT responded to the incident with the same regard as all incident responses by committing to maintaining the safe and effective flow of traffic during emergencies to prevent further damage, injury, or undue delay of the motoring public.
  - ODOT provided the following:
    - Salt treatment of state routes in and around train derailment site during initial fire department response.
    - Provided and set road barricades at designated intersections as directed by EMA to close inbound traffic to East Palestine.
    - Set and maintained state route detour for State Route 165.
      - *State Route 165 remains closed during cleanup of incident in East Palestine.*
    - During the evacuation period, ODOT provided signs, vehicles, and Highway Technicians (HT) at road closure intersections.
    - ODOT HT's and managers retreated from manned locations as directed by EMA to outlying locations during deliberate detonation of tank car.
    - After EMA issued the all-clear, ODOT returned to designated intersection closure locations.
    - ODOT Provided daily situational awareness updates to statewide ODOT Emergency Management Coordinator.

- **What went well and why?**
  - ODOT's response to the incident by all responding employees from Columbiana County and District staff.
    - 937.6 labor hours recorded.
    - 39 employees responded throughout the incident.
  - Working relationship with the Ohio State Highway Patrol.
  - Local communication between ODOT employees and other first responders.

- **What can we do to improve the next incident response?**
  - Additional incident response training, including the following.
    - National Incident Management Systems (NIMS)
    - Ohio Traffic Incident Management (OTIM)
  - Emergency Response Guidebook (ERG)
    - Create a QR code decal for our front-line workers for easy access to the ERG to place in the corner of the windshield in ODOT vehicles for easy access to the ERG.
    - Ensure the latest copy of the ERG book is available in all ODOT vehicles.
  - Continue to educate ODOT Employees and local entities on ODOT's role during Incident Response.
  - Seek and create opportunities for further expansion to improve communications between the private sector, government agencies, and all first responders.

OHIO DEPARTMENT OF TRANSPORTATION
Mike DeWine, *Governor*
Jack Marchbanks, Ph.D., *Director*

1980 W. Broad Street, Columbus, OH 43223
614-466-7170
transportation.ohio.gov

How did the Administration establish $125 million as an appropriate program size?

The Bipartisan Infrastructure Law (BIL) created the Railroad Crossing Elimination Program (RCEP) in the Federal Railroad Administration. The RCEP is funded at $500 million per year and each state may receive no more than 20% of the available funds per fiscal year. Using those overall parameters, a program of $125 million would allow Ohio to maximize leverage of federal resources.

The funding will be used to prepare potential projects for application to the federal grade crossing elimination program, including planning and preliminary engineering work; provide local match for Federal grant applications for grade separations; and fund construction for projects that do not receive federal awards or do not qualify for federal funding.

Because the RCEP is a competitive discretionary grant program, we cannot predict our rate of success in drawing down federal funding but using Ohio's experience with its own grade separation program in the early 2000s and the State of Indiana's Local TRAX program, the Rail Commission estimates that 15 grade separation projects can be completed with $125 million in state funds in coordination with discretionary grant awards from the RCEP.

Recent projects have averaged $17 million per grade separation but this varies widely with geography and complexity.

What is the timeframe for this funding?

If the Grade Separation funding is approved in the Operating Budget (HB 33):

Summer 2023: Open the application/selection window for communities to apply to the program;

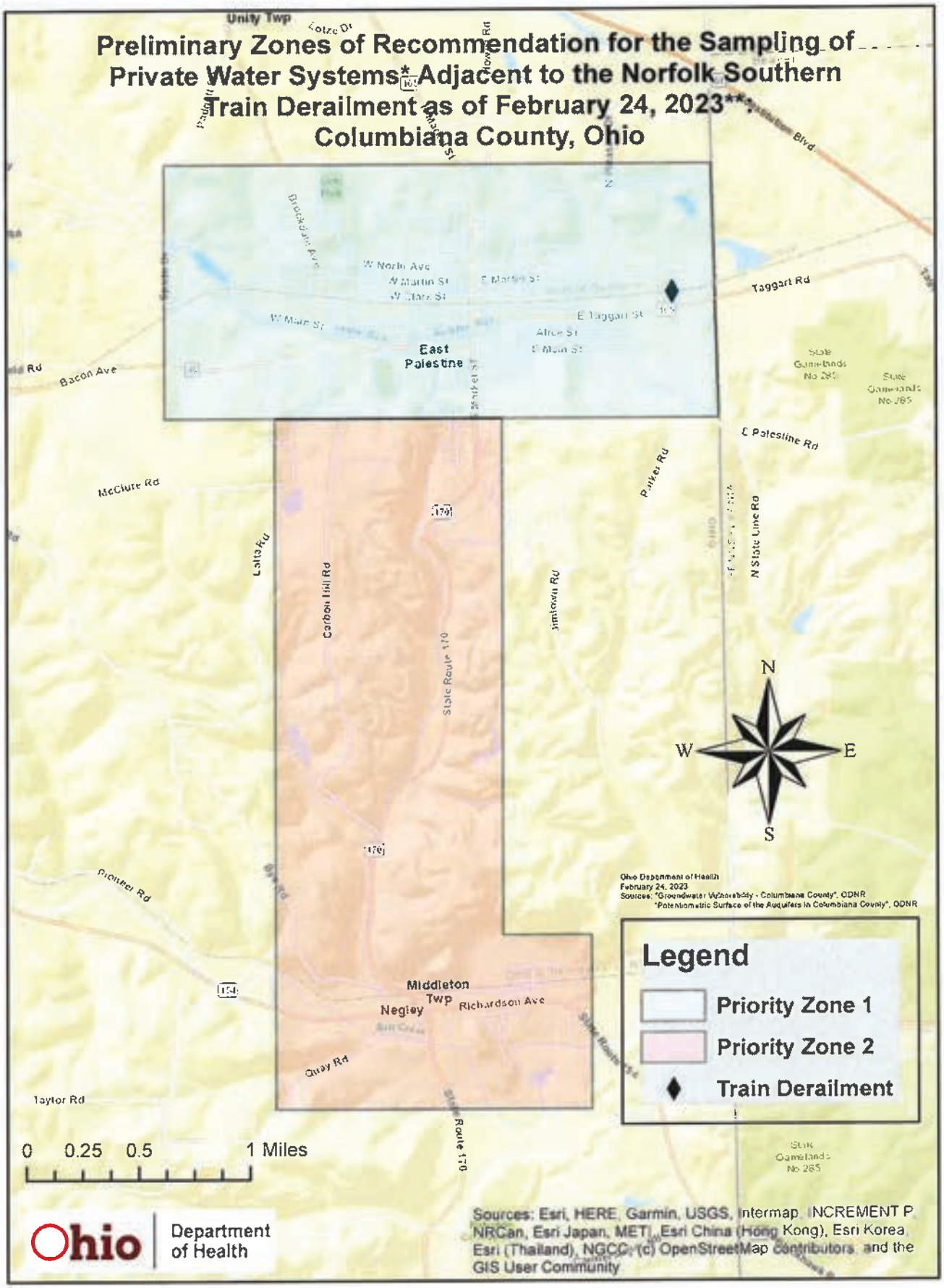
Fall 2023: Select consultant(s) to conduct the preliminary engineering work needed to prepare projects for federal applications;

Early 2024 and beyond: work with communities to develop federal applications and to support submission to the Federal Railroad Administration's Railroad Crossing Elimination Program and other federal grant opportunities.

Follow-up to Senator Ingram questions about Hazmat on rails:

There are resources currently available to local first responders such as the AskRail application developed and managed by the rail industry which provides information on rail car cargos. Additionally, the larger railroads offer training opportunities, both in-person and on-line for first responders. More details regarding the AskRail application can be found at AskRail Mobile App and we would encourage all local emergency management agencies and first responders to contact the railroads operating in their area and determine when training courses will be offered.

Preliminary Zones of Recommendation for the Sampling of Private Water Systems* Adjacent to the Norfolk Southern Train Derailment as of February 24, 2023**: Columbiana County, Ohio



ODH

*For those on private water systems, ODH is recommending drinking bottled water until you have the results of your private water system test. Call 330-849-3919 to schedule a free private water system test.

**Map as of February 24, 2023. Recommended sampling zones are subject to change.

East Palestine

Mental Health Resources for Residents

It's important to take care of yourself, even during a disaster. Pay attention to how you and your family members are acting and feeling, and reach out for help if you need it.

Mental Health Resources

The Counseling Center (Lisbon, Salem, Calcutta)
330-424-9573

Family Recovery Center (Lisbon)
330-424-1468

Community Action Agency (Calcutta, Lisbon)
330-386-7870

OnDemand Counseling (East Liverpool)
330-932-0157

Insight Clinical Counseling & Wellness, LLC (East Palestine, East Liverpool, Salem)
330-397-6007

Ohio CareLine
800-720-9616

Common Signs of Emotional Stress

- Feelings of disbelief or numbness.
- Change in energy or activity levels.
- Difficulty concentrating.
- Change in appetite.
- Sleeping problems or nightmares.
- Feeling anxious, fearful, or angry.
- Headaches, body pain, or skin rashes.
- Chronic health problems get worse.
- Increase use of alcohol, tobacco, or drugs.

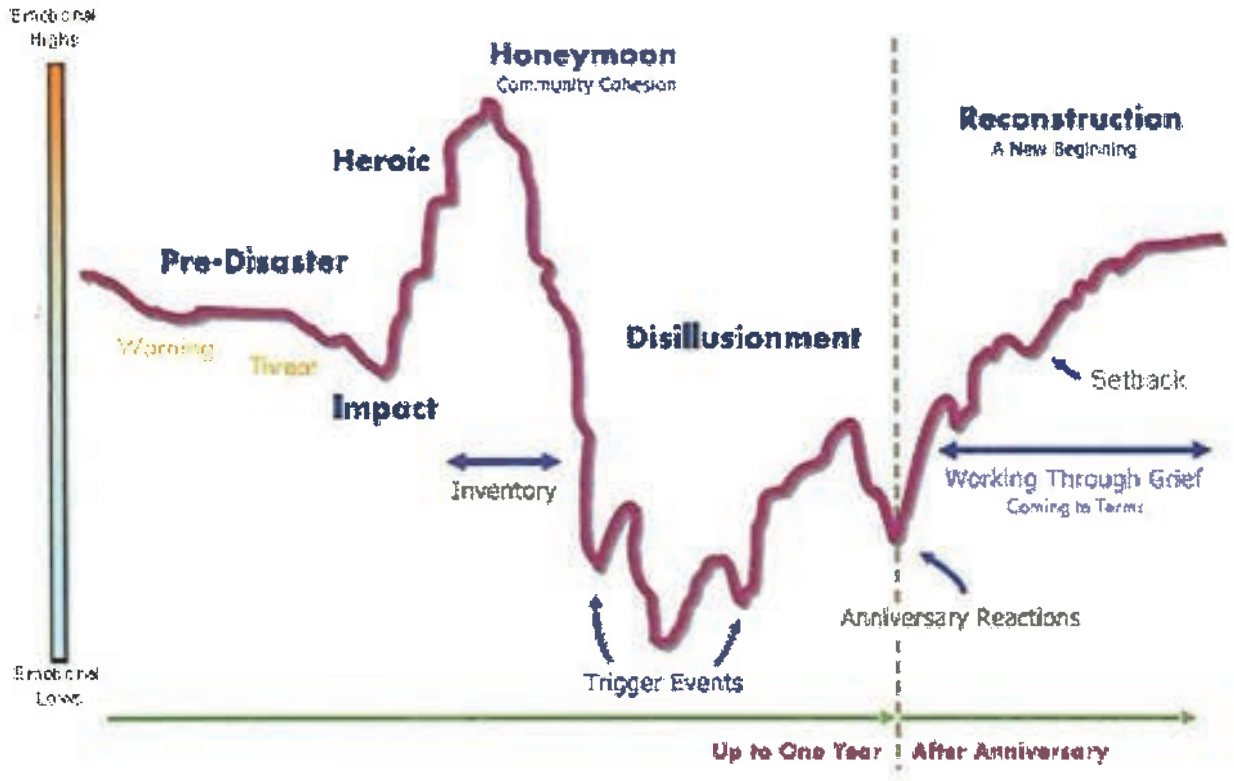
Ohio

Department of Agriculture
Department of Health
Department of Natural Resources
Department of Mental Health & Addiction Services
Environmental Protection Agency

EPA United States Environmental Protection Agency

ema.ohio.gov/eastpalestine

Understanding Emotional Responses to a Disaster

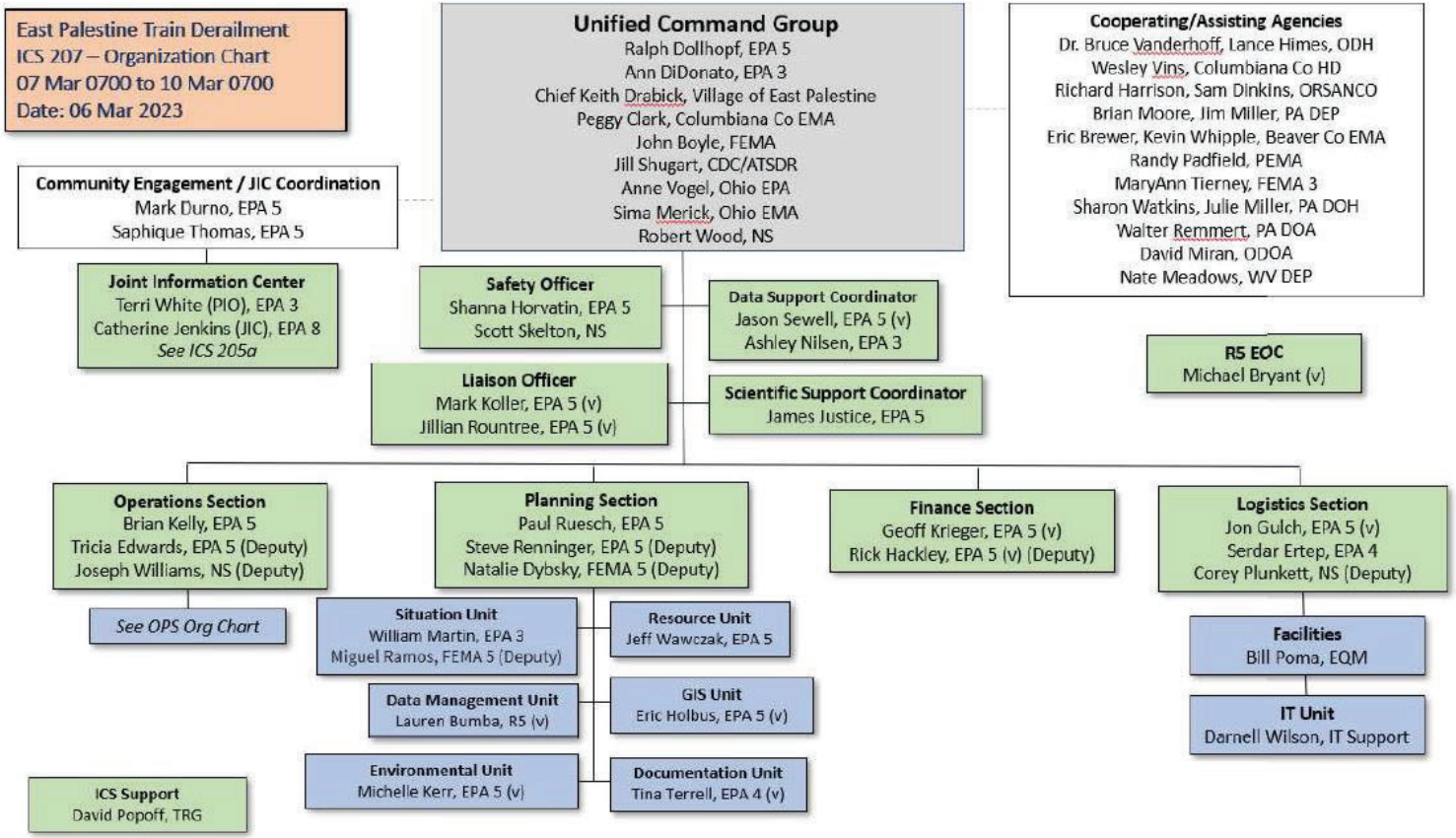


Source: SAMHSA

Ohio Train Derailment Joint Interagency Brief
UNCLASSIFIED // FOR OFFICIAL USE ONLY

Updates in Blue

Report Date: 03/07/2023	**Report Time:** 1500 EST	**Data Current as of:** 2130 EST 03/06/2023 unless otherwise specified



(Source: Joint Incident Action Plan 03/07/23 0700 EST – 03/10/23 0700 EST)

Updates in Blue

Report Date: 03/08/2023	Report Time: 1500 EST	Data Current as of: 1700 EST 03/08/2023 unless otherwise specified

East Palestine Train Derailment
ICS 207 – Organization Chart
07 Mar 0700 to 10 Mar 0700
Date: 08 Mar 2023

Unified Command Group
Ralph Dollhopf EPA 5, Ann DiDonato, EPA 3
Chief Keith Drabick, Village of East Palestine
Peggy Clark, Columbiana Co EMA
Anne Vogel, Ohio EPA
Robert Wood, NS

Cooperating/Assisting Agencies
John Boyle, FEMA
Jonathan McCracken, USDA
Sima Merick/Andrew Elder, Ohio EMA
Dr. Bruce Vanderhoff/Lance Himes, ODH
Wesley Vins, Columbiana Co HD
Richard Harrison/Sam Dinkins, ORSANCO
MaryAnn Tierney, FEMA
Brian Moore/Jim Miller, PA DEP
Eric Brewer/Kevin Whipple, Beaver Co EMA
Randy Padfield, PEMA
Sharon Watkins/Julie Miller, PA DOH
Walter Remmert, PA DOA
David Miran, ODOA
Nate Meadows, WV DEP

Community Engagement / Joint Information Center
Mark Durno, EPA 5
Katherine Jenkins, EPA 8
(See ICS 205a for JIC roster)

Safety Officer
Shanna Horvatin, EPA 5
Scott Skelton, CTEH

Public Health Advisor
Jill Shugart, CDC/ATSDR

Public Information Officer
Terri White, EPA 3

Scientific Support Coordinator
James Justice, EPA 5

R5 EOC
Michael Bryant (v)

Liaison Officer
Mark Koller, EPA 5 (v)
Jillian Rountree, EPA 5 (v)

Data Support Coordinator
Jason Sewell, EPA 5 (v)
Ashley Nilsen, EPA 3

Operations Section
Brian Kelly, EPA 5
Tricia Edwards, EPA 5 (Deputy)
Joseph Williams, NS (Deputy)

See OPS Org Chart

Planning Section
Paul Ruesch, EPA 5
Steve Renninger, EPA 5 (Deputy)

Situation Unit
William Martin, EPA 3

Resource Unit
Jeff Wawczak, EPA 5

Data Management Unit
Lauren Bumba, R5 (v)

GIS Unit
Eric Holbus, EPA 5 (v)

Environmental Unit
Michelle Kerr, EPA 5 (v)

Documentation Unit
Tina Terrell, EPA 4 (v)

Finance Section
Geoff Krieger, EPA 5 (v)
Rick Hackley, EPA 5 (v) (Deputy)

Logistics Section
Jon Gulch, EPA 5 (v)
Serdar Ertep, EPA 4
Corey Plunkett, NS (Deputy)

Facilities
Bill Poma, EQM

IT Unit
Darnell Wilson, EPA 5

ICS Support
David Popoff, TRG

(Source: Joint Incident Action Plan 03/07/23 0700 EST – 03/10/23 0700 EST)

Public Utilities Commission of Ohio
Senate Select Committee on Rail Safety

Ohio | Public Utilities Commission

Jurisdiction

Federal Railroad Administration (FRA)

- Enforces rules and regulations around the transportation of hazardous materials by rail, including classifications and hotbox detectors
- Instructs federal safety inspections of rail tracks, facilities and equipment
- Trains and certifies state inspectors
- Conducts incident investigations

Public Utilities Commission of Ohio

- Administers programs for improving the safety of railroad crossings.
- Conducts state safety inspections of public railway crossings, hazardous materials, structures and railroad equipment and facilities in Ohio.
- Conducts federal inspections on behalf of the FRA.
- Assists in incident investigations as requested by the FRA.

Rail Crossing safety

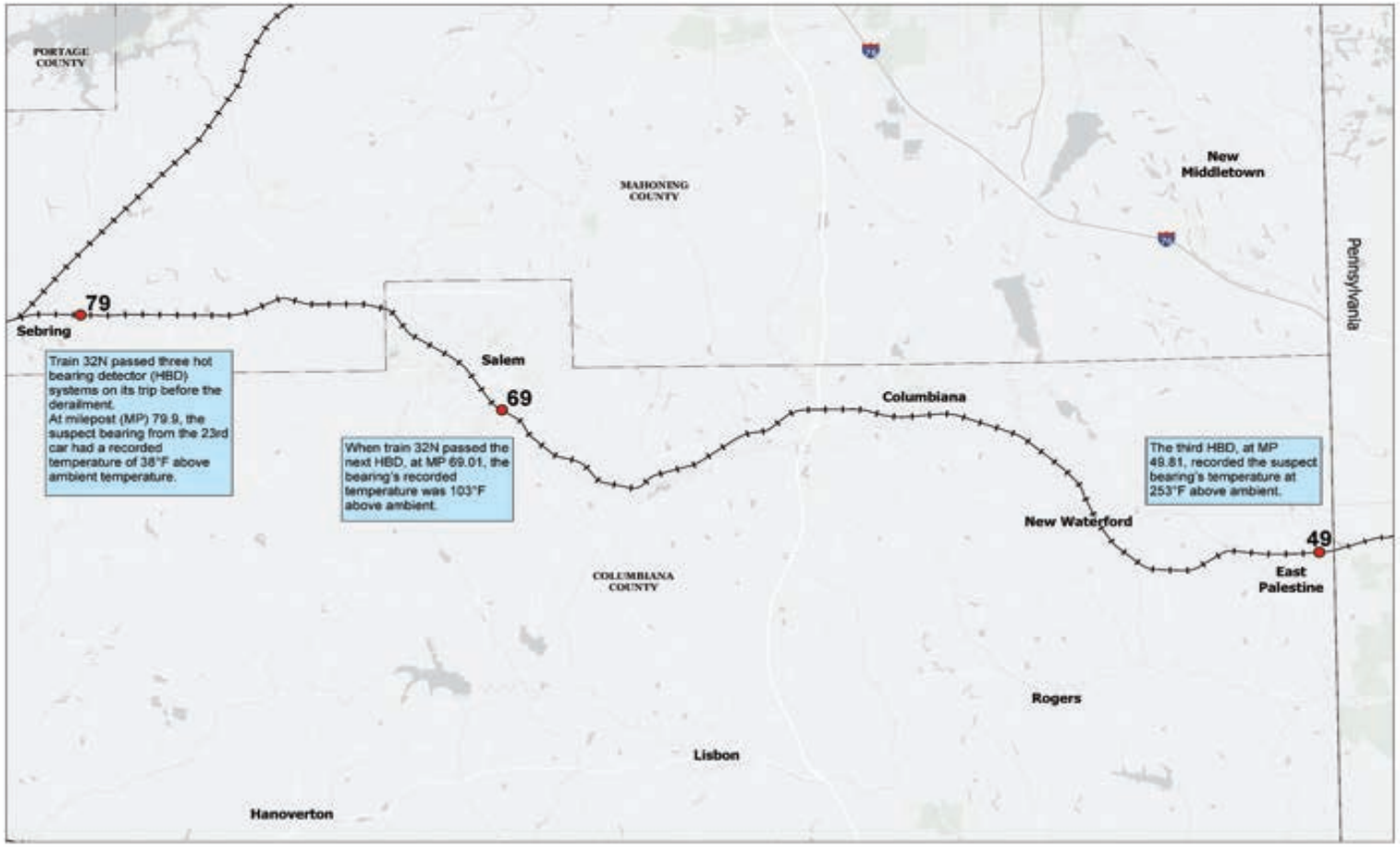
- **$12 million** in state and federal funds used for crossing upgrades last year
- **187** crossing safety upgrade projects in FY 2022
- Train-vehicle crashes have decreased from 356 in 1990 to **53** in 2021

Hazardous materials training grants

- PUCO awarded $800,000 in grants to 16 applicants in 2022.
- Educational institutions and local governments in Ohio use grants to train emergency responders in hazardous materials incident management.
- Current application period opened March 1 and runs through May 31.
- Money for grants comes from fines paid by hazardous material carriers and shippers.

All Hazards Training Center at the University of Findlay

NTSB Preliminary Report



Ohio Public Utilities Commission

Hot Bearing Detector

Ohio | Public Utilities Commission

Thank you!

HEARING BEFORE

THE OHIO SENATE SELECT COMMITTEE ON RAIL SAFETY

April 18, 2023

Testimony of Alan Shaw

President and Chief Executive Officer, Norfolk Southern Corporation

Chair Reineke, Vice Chair Rulli, Ranking Member Antonio, and distinguished members of the Committee, thank you for the opportunity to appear today to discuss the train derailment in East Palestine, Ohio.

My name is Alan Shaw, and I have been the President and CEO of Norfolk Southern since May 2022.

Today, I will share information with you about our progress cleaning the derailment site, assisting families whose lives were disrupted, and investing in the community. I will also discuss how we are making Norfolk Southern and the railroad industry safer through our own initiatives, collaboration with others in the industry, and engagement with lawmakers and other stakeholders. As we move this work forward, we are grateful for the leadership shown by Governor DeWine, Lt. Governor Husted, and Attorney General Yost and their teams from the beginning, and we look forward to continuing our close working relationship to make it right for the people of Ohio.

I am deeply sorry for the impact this derailment has had on the people in the region. I am determined to make it right.

We are making progress every day as we clean the site safely, thoroughly, and with urgency. Working under the Unilateral Administrative Order from the U.S. Environmental Protection Agency (U.S. EPA), we have submitted a long-term plan that will guide our comprehensive testing program for the community. That testing is informed by science and regulatory standards. And we will continue to transparently share the results of our ongoing testing. Agencies at the state and federal level—including the U.S. EPA, the Ohio Environmental Protection Agency (Ohio EPA), and the Pennsylvania Department of Environmental Protection (DEP)—are monitoring the air and water quality in the impacted region. We are encouraged that they have reported to date that both the air and drinking water are safe.

I recognize that financial assistance cannot change what happened, but it is an important part of doing the right thing. To date, we have committed to reimbursements and investments of more

than $30 million in total, including by helping more than 7,600 families through our Family Assistance Center. This is just a start. We are currently working toward a final resolution with Attorney General Yost and relevant stakeholders to establish three new funds to address healthcare, property values, and water protection in East Palestine and the surrounding communities. We also have launched a community website, NSMakingItRight.com, to provide the latest information to residents of East Palestine and the surrounding communities.

I would like to express my profound admiration for the first responders from Ohio, Pennsylvania, and West Virginia who responded to the derailment. I've had the opportunity to thank many of them personally for their heroism, including at an appreciation event we held in East Palestine last week. Making first responders whole has been a particular area of focus, and we have already pledged and paid millions to reimburse local fire departments for costs associated with the emergency response and clean-up.

I want to be clear: this financial assistance is just a down payment. I was on the ground in East Palestine soon after the accident, and I've been back almost every week since. I've met with community leaders, business owners, school officials, clergy, families, farmers, and others to begin to identify ways we can invest in the future prosperity of the residents in the area and support the long-term needs of its people.

We have hundreds of Norfolk Southern employees and contractors working in East Palestine seven days a week to address the community's needs, and we will be on the ground until our work is complete. A number of these employees and contractors are proud Ohioans, and I am proud that our ties to Ohio run deep. Over 2,700 Norfolk Southern employees call Ohio home, and we invest heavily in the state. Last year, our capital investments in the state totaled $214 million. We served almost 1,500 companies in Ohio last year across the agriculture, auto, steel, consumer, and coal industries, among others. We handled more than 450,000 cars in that time loaded with their freight, representing billions of dollars of our country's GDP supporting the Ohio economy, and it underscores the key role Ohio plays as a manufacturing powerhouse and a critical crossroad of our supply chain. We will continue to invest in the future of Ohio, just as we have always done.

We are also committed to learning from this accident and to working with public officials and industry to make railroads even safer. In the meantime, we have already launched a series of immediate steps to enhance safety, based on the facts in the National Transportation Safety Board (NTSB) preliminary report. We look forward to cooperating with the NTSB as it continues its investigation into the root cause of the accident as well as its wider investigation.

I. Our Commitment to Remediation and Monitoring

I appreciate each of the many opportunities I've had to meet with residents of East Palestine and the surrounding areas, and their feedback has informed our approach. Norfolk Southern is working around the clock to remediate the remaining issues and monitor for any impact on public health and the environment. We continue to work in close coordination with federal, state, and local regulators and others to conduct environmental monitoring and to develop and carry out near-term and longer-term clean-up activities. The remediation plan and each step of

our longer-term efforts will be implemented at the direction of the U.S. EPA pursuant to the Agency's Unilateral Administrative Order. We also appreciate the Ohio EPA's important work that it has been doing on the ground—both in monitoring of the area and in communicating with residents—and we look forward to maintaining open communication with, and listening to the experts at, Ohio EPA as cleanup efforts continue.

Norfolk Southern personnel arrived on-scene shortly after the accident, and we have been there ever since. We have worked to be transparent and cooperative with the various local, state, and federal stakeholders involved from the early hours of Unified Command through today. Following the accident, our specialists have remained on-location, assisted by expert derailment and environmental contractors. And we are making significant progress. These teams have contained, diverted, and treated affected portions of nearby waterways, flushed nearly a mile of surface waterways, and are capturing rainwater within the contaminated areas for temporary storage and disposal. To date, we have recovered and transported more than 12.3 million gallons of potentially affected water from the site for disposal at EPA-approved facilities.

We are working to safely remove affected soil, and our crews have removed more than 25,000 tons from the site. We are actively removing waste to facilities specifically engineered and permitted to safely handle this type of material. Last week, we completed excavation of the impacted soil beneath the removed south track, a major milestone in the remediation process, and we will complete the track restoration in the coming days.

We continue to listen to the experts and cooperate with state, federal, and local government agencies. The air monitoring to date has shown the air is safe to breathe. And the monitoring of the area's public drinking water and private water wells by state and local authorities and Norfolk Southern shows that the water is safe to drink and there are no harmful levels of substances related to the derailment. We are committed to continuing this monitoring for as long as necessary.

II. Our Commitment to the Community

I want the people of East Palestine and the surrounding communities to know that Norfolk Southern and I are deeply committed to them. As indicated above, we have already made an initial investment of over $30 million. Our financial support so far includes:

- More than $13 million in support to more than 7,600 families through our Family Assistance Center;
- Nearly $5 million in reimbursements and support to the East Palestine Fire Department and other area first responders for equipment used in the derailment response;
- A $1 million fund available immediately to East Palestine community leaders to identify where donations can do the most good;
- Another $1 million fund to support the immediate needs of the East Palestine community, overseen by a Norfolk Southern craft railroader who lives in East Palestine and has been hired to serve as a community liaison, reporting directly to my office;

- $300,000 to the East Palestine City School District to support the district's academics, athletics, extracurricular activities, and long-term contingency planning regarding the impacts of the derailment;

- $250,000 donation to The Way Station, an Ohio-based nonprofit delivering aid to the East Palestine community, to help establish a larger, permanent location in the area and hire additional staff, including a social worker;

- Funding and coordination of cleaning and air monitoring services for the East Palestine Elementary and High Schools;

- Donations intended to help local organizations thrive, including $33,000 to the Columbiana & Mahoning Beekeepers Association and $15,000 to the East Palestine Area Historical Society;

- $50,000 for business advancement to support local businesses in the area; and

- $65,000 to the East Palestine Youth Sports Association to allow children to play in sports leagues for free for the year.

We are listening closely to concerns from the community about whether there could be long-term impacts from the derailment, and we are working towards a final resolution with Attorney General Yost and relevant stakeholders on these issues. Many residents are worried about what they will do if health impacts related to the derailment are discovered years from now. To date, environmental monitoring continues to show the air and drinking water are safe. To provide an additional level of assurance, we are committed to a solution that addresses long-term health risks through the creation of a healthcare fund.

We also know residents are worried about their home values. While we are working with local leaders on investments to support the community's long-term prosperity, we understand these concerns. We are committed to working with all relevant stakeholders to provide tailored protection for home sellers if their property loses value due to the impact of the derailment.

We have heard the community's interest in programs that protect drinking water over the long term. We are prepared to work with stakeholders toward that goal as well.

We appreciate the leadership of Attorney General Yost on these issues, and we are committed to working with the Attorney General and his team to finalize the details of these programs and put those funds in place for the long term.

Because we know it is important to keep the community informed, NSMakingItRight.com is updated regularly with information about remediation, monitoring, financial assistance, and investments in the community. Again, this is all a down payment. We are listening to your concerns, and we are committed to making this right.

III. Our Focus on Safety

Rail is one of the safest modes of transporting hazardous materials. From 2021 to 2022, our train accidents in Ohio dropped by roughly 40 percent, and our employee injuries in Ohio have been declining each year since 2018. We recognize, however, that we need to continue working to improve railway safety. The morning after the derailment, I spoke to NTSB Chair Jennifer Homendy and pledged the full cooperation of Norfolk Southern in the NTSB's investigation. The NTSB's preliminary report released in February reflected that the Norfolk Southern crew was operating the train within our protocols and below the speed limit established by federal law. The wayside detectors installed on the track to identify overheated axles operated properly, and the crew took the appropriate action when they received the alarm.

We will analyze and address the NTSB's investigation results when they are available, but we are not waiting to act. We are committed to learning from this accident and working with public officials and industry to make railroads even safer. We have already launched a series of immediate steps to enhance safety, based on the facts in the NTSB's preliminary report.

As an initial step—and focusing on what we can do on our own—we are making our network of early-warning sensors stronger. Shortly after the derailment, I instructed my team to immediately look at steps we can take to improve safety further, and we are taking the following actions:

- Enhancing the hot bearing detector network;
- Piloting next-generation hot bearing detectors;
- Deploying more acoustic bearing detectors;
- Accelerating our Digital Train Inspection program; and
- Improving practices, alongside industry partners, for hot bearing detectors.

We currently spend more than $1 billion a year on technologies, equipment, and infrastructure to support safety, and another $1 billion per year on ongoing operations in support of safety. But the safety mechanisms in place did not prevent this accident. Every employee at Norfolk Southern is focused on learning from this incident and working with the entire freight rail industry to make changes.

We are committed to helping our first responders prepare for incidents when they do happen. For years prior to the East Palestine derailment, Norfolk Southern funded training for emergency responders. In 2015, Norfolk Southern launched "Operation Awareness & Response" with the goal of strengthening relationships with state and local first responders across our network through new training opportunities, and full-scale exercises.

In March, we announced a new regional training facility in Ohio, which offers free training to first responders in Pennsylvania, Ohio, and West Virginia. The first safety classes were held at our yard in Bellevue, Ohio, just west of Cleveland, and over the past six weeks we held eight

classes. In total, we trained over 300 first responders from Pennsylvania, Ohio, and West Virginia. In addition, the Norfolk Southern Safety Train will be in Cincinnati this week to offer similar training to over 110 first responders already registered there. We will have three more stops in Ohio with our dedicated Safety Train as it makes more than a dozen stops across our 22-state network in 2023. We are working cooperatively with the state of Ohio to establish a dedicated facility in the future. Every year, Norfolk Southern voluntarily trains between four and five thousand first responders throughout the states we serve.

In addressing issues going forward, Norfolk Southern views an industry-wide comprehensive approach—one that includes railcar owners, car manufacturers, leasing companies, equipment makers, and the railroad companies—as essential in helping to improve safety as the rail industry continues to provide the logistical infrastructure that enables the U.S. economy to grow. It's going to take all of us—and we're eager to help lead that effort.

IV. Charting a New Course

Since becoming CEO, I have made reliable and resilient service our goal. And we work every day to improve safety, service for our customers, and the quality of life for our front-line railroaders. To describe how we are doing that, I would like to provide some important context on the new strategy we announced for Norfolk Southern at the end of last year.

In the weeks since the derailment there have been a number of questions about an industry operating approach called precision scheduled railroading (PSR). There are five principles of PSR: operate safely, develop people, provide service, control costs, and optimize assets. These are sound principles one might find in any industry with an operational focus.

In recent years, however, PSR has become associated with a singular focus on cost-cutting to drive a low operating ratio, which is a common industry measure for efficiency. It is here that Norfolk Southern has approached things differently from others in the industry and charted a new course. In a significant departure from the railroad industry's recent past, we deliberately moved away from a singular focus on operating ratio. Instead, we are taking a more balanced approach to service, productivity, and growth.

As just one example of what our strategy means in practice, instead of furloughing workers during periodic economic downturns, we intend to use the opportunity to invest in our workforce and provide additional training. When we do that, it makes us a more resilient company that is better able to serve our customers, and it creates more career opportunities for our craft railroaders. We hired craft railroaders aggressively throughout 2022 and continue to do so this year.

Our new strategy goes hand-in-hand with our increased focus on culture and employee engagement, with an emphasis on transparency and collaboration. I know that when Norfolk Southern is successful, it is because our craft colleagues are getting the job done for our customers and the U.S. economy. I have spent countless hours in the field in the 11 months I have served as CEO, thanking our front-line railroaders for their service and listening to their ideas on how to make Norfolk Southern better.

We are committed to enhancing quality of life and work predictability for our craft employees, who are the key to our success. When we completed the recent round of national labor negotiations, with a historic and well-deserved 24 percent pay increase, I committed immediately to begin negotiations at the local level on quality-of-life issues like paid sick leave. We did what we said we were going to do and have already reached agreements on paid sick leave with ten of our unions.

V. Our Commitment to Industry & Legislative Action

We support legislative efforts to enhance the safety of the freight rail industry. We are committed to working with our fellow industry leaders to make the railroad industry a safer place. We recognize and appreciate the efforts of both state and federal lawmakers in proposing new legislation to create a safer rail industry. Pending legislation in Congress includes measures with the potential to enhance safety and improve outcomes for our industry, our customers, and the communities we serve.

We support provisions in this legislation that call for more industry-funded training for first responders, and we are not waiting for legislation to move this forward. We have already announced the expansion of our existing training programs and the creation of a new regional training center in Ohio, to serve first responders in Ohio, Pennsylvania and West Virginia.

We support the principle that first responders need accurate real-time information on the contents of trains moving through their communities and instruction on the safe handling of those contents in the event of an accident. We intend to take a leading role getting the AskRail safety application into the hands of every first responder who needs access. In this area specifically, the details of legislation matter as policymakers balance safety enhancements with national security concerns.

We support triennial reviews of regulations for rail car inspections and standards for freight car safety, because regular reviews drive good regulatory policy and outcomes.

We support the Federal Railroad Administration's (FRA) Confidential Close Call Reporting System (C3RS). Norfolk Southern participates in the C3RS Working Group that is part of the Department of Transportation's Railroad Safety Advisory Committee.

We support accelerating the phaseout of older tank car models, research into advanced tank car design, and additional funding for research and development on next-generation early-warning sensor technologies.

There are other aspects of the proposed legislation that we support in principle. Establishing performance standards, maintenance standards, and alert thresholds for safety sensors is one example. We have already committed to work with the industry to develop additional data-based best practices in these areas, and we welcome constructive discussion with stakeholders to craft effective and practical legislation.

There are also areas in which we believe Congress could go further with safety legislation. We encourage even stricter standards for tank car design. There are significant opportunities for

advanced technology to enhance rail safety, and we encourage Congress to consider additional research into on-board rail car defect detection technology.

We support increasing fines and penalties for persons found tampering with railroad facilities and safety equipment, such as grade crossing warning devices, wayside detectors, or signal boxes. We support codifying and enhancing the FRA's confidential close car reporting system. And we support new requirements to ensure utility installations in railroads rights-of-way are conducted safely.

We look forward to continuing to engage with relevant stakeholders on these important issues as we all work to improve safety in the freight rail industry.

VI. Conclusion

Finally, Chair Reineke, Vice Chair Rulli, Ranking Member Antonio, and members of the Committee, I want to state again how deeply sorry we are for the impact of this derailment on East Palestine and the surrounding communities. We are making progress in the recovery and know our work is not yet done. On behalf of the more than 19,700 hard-working employees of Norfolk Southern, I pledge that we won't be finished until we make it right. Thank you for the opportunity to testify before you today, and I look forward to your questions.

NORFOLK SOUTHERN

MAKING IT RIGHT

BY THE NUMBERS

7,672+

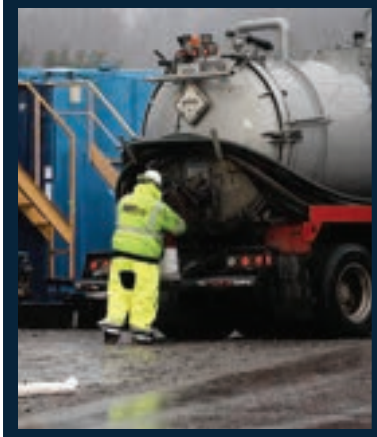
FAMILIES HELPED

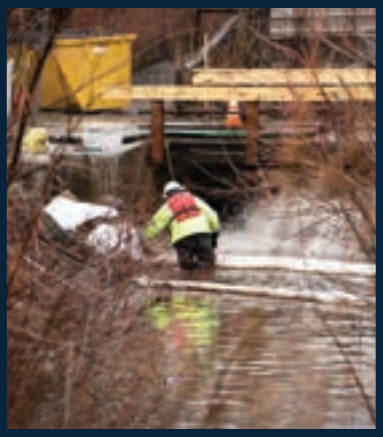
Thanks to the NS Family Assistance Center

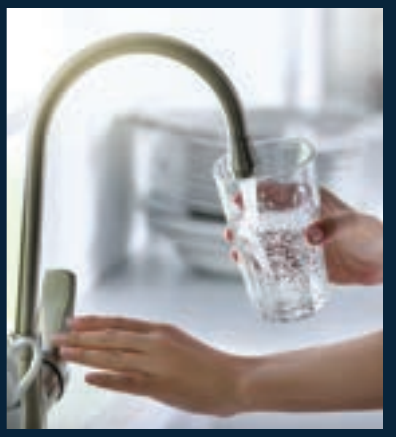
$30.1MM

DISTRIBUTED FOR

- *First responders in OH and PA*
- *Community relief funds*
- *Non-profits*
- *Cleaning places such as police and fire departments, and schools*
- *Bottled water*
- *Water treatment*







12.1MM
GALLONS OF IMPACTED WATER
recovered and transported off site

27,230
TONS OF WASTE SOIL
removed

5,200
FEET OF IMPACTED WATERWAYS
flushed

375
PRIVATE DRINKING WATER WELLS
sampled

TESTIMONY

OHIO SENATE SELECT COMMITTEE on RAIL SAFETY

April 18, 2023

Chairman Reineke, Vice Chair Rulli, Ranking Member Antonio, and members of the Senate Select Committee on Rail Safety, thank you for this opportunity to present testimony on Ohio's freight railroads.

I am Art Arnold, the Executive Director of the Ohio Railroad Association (ORA). The ORA represents 28 freight railroads operating in Ohio. Norfolk Southern and CSX are our largest members and the railroads with the most extensive rail operations in both Ohio and in the eastern half of the United States. The remaining members of the Ohio freight industry operate with much smaller footprints. The network of rail lines is necessarily and fortunately interconnected in many locations, providing options for the rail shipper to maximize their use of both the state and national rail system.

CSX and Norfolk Southern represent Class I railroads, the highest designation in the US rail industry. There are only seven freight railroads with this classification in North America. Two other Class I railroads, Canadian National and Canadian Pacific, have either operations or trackage rights in Ohio, but those are much smaller than their continent-spanning rail services north of the US-Canada border.

According to recent testimony presented by the Ohio Rail Development Commission (ORDC), Ohio's rail network is comprised of roughly 5,100 miles of track. As an example, that network in 2016 carried almost 290,000,000 million tons of freight, roughly 1.2 million rail carloads, or a tonnage equal to approximately 13 million commercial truckloads. (For comparison, 13 million truckloads are approximately equal to the number of trucks that operate through the Interstate 70-71 split near downtown Columbus over a two-year period.) This freight was moved on a network that is privately-owned, maintained, and operated. According to the Federal Railroad Administration (FRA), the U.S. freight rail network, consisting of almost 140,000 route miles, is widely considered the largest, safest, and most cost-efficient freight system in the world.

In assessing the Ohio freight rail system, the Ohio State Rail Plan has this to say about the extent and role of freight rail to Ohio's economy:

At 5,187 miles, Ohio's network of active rail lines is the fourth most.

extensive in the nation, behind that of Texas, Illinois, and California.

Because Ohio is geographically much smaller than either Texas or

California, the Ohio rail network is more concentrated. Rail infrastructure (unlike highway infrastructure) is often sold or abandoned if its use does not justify costs to maintain and operate. If Ohio businesses did not use the rail network, it would not be as extensive. The high mileage of rail lines in Ohio reflects the close integration of rail with Ohio's economy. Including the impact of employee spending and spending across industries, the freight rail industry contributes $2.8 billion to Ohio's economy annually.

Prominent within Ohio's economy are industries that rely on rail. For example, manufacturing's total share of employment within Ohio is 46 percent higher than in other parts of the country. Within manufacturing, top sectors are 1) steel manufacturing; 2) chemical manufacturing; 3) food and beverage manufacturing; and 4) motor vehicle manufacturing. Each of these sectors is a heavy user of rail.

Ohio ranks eighth in the nation for corn production and ninth in the nation for soybean production. The Association of American Railroads ranks states by originating and terminating rail tonnages by commodity. Ohio is ranked among the top 10 states in originating farm products; crushed stone, sand, and gravel; intermodal; food products; metallic ores; primary metal products; and waste/scrap. Ohio is also ranked among the top 10 in terminating tonnage of coal; chemicals; intermodal; crushed stone, sand, and gravel; food products; metallic ores; and waste and scrap.

In my opening remarks, I mentioned that the Association had 28 member railroads. Most of these businesses are referred to as short line railroads. Here's what the ORDC's State Rail Plan has to say about short line railroads in Ohio:

Short line railroads were created following bankruptcies or as spin offs of larger Class I railroads permitted by rail industry deregulation. Following

the Staggers Act of 1980, railroads gained the legal right to shed unprofitable rail lines. Major railroads marketed unproductive branches to short line operators. These railroads were able to provide service on the formerly unprofitable rail lines because they have lower cost structures. Local railroads provide "first mile" and "last mile" connections to railroad customers. They are important for economic development within the state. It is frequently much less costly to locate industrial sites on short lines, rather than build the necessary track infrastructure required by Class I railroads to locate on busy mainlines. Some short lines also can interchange with multiple Class I carriers, providing wider shipping options. Without long-haul freight, local railroads must focus on local service to survive and grow, so they often maintain a relatively strong focus on customers, large and small.

I think it is important for this committee to understand the state's rail system and how that system works, so I appreciate your patience and attention to the background I have just provided. All the railroads operating in Ohio have different operational and business challenges, but they have one thing in common – each of them is required to observe the many federal regulations surrounding their operations. These federal regulations address nearly every aspect of freight rail operations, from the track structure to train speeds to reporting requirements. These regulations include the rail cars you see every day. Many of these cars are not owned by the railroad, but by the rail shipper or by rail car leasing companies.

The rail system that supports the trains that move the million plus rail cars in, out, around, and through Ohio is subject to extensive federal rules and oversight. The adherence to these rules is overseen by the FRA's Office of Railroad Safety. This office promotes and regulates safety across the American railroad industry, encompassing all types of railroad operations. The office executes its regulatory and inspection responsibilities through a diverse staff of railroad safety experts. The staff includes nearly 400 Federal safety inspectors who specialize in one of six technical disciplines focusing on compliance and enforcement in:

Grade Crossings

Hazardous Materials

Motive Power and Equipment

Operating Practices

Signal and Train Control

Track

During the recent consideration of the state transportation budget, the industry shared more specific details on the role of federal regulatory oversight. We talked about the operations of short line railroads and how they differ from those of larger railroads. And we expressed our concerns with some of the requirements that were eventually included in HB 23.

The rail industry has been active in other ways since the derailment in East Palestine. Every railroad that operates in Ohio reviewed their operating practices and safety measures. Norfolk Southern and CSX have both publicly shared the extensive steps they have undertaken to examine their operations and standards. Over the past two months, both the FRA and the Association of American Railroads have issued advisories on rail operations. This has taken place in an industry where the safety record shows great progress over the past twenty years, as FRA data and numerous reports have described.

Over 99% of trains operate safely from origin to destination, notwithstanding the railroad or any other variable. Rail transportation is the safest method of moving hazardous materials. (The transportation of haz mat over the highway is almost three times more likely to have an incident than rail.) This substantial record is readily available for your examination via the FRA's website. Since the 1990s, derailments nationally have decreased by 85% due to improved operating rules, massive investments in track and equipment, and the voluntary application of technology to rail operations. More is being done to improve these numbers, but there is no magic wand. It takes time, resources, training, and investment. My fellow Ohioans should be encouraged to know that these are all being applied to improving rail safety in Ohio and across the country. As a recent example, I've included an announcement of an upcoming training session in Zanesville for first responders organized through the Genesee & Wyoming Railroad and the Association of Short Line & Regional Railroads. Other similar Ohio events organized in partnership with other railroads have already taken place and more are scheduled.

The rail industry's longstanding commitment to Ohio, evidenced by the billions of dollars invested over decades in the rail network, has resulted in thousands of rail-dependent jobs and massive private investments by the businesses that rely on rail service. (Please see the attached document detailing the ORDC-supported projects as examples of that investment, industries, and related jobs.) Ohioans have also flocked to that rail industry for employment. Railroad jobs are demanding, but they are good jobs. Railroads provide the opportunity to build lifelong careers in fields such as engineering and dispatching, law enforcement, information technology, and industrial development. And with a strong track record of hiring America's veterans, rail companies are military-friendly employers. Because of high wages and benefits, technical training, and professional growth opportunities, freight rail employees often stay in the industry for their entire careers. In fact, many have family railroad legacies that stretch back generations.

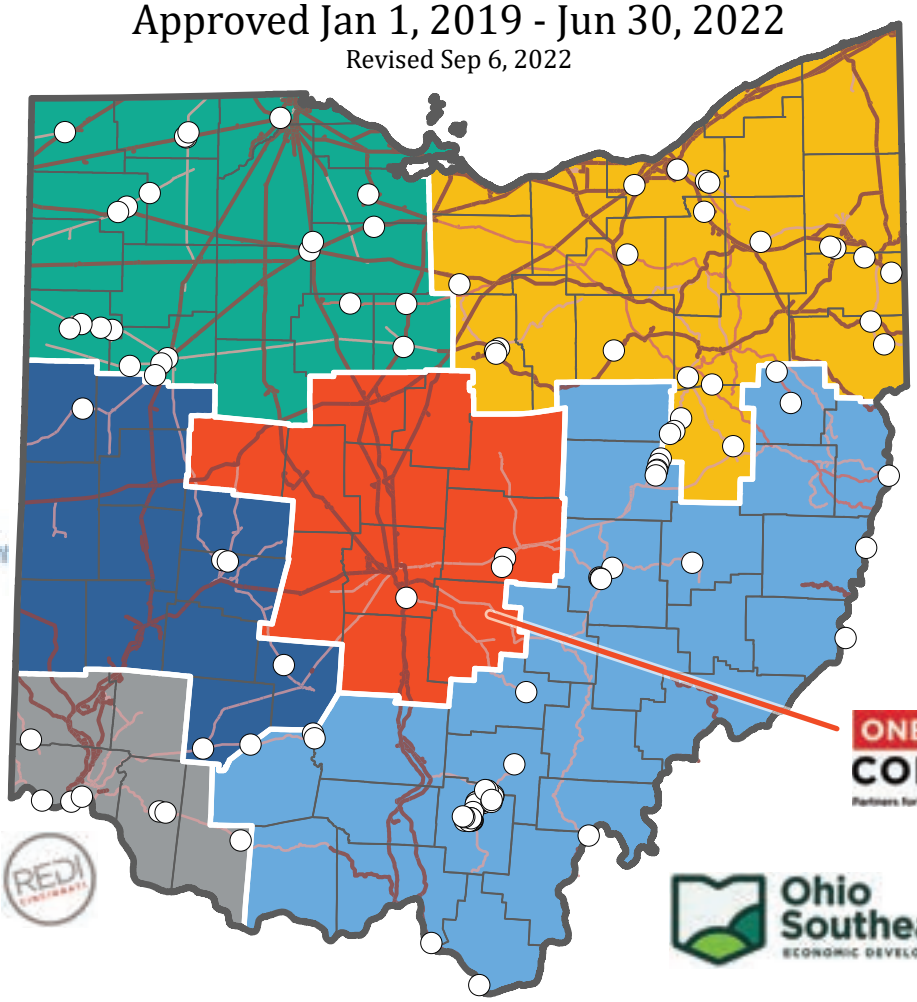
The freight rail industry in Ohio and nationally is safe and it is getting safer every year. That's happening through the efforts of individuals, companies, government agencies, and the industry as a whole. The numbers back this up. Ohio will remain an important location for railroads to operate, and rail will remain an important partner for Ohio businesses, and a linchpin for thousands of jobs.

Thank you for the opportunity to share this background on the state's freight rail system.

ORDC Rail Development Projects

Approved Jan 1, 2019 - Jun 30, 2022

Revised Sep 6, 2022



	Regional Growth Partnership	Team NEO	Dayton Development Coalition	One Columbus	REDI Cincinnati	Ohio Southeast	Total
Projects*	18*	18*	5*	3*	7	19*	66 (unique)
Funding							
ORDC Grant	$ 3,487,080	$ 4,780,895	$ 1,078,163	$ 160,960	$ 976,106	$ 2,496,943	$ 12,980,147
ORDC Loan	$ 900,000	$ 500,000	$ 0	$ 0	$ 700,000	$ 70,000	$ 2,170,000
Other Private	$ 72,703,172	$ 5,585,342	$ 2,010,055	$ 945,960	$ 4,572,762	$ 23,512,917	$ 109,330,208
Other Public	$ 13,572,692	$ 1,755,575	$ 905,344	$ 315,000	$ 0	$ 854,155	$ 17,402,766
Total	**$ 90,662,944**	**$ 12,621,812**	**$ 3,993,562**	**$ 1,421,920**	**$ 6,248,868**	**$ 26,934,015**	**$ 141,883,121**
Jobs							
Created	552	231	173	150	0	205	1,311
Retained	867	176	90	0	0	998	2,131
Supported	2,242	3,553	1,800	0	369	129	8,093
Total	**3,661**	**3,960**	**2,063**	**150**	**369**	**1,332**	**11,535**

Funding values rounded up to whole dollars.

*Note: Three projects had sites falling in more than one JobsOhio region.

The project totals were divided among the number of sites in each region to calculate the regional totals but only once for the whole Project count.

Genesee and Wyoming - Bridge Repair

3 Team NEO
1 One Columbus
9 Ohio Southeast

IORY - Revitalizing Rail Greenfield Line

1 Dayton Development Coalition
1 Ohio Southeast

RJ Corman - On-Site Rail Rehab

3 Regional Growth Partnership
2 Team NEO

Ohio Rail Development Commission

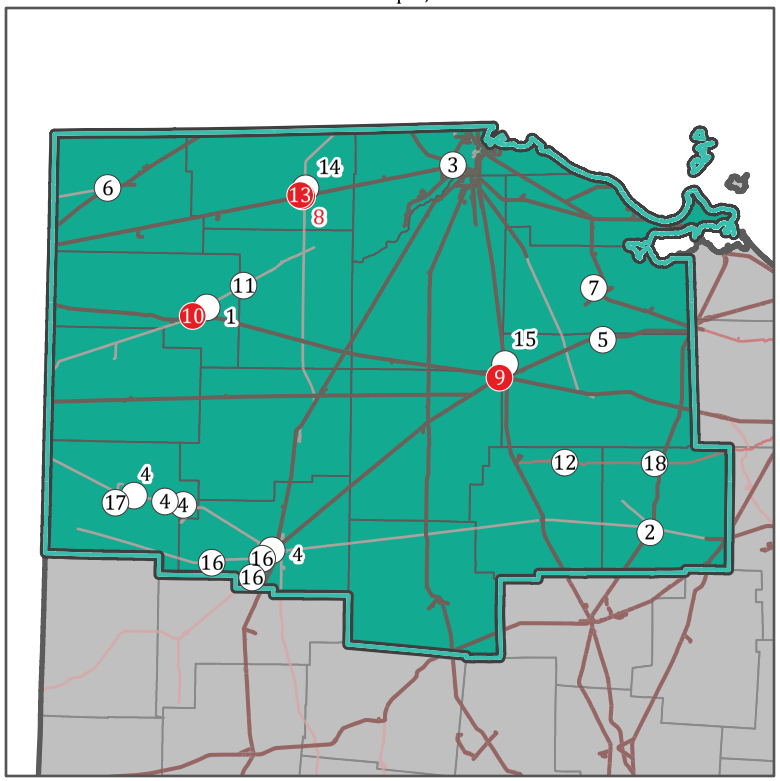
rail.ohio.gov

JobsOhio Network Partner

ORDC Rail Development Projects

Approved Jan 1, 2019 - Jun 30, 2022

Revised Sep 6, 2022



1. APackaging Group - New Facility
2. BIR - Rail Expansion
3. Brenntag - New Facility
4. CFE - Linking Lima (4 Sites)
5. Church and Dwight - Rail Expansion - 2020
6. IN - On-Site Track Rehab
7. International Cushioning Co. New Facility
8. **IORY - Delta Yard Rehab**
9. **Mennel Milling - Facility Expansion**
10. **NDW - Critical Safety Upgrades**
11. NDW - Rail Replacement Project
12. NGL Supply - New Facility
13. **North Star Bluescope Steel New Facility**
14. Nova Tube and Steel - New Facility
15. Ohio Logistics - Rail Expansion
16. RJ Corman - On-Site Rail Rehab (3 / 5 Sites)
17. Trucent Renewable Chemicals New Facility
18. WE - Crawford Siding

Funding		
ORDC Grant	$	3,487,080
ORDC Loan	$	900,000
Other Private	$	72,703,172
Other Public	$	13,572,692
Total	**$**	**90,662,944**

Jobs	
Created	552
Retained	867
Supported	2,242
Total	**3,661**

Regional Growth Partnership - 18 Projects - $90,662,944

Featured Projects

8. IORY - Delta Yard Rehab

About

Rehabilitation of the Delta Yard to support increased current and future rail freight shipment demand.

Project Benefits

- Improves capacity at a yard that is experiencing an increase in rail freight volume
- Supports area steel industry shippers

Funding		
ORDC Grant	$	300,000
Private (IORY)	$	3,584,000
CRISI Grant	$	3,284,000
Total	**$**	**7,168,000**

9. Mennel Milling - Facility Expansion

About

New rail expansion after Mennel acquired a new customer.

Project Benefits

- $9.5m expansion will result in 12 new and 210 retained jobs at the facility
- Ensures Mennel continues to have room to grow

Funding		
ORDC Grant	$	75,000
Private (MM)	$	225,000
Total	**$**	**300,000**

10. NDW Critical Safety Upgrades

About

CRISI Project to upgrade 10 miles of rail with heavier, newer rail, and replace approximately 29,000 ties on 29 miles of the ND&W.

Project Benefits

- Leverages State and private funding to acquire CRISI Grant
- Ensures NDW is able to serve existing customers
- Investment in NDW led directly to project #1 on this page

Funding		
ORDC Grant	$	250,000
Private (NDW)	$	3,862,452
CRISI Grant	$	4,112,452
Total	**$**	**8,224,904**

13. North Star Bluescope Steel - New Facility

About

Installation of new rail for new hot-rolled steel processing facility.

Project Benefits

- Part of a $700,000,000 plant expansion by North Star Bluescope Steel in Delta
- 90 new jobs and 397 retained jobs in Fulton County

Funding		
ORDC Grant	$	100,000
Private (North Star)	$	1,600,000
Total	**$**	**1,700,000**

rail.ohio.gov

Ohio | Rail Development Commission

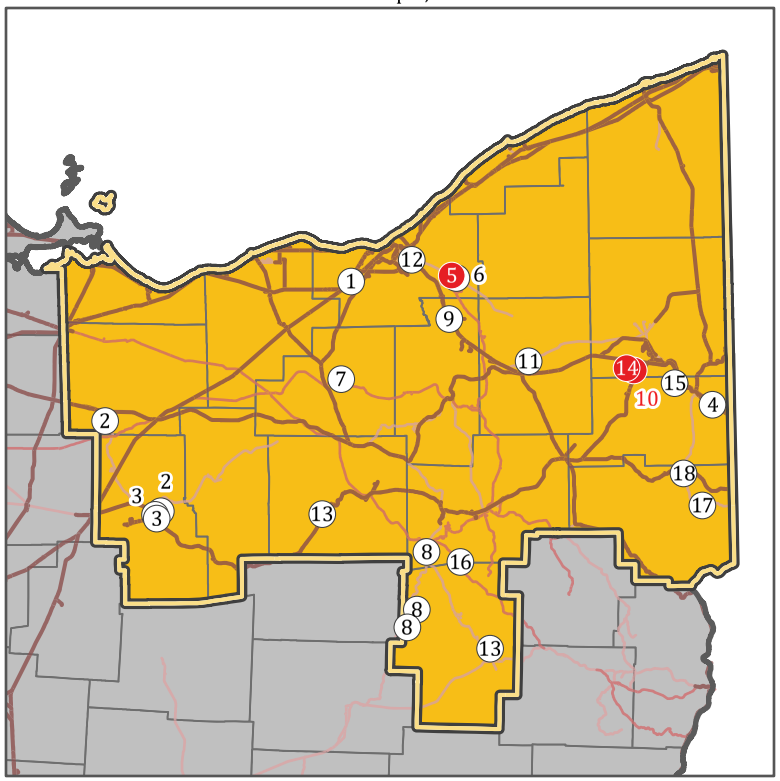
RGP NORTHWEST OHIO

JobsOhio Network Partner

ORDC Rail Development Projects

Approved Jan 1, 2019 - Jun 30, 2022

Revised Sep 6, 2022



1. Amware, Recycle-It - On-Site Rail Rehab
2. ASRY - Bridge and Culvert Repair (2 Sites)
3. ASRY - Yard Expansion and Line Rehab (2 Sites)
4. CASTLO Industrial Park Bridge Painting
5. **CCR - Emergency Culvert Repair**
6. CCR - Mahoning Subdivision Rehab
7. City of Medina - Track Improvements
8. Genesee and Wyoming Bridge Repair (3 / 13 Sites)
9. Jamen, Tri Mor - Transload
10. **M&M Industries - New Facility**
11. Menard - New Facility (Ravenna)
12. OmniTRAX - On-Site Rail Rehab
13. RJ Corman - On-Site Rail Rehab (2 / 5 Sites)
14. **Taylor Coil - On-Site Rail Rehab**
15. United Freezer - On-Site Rail Rehab
16. WE - State Route 212 Bridge Repair
17. YSRR - Little Bull Creek Stream Restoration
18. YSRR - On-Site Rail Rehab

Funding		
ORDC Grant	$	4,780,895
ORDC Loan	$	500,000
Other Private	$	5,585,342
Other Public	$	1,755,575
Total	**$**	**12,621,812**

Jobs	
Created	231
Retained	176
Supported	3,553
Total	**3,960**

Team NEO - 18 Projects - $12,621,812

Featured Projects

5. CCR - Emergency Culvert Repair

About

Emergency repair of failed stone arch culvert to ensure service to customers along the Mahoning Subdivision Line, including the Nestle frozen foods production facility.

Project Benefits

- Allows crucial repairs to culvert to occur sooner
- Prevents potential rail service interruptions to important employer in the region (Nestle)

Funding

ORDC Grant	$	300,000
Private (CUOH)	$	300,000
Total	**$**	**600,000**

10. M&M Industries - New Facility

About

Installation of new rail for new plastic container manufacturing facility.

Project Benefits

- 106 new jobs at the Lordstown facility
- Reutilizes brownfield site for productive use
- Increases rail traffic on a line previously preserved for future projects such as this one

Funding

ORDC Grant	$	100,000
Rail Cost (Estimate)	$	750,000
Total Investment	**$**	**38,000,000**

14. Taylor Coil - On-Site Rail Rehab

About

Rehabilitation work including replacement of 100-pound rail with relay 115-pound rail and a total rebuild from the sub-grade up to the top of rail.

Project Benefits

- Helps maintain rail service, which is crucial to the company's operations
- 67 jobs retained in Trumbull County

Funding

ORDC Grant	$	56,125
Private (CUOH)	$	56,125
Total	**$**	**112,250**

rail.ohio.gov

Ohio | Rail Development Commission

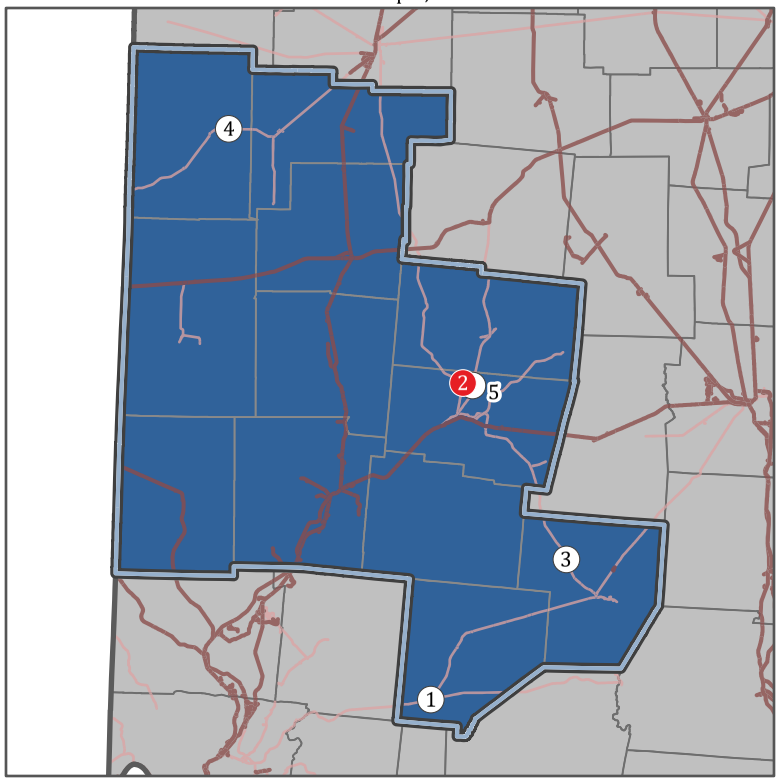
Team neo

JobsOhio Network Partner

ORDC Rail Development Projects

Approved Jan 1, 2019 - Jun 30, 2022

Revised Sep 6, 2022



1. IORY - Revitalizing Rail Greenfield Line (1 / 2 Sites)
2. **IORY Tremont City Siding - DTMF Switches**
3. Menard - New Facility - Jeffersonville
4. **Versa-Pak - On-Site Rail Expansion**
5. WESTCO - Bridge Repair and On-Site Rail Rehab

Funding			**Jobs**	
ORDC Grant	$	1,078,163	Created	173
ORDC Loan	$	0	Retained	90
Other Private	$	2,010,055	Supported	1,800
Other Public	$	905,344		
Total	**$**	**3,993,562**	**Total**	**2,063**

Dayton Development Coalition - 5 Projects - $3,993,562

Featured Projects

2. IORY Tremont City Siding - DTMF Switches

About

Replacement of turnouts at each end of the existing Tremont City Siding, an upgrade to electronic DTMF (Dual-Tone Multi-Frequency) switches, and replacement of railroad ties with related work.

Project Benefits

- Improves train fluidity
- More efficient service increases reliability to existing customers, including P&G and North Star Bluescope Steel
- Remote switch control improves train crew safety; reduces potential for blocked crossings and train idling time

Funding		
ORDC Grant	$	525,768
Private	$	283,106
Total	**$**	**808,874**

4. Versa-Pak - On-Site Rail Expansion

About

Expansion of existing rail infrastructure at plastic packaging facility.

Project Benefits

- 12 new jobs at the Celina facility - total employment of 102
- New rail expansion accommodates the facility's future growth
- Partnered with Mercer County on this project

Funding		
ORDC Grant	$	125,000
Rail Cost (estimated)	$	382,000
Other Incentives	$	54,000
Total Investment		**$10,000,000**

rail.ohio.gov

Ohio Rail Development Commission

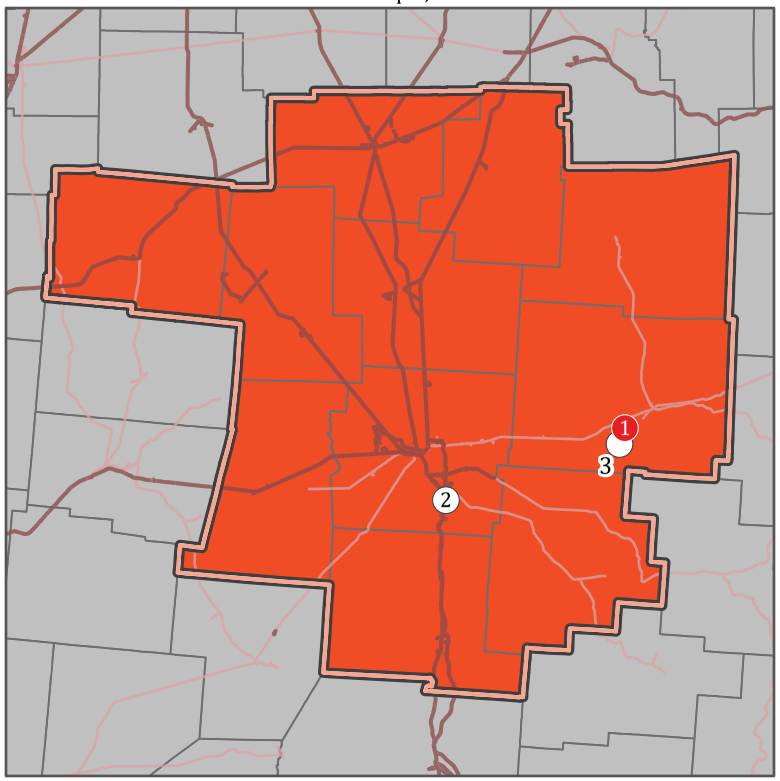
ddc dayton development coalition

JobsOhio Network Partner

ORDC Rail Development Projects

Approved Jan 1, 2019 - Jun 30, 2022

Revised Sep 6, 2022



1. Behr Processing - On-Site Rail Improvements

2. Freepoint Commodities - New Recycling Facility

3. Genesee and Wyoming - Bridge Repair (1 / 13 Sites)

One Columbus - 3 Projects - $1,421,920

Featured Projects

1. Behr Processing - On-Site Rail Improvements

About

New rail expansion for new paint manufacturing and distribution plant.

Project Benefits

- Behr Processing is seeking to build a new state-of-the-art manufacturing and distribution operation in the Midwest region
- Approximately $80M of capital investment
- Approximately 90 new jobs at the facility
- Rail improvements required to prepare site for operations

Funding

ORDC Grant	$	100,000
Private (Behr)	$	300,000
Total	**$**	**400,000**

Funding

ORDC Grant	$	160,960
ORDC Loan	$	0
Other Private	$	945,960
Other Public	$	315,000
Total	**$**	**1,421,920**

Jobs

Created	150
Retained	0
Supported	0
Total	**150**

rail.ohio.gov

Ohio Rail Development Commission

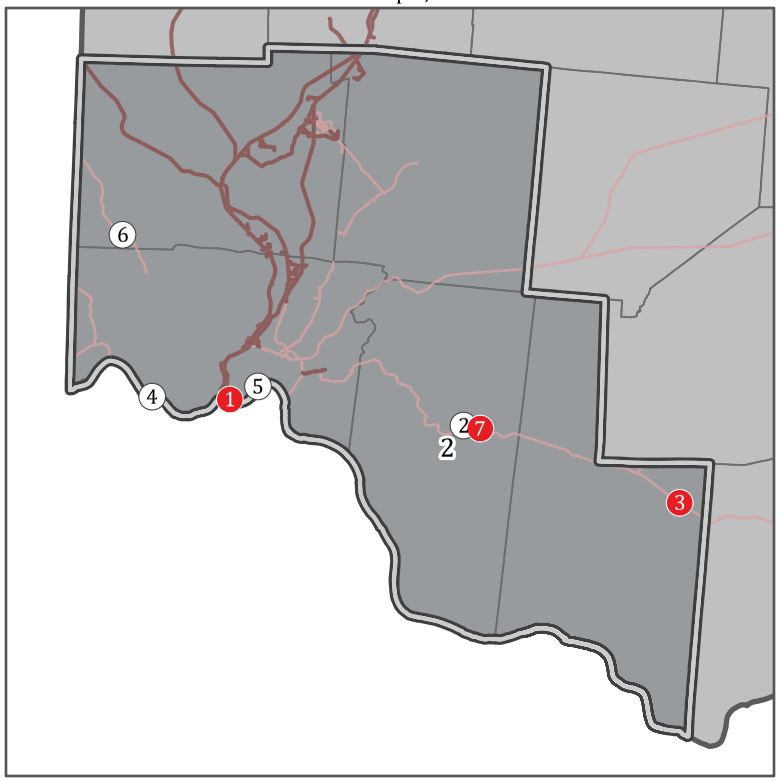
ONE COLUMBUS Partners for Regional Growth & Prosperity

JobsOhio Network Partner

ORDC Rail Development Projects

Approved Jan 1, 2019 - Jun 30, 2022

Revised Sep 6, 2022



1. CBT - On-Site Rail Expansion
2. CCET - On-Site Rehab and Bridge Repair
3. CCET - Stone Transload
4. CIND - On-Site Rail Rehab
5. Fulton Co. Railway - Front Loader Loan
6. IERR - On-Site Track Rehab
7. Purina - New Facility

Funding		
ORDC Grant	$	976,106
ORDC Loan	$	700,000
Other Private	$	4,572,762
Other Public	$	0
Total	**$**	**6,248,868**

Jobs	
Created	0
Retained	0
Supported	369
Total	**369**

REDI Cincinnati - 7 Projects - $6,248,868

Featured Projects

1. CBT - On-Site Rail Expansion

About

Expansion of rail to increase storage space for cars on-site, reducing trips required through CSX Queensgate yard.

Project Benefits

- Site is an all-purpose inland marine terminal, shipping bulk / breakbulk products in the steel, oil, and agricultural industries across western Ohio
- Currently moves ~38 cars per trip (3,000+ per year); project would create space for an additional 17 cars onsite, commitment of 3,300 railcars per year after completion
- Small loop track allows more flexibility to retain loaded / empty cars on site, reducing number of trips through the CSX Queensgate Yard

Funding

ORDC Grant	$	50,000
Private	$	450,000
Total	**$**	**500,000**

3. CCET - Stone Transload

About

Installation of new rail for new stone aggregate processing and transload facility.

Project Benefits

- Two new transload facilities will be established
- A commitment of 1,500 new railcars, diverting 12,000 trucks from area highways

Funding

ORDC Grant	$	200,000
ORDC Loan	$	500,000
Private	$	2,200,000
Total	**$**	**2,900,000**

7. Purina - New Facility

About

Construction of a connecting track for a new pet food facility.

Project Benefits

- $910,000 investment in rail infrastructure
- Company will employ 300 at project completion
- Significantly increases traffic on the operating shortline railroad

Funding

ORDC Grant	$	150,000
Private (CCET)	$	125,000
Private Funds	$	635,000
Total Funding	**$**	**910,000**
Total Investment	**$**	**550,000,000**

rail.ohio.gov

Ohio | Rail Development Commission

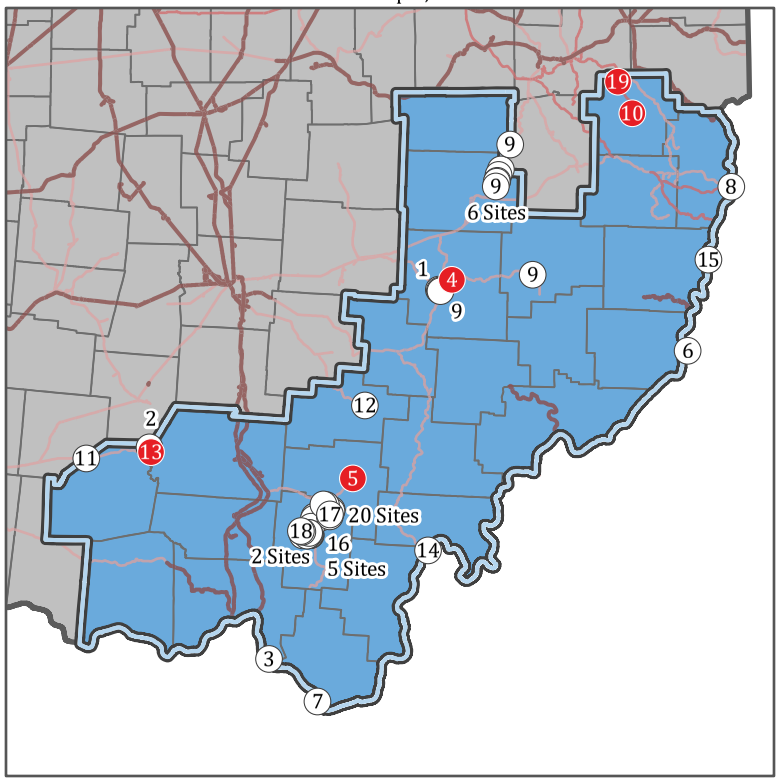
REDI CINCINNATI

JobsOhio Network Partner

ORDC Rail Development Projects

Approved Jan 1, 2019 - Jun 30, 2022

Revised Sep 6, 2022



1. Adams Bros. Concrete Products Zemba Bros. Transload
2. Adient US - On-Site Rail Rehab
3. ALTIVIA Petrochemicals - Rail Expansion
4. **AMG Vanadium - New Facility**
5. **Austin Powder - On-Site Rail Rehab**
6. CUOH - Rail Expansion
7. Engines / LEDC - On-Site Rail Rehab
8. FeX Processing - New Facility
9. Genesee and Wyoming Bridge Repair (9 / 13 Sites)
10. **Griffeth and Son Trucking Transload**
11. Huhtamaki - Facility Expansion
12. IORY - HVSR - Interchange Repair
13. **IORY - Revitalizing Rail Greenfield Line (1 / 2 Sites)**
14. KNWA - On-Site Rail Rehab
15. Mountaineer Products - New Facility
16. OSCR - AluChem Lead Rehab (5 Sites)
17. OSCR - Bridge Repairs and Grade Crossing Surfaces (20 Sites)
18. OSCR - Crossing Surface
19. **WE - Oneida Bridge Repair**

Funding		
ORDC Grant	$	2,496,943
ORDC Loan	$	70,000
Other Private	$	23,512,917
Other Public	$	854,155
Total	**$**	**26,934,015**

Jobs	
Created	205
Retained	998
Supported	129
Total	**1,332**

Ohio Southeast - 19 Projects - $26,934,015

Featured Projects

4. AMG Vanadium - New Facility

About

Installation of new rail for new elemental metals processing facility.

Project Benefits

- Part of a $300,000,000 project for AMG Vanadium to establish a new facility, their second in the region
- 100 new jobs in Muskingum County

Funding		
ORDC Grant	$	150,000
Private (AMG)	$	1,350,000
Total	**$**	**1,500,000**

5. Austin Powder - On-Site Rail Rehab

About

Rehab work (tie replacement, raising tracks, ballast, drainage, switches, and four grade crossing reconstructions) to repair track to a safe and reliable level in order to continue receiving raw material.

Project Benefits

- 250+ existing jobs, 15 new jobs
- Vinton County plant is the heart of Austin Powder Company
- Provides commercial explosives manufacturing R&D for other plants around the world
- Reduces derailments, creates a safer workplace

Funding		
ORDC Grant	$	200,000
Private (Austin Powder)	$	353,296
Total	**$**	**553,296**

10. Griffeth and Son - Trucking Transload

About

Installation of new rail for new transload facility.

Project Benefits

- Provides a new transload service to the area and redevelops a vacant industrial facility
- 40 new jobs, 30 retained jobs

Funding		
ORDC Grant	$	100,000
Private (Griffeth)	$	1,100,000
Total	**$**	**1,200,000**

13. IORY - Revitalizing Rail Greenfield Line (1 / 2 Sites)

About

Repair and rehabilitation of all 29.5 miles of the Greenfield Line from the Indiana & Ohio Railway connection in Midland to Greenfield.

Project Benefits

- Improves Greenfield Line to FRA Class II condition
- Ensures safety and adequacy of bridges on the line
- Leverages funding from numerous project partners

Funding		
ORDC Grant	$	54,789
Other Partners	$	1,647,898
CRISI Grant	$	1,702,688
CRISI Prj. Total	**$**	**3,405,375**
ORDC Grant Bridge Project	$	659,000
Greenfield Line Total Investment	**$**	**4,064,375**

19. WE - Oneida Bridge Repair

About

Rehabilitate and repair the Oneida Bridge to ensure continued service Carrollton, OH.

Project Benefits

- Repairs a bridge to be suitable for service years into the future
- The bridge is an integral structure for continued service to Griffeth and Son (Project #10)

Funding		
ORDC Grant	$	235,225
Private (WE)	$	235,225
Total	**$**	**470,450**

rail.ohio.gov

Ohio Rail Development Commission

Ohio Southeast Economic Development

JobsOhio Network Partner

Hazardous Materials Training
Event for First Responders and Railroaders

When: Wednesday June 7th @ 0900 & 1400
Where: Classroom Training – Zemba Brothers Headquarters @ 3401 East Pike Street / Zanesville
Field Training – 221 Market Street Zanesville Ohio

Overview

This unique training combines classroom instruction with hands on field identification and hands on components. Classroom training will be the first session and then the field portion will be the final portion.

Topics Covered

Tank car Identification
Tank car Component Identification
Safety and Scene Size up
Scene Isolation
Product Identification
Railroad Collaboration
Incident Management
Basic Locomotive Identification
Locomotive Familiarization

Name	Date	Session		Name	Date	Session
1.				15.		
2.				16.		
3.				17.		
4.				18		
5.				19.		
6.				20.		
7.				21.		
8.				22.		
9.				23.		
10.				24.		
11.				25.		
12.				26.		
13.				27.		
14.				28.		

Name	Date	Session		Name	Date	Session
29.				43.		
30.				44.		
31				45.		
32.				46.		
33.				47.		
34.				48.		
35.				49.		
36.				50.		
37.				51.		
38.				52.		
39.				53.		
40.				54.		
41.				55.		
42.				56.		


oneG&W
One Team. Common Values.
Individual Responsibility.


Zero
Injuries
Our Goal Every Day

Brotherhood of Locomotive Engineers and Trainmen
Ohio State Legislative Board

A Division of the International Brotherhood of Teamsters Rail Conference

JOHN ESTERLY, CHAIRMAN
Post Office Box 7951, Columbus, Ohio 43207
Phone: (614) 284-5876
E-Mail: john.s.esterly@gmail.com

Ohio Senate – Select Committee on Rail Safety
April 26, 2023 Hearing Testimony of John Esterly

Chairman Reineke, Vice Chair Rulli, Ranking Member Antonio, and members of the Senate Select Committee on Rail Safety – thank you for the opportunity to address you today. My name is John Esterly and I am the State Chairman and Legislative Director of the Brotherhood of Locomotive Engineers and Trainmen, a member of the Teamsters Rail Division. I'm here today to speak to the current legislation and regulation related to the transportation of hazardous materials by rail, the role of various Federal agencies in this process, to discuss what we have learned from the East Palestine derailment, and to answer any questions you may have.

Rail transportation is governed by a number of federal regulatory bodies. The Surface Transportation Board has jurisdiction over matters of interstate commerce and manages rail operators' obligations as common carriers. The Federal Railroad Administration governs rail safety and general operations. The Pipeline and Hazardous Materials Safety Administration establishes regulations for the safe handling of hazardous materials and their transportation by rail and other methods. Finally, the Department of Homeland Security handles safety and security as it applies to rail transportation, specifically the transportation of hazardous materials. While this division of power allows for subject matter expertise, it also leads to difficult navigation of the laws and regulations for the general public and interested parties.

Hazardous materials are divided into eight groups, classified by the type of material and the hazards they pose to humans, animals, and the environment. A ninth category exists for all miscellaneous hazardous materials. The PHMSA defines several specific types of shipments in their regulations: poisonous by inhalation hazards (PIH), spent or consumed nuclear fuel, and high-hazard flammable trains (HHFT). Each of these types of shipments has specific requirements for operation dictated in the regulations having to do with train speed and route identification. General shipments of hazardous materials are not regulated any differently than standard shipments by rail.

The strictest regulations for the transportation of hazardous materials pertains to high-hazard flammable trains (HHFT) which are trains with 20 or more tank cars loaded with Class 3 flammable liquids in a single block, or 35 or more throughout the consist. The PHMSA outlines specific operational procedures for these trains, including identifying routes the HHFTs will travel, specifications for the types of railcar that will be used in these shipments, and establishing a HHFT point of contact who is responsible for knowledge of the railroad operator's operations and coordinates State agencies in the event of issues with these trains. These

guidelines, however, only apply to HHFT shipments – not to any other type of hazardous material shipment.

The rail industry itself offers some additional guidelines for the transportation of hazardous materials, but these are generally not enforceable by any regulatory agency. Trains carrying specific types or quantities of hazardous materials are classified as “key trains” – any train with one or more poisonous by inhalation hazard, with one or more spent nuclear fuel car, or any train with twenty or more loaded hazardous material cars will meet the threshold for this classification. Key trains are limited to a lower speed of 50mph, and have more stringent procedures when a defect is detected during a trip. Since these procedures are managed by the industry and not by any of the regulatory bodies, unfortunately there is no requirement for compliance. Rail operators are free to make operational decisions to ignore any of the operations related to key trains without penalty.

The Department of Homeland Security manages security and safety related to hazardous materials shipments by rail. They define geographic areas of concern called High-Threat Urban Areas (HTUAs), which due to their population density and potential to be a target for attack have further requirements for hazardous materials shipments. Ohio has four HTUAs: Columbus, Cincinnati, Cleveland, and the Greater Toledo area. Homeland Security also manages information about hazardous materials shipments through the TSA. This information can be used for emergency response, or to work with railroad operators to curfew shipments near events with high attendance such as sporting events or major concerts.

February 3, 2023 is a date that will live with Ohioans for years to come. The derailment in East Palestine has permanently changed the landscape in Ohio and has exposed concerning flaws in the regulatory arena. I begin by stating that as a career railroader, I am not here to demonize the industry today – I have a vested interest in their continued success in Ohio. The events leading up to the derailment have been covered at length by prior testimony, but I want to highlight one of the most important success stories. As the wayside detector at East Palestine broadcast the warning to the train crew, the conductor on board the 32N immediately began reviewing his shipping papers. The detector identified a specific car, which was determined to be a hazardous shipment. The conductor found the papers for this shipment, determined what the appropriate recommended response would be, and prepared to inspect the car when the train stopped. As he dismounted the cab, the fire had already begun – the crew swiftly went into action and separated the locomotives. I believe wholeheartedly that this action saved lives – not only of the crew members, but of the general public by removing thousands of gallons of fuel from open flames. This action also preserved critical event recorder data which has been used to learn from East Palestine. Last week, Alan Shaw credited the crew with doing everything correct, and I will echo that today. Our members did exactly what they needed to do in the heat of the moment.

I want to thank Chairman Reineke for his invitation to speak today, and to thank the committee for your time. At this time, I am happy to answer any questions you might have.

Further Resources for the Committee:

United States Hazardous Materials Instructions for Rail (Attached)

Emergency Order (EO) 28 from the FRA (Attached)

49 CFR Part 171 – General PHMSA information – definitions, etc.

49 CFR Part 174 – Regulations from the PHMSA pertaining to rail.

49 CFR Chapter II – Regulations from the FRA.

49 CFR Part 1580 – Regulations from Homeland Security pertaining to rail.

United States Hazardous Materials Instructions for Rail

Jan. 20, 2022
Update

The ***United States Hazardous Materials Instructions for Rail*** should be interpreted and used as general guidelines. For further information, appropriate regulations must be consulted.

The Association of American Railroads (AAR) and the AAR Hazardous Materials Committee are not responsible for any omissions or errors found in the ***United States Hazardous Materials Instructions for Rail***.

TABLE OF CONTENTS

INTRODUCTION 6
1. Purpose 6
2. Policy 6
3. Questions 6
4. Print Date/Version 6
5. Regulatory Updates, Additions and Corrections 6

SECTION I. GENERAL INFORMATION 7
1. Definition of Hazardous Materials: 7
2. General DOT Requirement 8
3. Expediting Hazardous Material Shipments 8
4. Exceptions for U.S. Government Material 8

SECTION II. REQUIRED DOCUMENTATION 9
1. General Requirements 9
2. Acceptable Shipping Documents 9
3. Acceptable Emergency Response Information 9
4. Document Indicating Position in Train 9
5. Checking for Shipping Documents 9
6. Reviewing Shipping Document Entries 10
   a. Reporting marks (initials) and numbers 10
   b. Total Quantity Notation 10
   c. Identification Number 11
   d. Proper Shipping Name 11
   e. Hazard Class/Division – Numeric or Worded 11
   f. Packing Group 11
   g. Emergency Response Telephone Number 11
   h. Additional Entries 12
7. Handling Situations when Shipping Documents or Required Entries Are Not Available 13
8. Checking for Emergency Response Information 13
9. Checking for Position-in-Train Document 13
10. Handling Shipping Documents Received from a Customer 15
11. Handling Hazardous Waste Shipping Documents and Manifests 15
12. Handling Requests for Shipping Documents or Emergency Response Information 15

SECTION III. INSPECTION 16
1. General Requirements 16
2. Inspection Procedures 16
   a. Inspecting All Car Types (from ground level) 16
   b. Inspecting Placarded/Marked Tank Cars (from ground level) 17
   c. Inspecting Placarded/Marked Gondola Cars (from ground level) 17
   d. Inspecting Placarded/Marked Hopper Cars (from ground level) 17
   e. Inspecting Shipments Placarded EXPLOSIVES 1.1 or 1.2 (from ground level) 17
   f. Inspecting Placarded/Marked Intermodal Shipments (from ground level) 18
3. Handling Defects 18

SECTION IV. PLACARDS AND MARKINGS 19
1. General Requirement 19
2. Placard Requirements 19
3. Inspecting for Placards 21
4. Marking Requirements and Inspecting for Markings 23
   a. Identification Number Markings 23
   b. MARINE POLLUTANT Mark 24
   c. Elevated Temperature Material Mark 25
   d. LIMITED QUANTITIES Mark 25
   e. INHALATION HAZARD Mark 26

f. Commodity Name 26
g. Tank Car Specification and Qualification Dates Stencils 27
h. FUMIGANT mark 27
i. Non - Odorized Mark 28
j. Sour Crude Oil Mark 28
SECTION V. SWITCHING 29
1. General Requirement 29
2. Safety 29
3. When to Use the Switching Chart 29
SECTION VI. TRAIN PLACEMENT 31
1. General Requirement 31
2. When to Use the Position-in-Train Chart 31
3. General Information 31
SECTION VII. KEY TRAINS 33
1. General Requirement 33
2. Key Train Definition 33
3. Identifying Key Trains 33
4. Instructions for Operating Key Trains 33
SECTION VIII. EMERGENCY RESPONSE 34
1. General Requirement 34
2. When a Fire or Vapor Cloud is Visible 34
3. When No Fire or Vapor Cloud is Visible 35
4. Cooperating with Local Emergency Responders 35
5. Handling Leaking Hazardous Material Shipments 36
APPENDICES 37
1. List of materials that require the commodity name on tank cars 37
GLOSSARY 38

LIST OF TABLES

Table 1. Hazard Classes and Divisions 7
Table 2. Time-Sensitive Shipments 8

LIST OF FIGURES

Figure 1. Shipping Descriptions Entries 10
Figure 2. Example of Radio Waybill 14
Figure 3. Car Certificates 18
Figure 4. Placards for Hazardous Materials by Hazard Class 22
Figure 5. Identification Numbers 23
Figure 6. MARINE POLLUTANT Mark 24
Figure 7. Elevated Temperature Material Mark 25
Figure 8. LIMITED QUANTITIES Mark 26
Figure 9. Tank Car Specification and Qualification Stencils 27
Figure 10. FUMIGANT Mark 28
Figure 11. Sour Crude Oil Mark 28
Figure 12. Switching Chart 30
Figure 13. Position-in-Train Chart 32

INTRODUCTION

1. Purpose

One of the rail industry's primary focuses continues to be the safe transportation of hazardous materials. Rail employees interact regularly with employees of other railroads. If subscribing railroads implement and consistently apply a standard set of rules and regulations, we will significantly enhance both our employees' safety and the safety of the communities through which we operate. Those railroads involved in developing the ***United States Hazardous Materials Instructions for Rail*** therefore worked together to create these instructions for employees who transport hazardous materials.

Note: These general guidelines may be appropriately modified by an individual railroad to be consistent with its unique operating rules and practices.

2. Policy

To handle hazardous material shipments or incidents safely and efficiently, without delay, and in accord with local, state, and federal regulations, it is imperative that you familiarize yourself with the ***United States Hazardous Materials Instructions for Rail***, in addition to other operating rules. These instructions provide guidance on how to perform your duties so that both you and the company will comply with Department of Transportation (DOT) regulations.

Employees who transport hazardous materials must also have a copy of the current ***Emergency Response Guidebook*** (ERG) readily accessible while on duty.

The company will provide appropriate training and testing to each employee who directly affects hazardous material transportation safety.

Always keep in mind that the company requires full compliance with the law. Compliance with the letter and spirit of our obligations is good corporate citizenship and is basic to achieving quality in all areas of our operations. Each employee has a duty to see that the railroad's actions are consistent with the highest legal and ethical standards.

3. Questions

For questions about the ***United States Hazardous Materials Instructions for Rail***, contact your immediate supervisor and/or your railroad's Hazardous Materials / Dangerous Goods representative.

4. Print Date/Version

Effective: 10/18 /2021

5. Regulatory Updates, Additions and Corrections

Requests should be submitted via email to the Association of American Railroads' Hazardous Materials Committee for review. (BOE@aar.org) If approved, changes will occur in the next publication of the ***United States Hazardous Materials Instructions for Rail.***

SECTION I. GENERAL INFORMATION

1. Definition of Hazardous Materials:

The U.S. Department of Transportation (DOT) and the International Air Transportation Association (IATA) define hazardous materials as articles or substances which are capable of posing a risk to health, safety, property, or the environment; are listed or classified in the regulations; and are transported in commerce.

Table 1. Hazard Classes and Divisions

Numbered Hazard Classes and Divisions

Explosives – Class 1
- 1.1 – Explosive with mass explosion hazard
- 1.2 – Explosive with projection hazard
- 1.3 – Explosive with predominantly fire hazard
- 1.4 – Explosive with no significant blast hazard
- 1.5 – Very insensitive explosive; blasting agent
- 1.6 – Extremely insensitive detonating substance

Gases – Class 2
- 2.1 – Flammable gas
- 2.2 – Nonflammable, nonpoisonous (nontoxic) compressed gas
- 2.3 – Gas poisonous (toxic) by inhalation

Flammable Liquids – Class 3

Combustible Liquids - Worded Hazard Class
- Regulated in the US only

Flammable Solids and Reactive Solids/Liquids – Class 4
- 4.1 – Flammable solid
- 4.2 – Spontaneously combustible material
- 4.3 – Dangerous when wet material

Oxidizers and Organic Peroxides – Class 5
- 5.1 – Oxidizer
- 5.2 – Organic peroxide

Poisonous (Toxic) Materials and Infectious Substances – Class 6
- 6.1 – Poisonous (toxic) material
- 6.2 – Infectious substance

Radioactive Materials – Class 7

Corrosive Materials – Class 8

Miscellaneous Hazardous Materials – Class 9

2. General DOT Requirement

a. No person may offer, accept, or transport a hazardous material in commerce unless that material is properly classed, described, packaged, marked, labeled, and placarded and is in proper condition for transportation according to DOT and International regulations.

b. No person may transport a hazardous material in commerce unless the hazardous material is handled and transported according to DOT regulations.

3. Expediting Hazardous Material Shipments

Loaded hazardous material shipments and both loaded and residue/empty time-sensitive shipments (see Table 2) must be forwarded either:

a. within 48 hours (excluding Saturdays, Sundays, and holidays) after accepting them at the shipper's facility or receiving them in any yard, intermediate (transfer) station, or interchange point

or

b. when only bi-weekly or weekly service is performed, on the first available train toward the destination.

Exception: The 48-hour requirement does not apply to shipments that are constructively placed or set out for repairs.

Table 2. Time-Sensitive Shipments

20 Day
(1) Ethylene, refrigerated liquid – UN 1038
(2) Hydrogen, refrigerated liquid – UN 1966
(3) Chloroprene, stabilized – UN 1991
(4) Flammable Liquid, n.o.s. (Methyl Methacrylate Monomer, uninhibited) – UN 1993
(5) Hydrogen chloride, refrigerated liquid – UN 2186
(6) Vinyl Fluoride, stabilized – UN1860
30 Day
(1) Styrene monomer, stabilized – UN 2055

4. Exceptions for U.S. Government Material

a. Department of Energy (DOE) and Department of Defense (DOD) shipments made for the purpose of national security and accompanied by escorts (personnel specifically designated by or under the authority of DOD or DOE) are not subject to DOT regulations or these instructions.

b. Escorts must travel in a separate transport vehicle from the rail car carrying the hazardous materials.

c. The escorts must have, in their possession, a document certifying that the shipment is for the purpose of national security.

SECTION II. REQUIRED DOCUMENTATION

1. General Requirements

No person may accept a hazardous material for shipment by rail transportation or transport a hazardous material in a train unless a member of the crew has each of the following documents:

a. acceptable shipping documents

b acceptable emergency response information

c. a document showing the current position of the hazardous material shipment in the train.

Notes:

1) The purpose of this documentation is to provide railroad personnel and emergency response personnel with accurate information about the hazardous materials.

Therefore, keep all current hazardous material documents neat and orderly and ensure that they are available in case of an emergency or for inspection. Properly discard superseded documents to eliminate the possibility of confusing or inconsistent information.

2) Electronic documents are only acceptable with Railroads having authorization from DOT.

2. Acceptable Shipping Documents

Any one of the following documents is an acceptable shipping document for hazardous material shipments, as long as it includes the required shipping description entries (see item 6 of this section), is legible, is printed (manually or mechanically in English), and, for multiple pages, is consecutively numbered with the first page indicating total number of pages.

a. **Railroad-produced documents** – for example, train consists, train lists, wheel reports, waybills, industry work orders, or other similar documents

b. **Customer-produced documents** – for example, bills of lading or switch lists

c. A **connecting carrier's documents**

d. A **hand-printed document** (printed, not cursive letters) – for example, radio waybills

e. A **hazardous waste manifest**.

3. Acceptable Emergency Response Information

The ***Emergency Response Guidebook*** (ERG) contains acceptable emergency response information. The ERG may be supplemented by emergency response information printed as part of the train list/consist or provided by the customer – for example, a Safety Data Sheet (SDS).

4. Document Indicating Position in Train

Before moving hazardous material shipments in a train, a member of the crew must have a document that shows the current position in the train of each hazardous material shipment (loaded and residue/empty).

When making pickups or setouts, update the document before proceeding. The train crew must update the document electronically, by handwriting on it or by appending, or attaching another document to it.

5. Checking for Shipping Documents

Make sure that a member of the crew has acceptable shipping documents, with the required entries, for each hazardous material when:

a. accepting hazardous material shipments at a customer's facility, interchange point, or other location

b. moving hazardous material shipments in a train

c. delivering hazardous material shipments to a customer's facility, interchange point, or other setout point

d. switching hazardous material shipments outside a yard.

Note: Shipping documents are not required to be in the switch crew's possession when moving hazardous material shipments within a yard or at a customer's facility.

Exception: Although they may remain placarded and marked, residue/empty packages of Class 9 that are not hazardous substances, hazardous wastes or marine pollutants do not require hazardous material shipping documents and emergency response information.

6. Reviewing Shipping Document Entries

Review the shipping description entries for each hazardous material on the shipping documents and make sure that the following entries (a-g under this item) are present. (Figure 1 shows two formats for displaying the shipping description entries.)

Vertical Format

GATX 12345 [a]
1 T/C [b]
UN1830 [c]
SULFURIC ACID [d]
8 [e]
PG II [f]
RQ (SULFURIC ACID) [h3]
EMERGENCY CONTACT: 800-424-9300 [g]

Horizontal Format

UTLX 12345 [a]

1 T/C [b] // UN1017 [c] // CHLORINE [d] // 2.3 (5.1, 8) [e] // RQ (CHLORINE) [h3] // POISON-INHALATION HAZARD [h6] // ZONE B [h7] // MARINE POLLUTANT (CHLORINE) [h4] // EMERGENCY CONTACT: 800-424-9300 [g]

Items [a] through [g] are required entries, and items [c] through [f] are referred to as the basic description. Item [h] refers to additional entries that may appear.

Figure 1. Shipping Descriptions Entries

a. Reporting marks (initials) and numbers

The shipping document for a rail car, freight container, transport vehicle, or portable tank must include the reporting mark and numbers when the reporting mark and numbers are displayed on the rail car, freight container, transport vehicle, or portable tank.

b. Total Quantity Notation

(1) For empty packagings, bulk packagings, or cylinders of Class 2 materials, some indication of the total quantity must be shown (certain abbreviations are acceptable). For example, "1 T/C" (1 tank car), "1C/L" (1 car load), or "10 CYL" (10 cylinders).

(2) For **non-bulk packaging**, the total quantity is given by both:

(a) weight or volume (including the unit of measure); for example, "100 LBS", "55 GAL", "5 KG", or "208 L"; and

(b) number and type of packages; for example "12 DRUMS", "12 UN 1A1", "15 4G", or "2 UN 3H1JERRICAN".

(3) For Class 1 materials, the quantity must be the net explosive mass.

c. Identification Number

A 4-digit number preceded by “UN”, “NA” or “ID” assigned to a hazardous material.

d. Proper Shipping Name

(1) The proper shipping name of the hazardous material may be one or more words, such as “CHLORINE” or “SULFURIC ACID**.**” The proper shipping name may include a number that indicates the concentration of the material.

(2) When a N.O.S. (Not Otherwise Specified) shipping name appears, the technical name of the product may appear in parentheses immediately after the N.O.S. shipping name, such as “CORROSIVE LIQUID, N.O.S. (CAPRYL CHLORIDE).”

(3) Residue/empty shipments in tank cars must include the phrase “RESIDUE: LAST CONTAINED . . .” in association with the basic description, including the proper shipping name.

(4) For waste shipments, the word “WASTE” will precede or be part of the proper shipping name of the material.

e. Hazard Class/Division – Numeric or Worded

Reference: For further information on hazard classes/divisions, see the definitions in the Glossary and the list of hazard classes/divisions in Table 1.

(1) For certain hazardous materials, the subsidiary hazard class(es)/division(s) will appear in parentheses after the primary hazard class/division. For example, Ethylene Oxide is listed as **“**2.3 (2.1)**”,** and Chlorine is listed as **“**2.3 (5.1, 8)**”**.

(2) The hazard class need not be repeated for “COMBUSTIBLE LIQUID, N.O.S.” shipments.

(3) Divisions 1.1, 1.2, 1.3, 1.4, 1.5, and 1.6 will show a compatibility group letter after the division (”1.1A”). The letter has no significance in rail transportation.

f. Packing Group

The packing group, *when required by regulation*, will appear on the shipping documents in Roman numerals (“I”, “II”, or “III”). The packing group may be preceded by the letters “PG” (“PG I”, “PG II”, or “PG III”).

Exceptions:

Classes / Divisions 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 2.1, 2.2, 2.3, 4.1 (self-reactive liquids or solids, types B-F), 5.2, 6.2 and Class 7 do not require the packing group notation.

In addition, there are specific commodities in Classes / Divisions 3, 4.2, 4.3, 5.1, 8 and 9 that do not require the packing group notation. If the Packing Group is not required, the field will be blank.

g. Emergency Response Telephone Number

Shipping documents for hazardous materials must show a 24-hour emergency response telephone number, including the area code, for use in the event of an emergency involving the hazardous materials. For telephone numbers outside the United States, the international access code or the “+” (plus) sign, country code, and city code, as appropriate, must be included.

Note: In some cases, a shipper name or contract number may be shown before or after the emergency response telephone number.

Exceptions: Emergency response telephone numbers are not required when the hazardous material is shown as “LIMITED QUANTITY”, “LTD QTY”, or its proper shipping name is:

(1) battery powered - equipment or vehicle
(2) carbon dioxide, solid or dry ice
(3) castor - bean, meal, flake, or pomace
(4) consumer commodity
(5) engines, internal combustion
(6) fish - meal or scrap, stabilized
(7) fumigated unit
(8) krill meal, PG III
(9) refrigerating machine
(10) vehicle, flammable gas powered or vehicle, flammable liquid powered
(11) wheelchair, electric

h. Additional Entries

Some hazardous material shipping descriptions may contain one or more of these entries:

(1) “RESIDUE: LAST CONTAINED ...” (for packages emptied to the maximum extent possible)
(2) “HOT” notation added before a proper shipping name for elevated temperature materials
(3) “RQ” for Reportable Quantity notation of a hazardous substance
(4) “MARINE POLLUTANT” notation
(5) “POISON” or “TOXIC” notation
(6) “POISON (TOXIC)-INHALATION HAZARD (PIH or TIH)” or “INHALATION HAZARD (IH)” notation
(7) Hazard Zone notation (“ZONE A,” “ZONE B,” “ZONE C,” or “ZONE D”)
(8) “LIMITED QUANTITY” or “LTD QTY” notation
(9) FRA Movement Approval (**“**FRA 0109123**”**), DOT Special Permit (**“**DOT- SP 9271**”**), Special Approval Number (**“**SA 920403**”**), or Competent Authority Number (**“**CA 9701001**”**)
(10) DOT-113 notation (“DOT-113, DO NOT HUMP OR CUT OFF IN MOTION”)
(11) Hazardous Materials Response Code (Hazmat STCC “48xxxxx” or “49xxxxx”)
(12) certain shipments described using Canadian regulations may contain both an Emergency Response Assistance Plan number and its activation telephone number (“ERAP-2-1008 (800-555-5555) // SPECIAL COMMODITY”)
(13) box of asterisks with or without wording (not required by DOT, but may appear on railroad-produced documents)

(14) Shipper's Certification (Not required for residue shipments)
(15) “OIL” notation
(16) additional radioactive material entries
(17) name and address of the place of business in Canada of the consignor
(18) additional hazardous waste shipping description entries (see Section II, item 11, a)
(19) EX number for air bag modules classified as Class 9. ***Note:*** Recycled air bag modules do not require the EX number entry, but must have the word “recycled” after the basic description.

(20) For International shipments, the notation “DANGEROUS GOODS IN EXCEPTED QUANTITIES” as appropriate

(21) “NON-ODORIZED” or “NOT-ODORIZED" notation for non-odorized liquefied petroleum gas

7. Handling Situations when Shipping Documents or Required Entries Are Not Available

When the appropriate shipping document is not present or when all required entries on the shipping document provided are not present:

a. Do not move the car until the appropriate shipping document or the required entries on the shipping document are present.

b. Take one of these three actions:

(1) Correct the existing document. Contact the customer or your supervisor, request the entries required to complete the shipping description, update the document electronically or legibly print those entries in the appropriate sequence (see Section II, item 6).

or

(2) Obtain the appropriate shipping document from the shipper, your supervisor, or other appropriate person.

or

(3) Use a radio waybill.

(a) Contact your supervisor or dispatcher and request the appropriate entries for a radio waybill (see Figure 2, Example of Radio Waybill).

The supervisor or dispatcher will provide the requested entries via radio or telephone to you.

(b) Complete the radio waybill using the information the supervisor or dispatcher provided.

Note: If a radio waybill form is not available, legibly print the required hazardous material information on a sheet of paper, including the car’s initials and number (see Section II, item 6).

(c) Keep the radio waybill with the other shipping documents until either reaching the final destination or receiving another shipping document with the appropriate entries.

(d) For each radio waybill issued, add the car initial and number and its position on the position-in-train document.

8. Checking for Emergency Response Information

a. When accepting and transporting hazardous material shipments, make sure a copy of the emergency response information for each shipment (see Section II, item 3) is available.

b. If emergency response information is **not** available, do **not** accept or transport the car.

9. Checking for Position-in-Train Document

a. When transporting hazardous material shipments in a train, make sure a member of the crew has a document indicating the current position in train of each hazardous material shipment.

b. If the document indicating the current position in train of each hazardous material is **not** available:

(1) Update the documents already in your possession.

or

(2) Create a hand-printed list showing the position in train of each hazardous material shipment.

Note: The list must show the reporting marks and number for each hazardous material shipment in the train and its actual position in the train.

Hazardous Material Radio Waybill

NOTE: Print legibly

HAZARDOUS MATERIAL

1. Train Number _____
2. Number of Cars from Head End _____
3. Car Initial & No. _____
4. Total Quantity Notation (Circle One)

   Tank Car or Car Load or Residue: Last Contained or Other

   If Other, specify weight or volume _____
5. Number of Packages or Car(s) _____

*** Description of Articles ***

6. Identification No. (UN/NA) _____
7. Proper Shipping Name _____

   _____
8. Technical Name (_____)
9. Primary Hazard Class _____

   Subsidiary Hazard Class(es) (_____)
10. Packing Group (PG): I II III (Circle One)
11. Reportable Quantity (RQ): (_____)

*** Additional Information ***

12. Poison/Toxic Inhalation Hazard:

    Zone A, Zone B, Zone C, Zone D (Circle One)
13. Marine Pollutant (_____)
14. DOT Special Permit Number(s):

    _____
15. Additional Information _____

    _____
16. ERAP Plan No.: _____
    (Canadian Shipments Only)
17. ERAP Telephone No.: (_____) _____-_____
    (Canadian Shipments Only)
18. Emergency Contact (_____) _____-_____

    Contract Number or Shipper Name:

Completed:

Date _____/_____/_____ Time: _____ : _____

MO DAY YR 24-HR MIN

Figure 2. Example of Radio Waybill

10. Handling Shipping Documents Received from a Customer

When picking up a hazardous material shipment from the customer and the customer provides the original shipping documents:

a. Check for appropriate hazardous material entries.

b. For loaded shipments, make sure that the shipper's certification and signature (signature by hand or mechanical means) are on the shipping documents received from the customer.

11. Handling Hazardous Waste Shipping Documents and Manifests

a. The shipping document for a hazardous waste shipment must have the following entries in addition to the the required term "waste" before or after the proper shipping name:

(1) proper shipping description

(2) name, address, and telephone number of the hazardous waste generator

(3) name and address of the hazardous waste disposal facility

(4) name of transporter

(5) waste manifest number

(6) special handling instructions.

b. When accepting a hazardous waste shipment **with** railroad generated shipping documents for the shipment which contains the hazardous waste manifest entries [(a) above], pick up the car containing hazardous waste without a copy of the hazardous waste manifest.

c. When accepting a hazardous waste shipment **without** railroad shipping documents for the shipment, check to see that the hazardous waste manifest contains both the hazardous materials shipping description entries (see Section II, item 6, a-g) and the hazardous waste manifest entries [(a) above].

If all entries are present on the hazardous waste manifest, pick up the car containing hazardous waste with the copy of the hazardous waste manifest.

12. Handling Requests for Shipping Documents or Emergency Response Information

When receiving a request for shipping documents or emergency response information from a railroad employee, regulatory enforcement officer, or emergency response personnel in an emergency:

a. Immediately share any requested information document for the shipment.

(Provide an extra copy of the train list/consist, when available.)

Note: Retain any waybills and a copy of the train list/consist until you can deliver them to the first railroad manager on the scene.

and

b. Immediately share a copy of the emergency response information provided with the shipment.

SECTION III. INSPECTION

1. General Requirements

a. To determine that they are in acceptable condition for transportation, all loaded and residue/empty hazardous material shipments must be inspected at these points:

(1) before accepting them from the shipper

(2) when receiving them in interchange

Note: Run-through trains received in interchange may continue to the next inspection point before being inspected.

(3) when placing them in a train

(4) at other points where an inspection is required.

b. Accept or transport only those hazardous material shipments that conform to these instructions.

2. Inspection Procedures

In addition to inspecting rail cars for compliance with train make-up, adequate buffer cars, shiftable loads and temperature control equipment (see Position-In-Train Chart, Instructions 1 through 5) as well as mechanical requirements, visually inspect each loaded or residue/empty hazardous material shipment (including flat cars transporting placarded or marked trailers or containers) and adjacent rail cars, **from ground level** (do not climb on or go under the car) and check for:

- leakage and/or visible product on the outside of the car
- required placards and markings, including stenciling, car certificates, and qualification dates (See section IV for details)
- closures are secure, including but not limited to bottom outlet caps, bottom outlet valve handles, protective housing covers and manway cover securement bolts
- signs of tampering, such as suspicious items or items that do not belong, the presence of an "Improvised Explosive Device" (IED), and other signs that the security of the car may have been compromised

Note: Where an indication of tampering or a foreign object is found, take the following actions:

(1) Do not accept or move the rail car.

(2) Immediately move yourself and others to a safe location away from the rail car before using radios and cell phones to make notifications.

(3) For cars at a customer's facility, immediately contact local plant personnel. If local plant personnel are not available or cannot correct the issue, immediately contact the train dispatcher (follow your specific railroad instructions).

(4) For cars on interchange tracks or in the yard, immediately contact the yardmaster or train dispatcher (follow your specific railroad instructions).

a. Inspecting All Car Types (from ground level)

(1) Without climbing on the car, make sure that the hazardous material shipment is not leaking.

Look for leaking contents – drips, wetness, odor or material on the car or on the ground.

Note: If you find a hazardous material shipment leaking, or if there is hazardous material residue / spillage on the outside of the car (excluding Molten Sulfur), follow the instructions in item 3 of this section and in Section VIII (Emergency Response), item 5.

(2) Make sure placards and markings are appropriate for the shipment and displayed correctly (see Section IV, Placards and Markings)

(3) Before accepting a hazardous material shipment from the shipper, make sure that:

(a) all customer loading and unloading lines are disconnected

(b) derails, chocks, and blue flags are removed

(c) all platforms are raised or in the clear.

b. Inspecting Placarded/Marked Tank Cars (from ground level)

Check placarded tank cars or tank cars marked with an identification number to see that:

(1) Insure that it is not leaking.

(a) Look for wetness or accumulation of the material.

(b) Look for a vapor cloud.

(c) Listen for hissing sounds of the contents escaping.

Note: If you find a hazardous material shipment leaking, or if there is hazardous material residue / spillage on the outside of the car (excluding Molten Sulfur), follow the instructions in item 3 of this section and in Section VIII (Emergency Response), item 5.

(2) protective housing covers are closed

(3) manway cover swing bolts are up and in place

(4) all valves, valve handles and fittings appear to be closed and secure

(5) visible plugs or caps (including bottom outlet caps) or other fittings are securely in place

Note: When heater coil caps are provided, they must be applied.

(6) "Double shelf" couplers are present for all tank cars.

c. Inspecting Placarded/Marked Gondola Cars (from ground level)

(1) Look for loosely fastened gondola covers.

(2) Make sure the cover or tie downs do not foul any safety appliances.

d. Inspecting Placarded/Marked Hopper Cars (from ground level)

Check that discharge gates and discharge caps are closed and secured.

e. Inspecting Shipments Placarded EXPLOSIVES 1.1 or 1.2 (from ground level)

(1) In addition to the other inspection requirements in this section, for shipments placarded EXPLOSIVES 1.1 and 1.2:

(a) Look for indications of damage to the contents.

(b) Make sure that completed "car certificates" (see Figure 3, Car Certificates) are displayed on both sides of the rail car. Car certificates must be removed after the rail car, trailer, or container is unloaded.

(2) Do not accept or transport the car until all damage has been corrected and car certificates are in place.

_____ Railroad

No 1 _____ Station _____ 20 _____
_____hereby certify that I have this day personally examined Car Number _____ and that the car is in condition for service and complies with the FRA Freight Car Safety Standards (49 CFR Part 215) and with the requirements for freight cars used to transport explosives prescribed by the DOT Hazardous Materials Regulations (49 CFR Part 174)

_____
Qualified Person Designated Under 49 CFR 215.11

No 2 _____ Station _____ 20_____
I have this day personally examined the above car and hereby certify that the explosives in or on this car, or in or on vehicles or in containers have been loaded and braced; that placards have been applied, according to the regulations prescribed by the Department of Transportation; and that the doors of cars so equipped fit or have been stripped so that sparks cannot enter.

_____
Shipper or his authorized agent

_____
Qualified Person Designated Under 49 CFR 215.11

No 3 _____ Station _____ 20_____

_____
I hereby certify that I have this day personally supervised the loading of the vehicles or containers on and their securement to the above car.

_____
Shipper or railway employee inspecting loading and securement

Note 1: A shipper must decline to use a car not in proper condition.
Note 2: All certificates, where applicable, must be signed.

Figure 3. Car Certificates

f. Inspecting Placarded/Marked Intermodal Shipments (from ground level)

In addition to completing other inspection requirements in this section:

(1) Make sure that an intermodal tank container of hazardous material is not transported with a container above or below the tank.

(2) Make sure that placards are fully visible when containers are loaded in a well car.

(3) Make sure that an intermodal tank container of hazardous material has the Proper Shipping Name on both sides, is legible and visible when the container is loaded in a well car.

(4) Make sure that intermodal tank containers are placed so that the bottom outlet valves are pointed toward the ends of the well or platform.

3. Handling Defects

When a hazardous material shipment does not appear to be properly prepared for transportation:

a. Do not accept or pull the hazardous material shipment or allow it to continue in transportation.

b. Notify the customer, train dispatcher, yardmaster, or your immediate supervisor, as appropriate, and explain the problem.

SECTION IV. PLACARDS AND MARKINGS

1. General Requirement

Hazardous material shipments, whether loaded or containing a residue, must **not** be accepted for transportation or transported unless they are properly placarded and marked. Not all hazardous material shipments require placards.

2. Placard Requirements

Each bulk packaging, freight container, transport vehicle, or rail car containing hazardous material must be placarded on each side and each end in accordance with the instructions below.

Note: Unless the shipping documents indicate that the shipment is a Limited Quantity, most international shipments (including Canada and Mexico) of hazardous materials require placards.

Placard - a sign measuring at least 250 mm (9.8 in) by 250 mm (9.8 in) square-on-point, communicating a hazard by symbol, color, hazard class/division number and possibly text (see Figure 4 for pictures of placards). Text indicating the hazard is not required on placards other than the Class 7 and DANGEROUS placards; however, for shipments originating internationally, text may not appear on a Class 7 placard. The hazard class text does not have to be in English, except for the DANGEROUS placard, as long as the size, color, hazard class, and symbol are correct.

a. Placards are required when transporting **any quantity** (bulk or non-bulk) of these hazard classes:

- 1.1 Explosive with mass explosion hazard
- 1.2 Explosive with projection hazard
- 1.3 Explosive with predominantly fire hazard
- 2.3 Gas poisonous (toxic) by inhalation
- 4.3 Dangerous when wet material
- 5.2 Organic peroxide, Type B, liquid or solid, temperature controlled
- 6.1 Material poisonous (toxic) by inhalation
- 7 Radioactive Yellow III label or exclusive use shipments of low specific activity (LSA) materials and surface contaminated objects.

b. Placards are required when transporting total weight of 1001 lbs (454 kg) or more (bulk or non-bulk) of these hazard classes:

Note: Placards may be displayed for a total weight less than 1001 lbs of these materials, as long as they are appropriate for the shipment.

- 1.4 Explosive with no significant blast hazard
  Note: Placards are not required for Class 1.4S materials.
- 1.5 Very insensitive explosive; blasting agents
- 1.6 Extremely insensitive detonating substances
- 2.1 Flammable gas
- 2.2 Nonflammable, nonpoisonous (nontoxic) compressed gas
- 3 Flammable liquid
- 4.1 Flammable solid
- 4.2 Spontaneously combustible material
- 5.1 Oxidizer
- 5.2 Organic peroxide, other than “organic peroxide, Type B, liquid or solid, temperature controlled” in 2a above
- 6.1 Poisonous (toxic) material, (other than material poisonous (toxic) by inhalation)
  Note: For U.S. transportation of Class 6.1 PG III materials, a PG III placard may be used in place of a POISON (TOXIC) placard.
- 8 Corrosive material

9 Miscellaneous hazardous material.

Exception: For U.S. transportation only, Class 9 placards are not required for non-bulk shipments. However, bulk shipments of Class 9 materials transported in the US one of the following is acceptable:

1) Class 9 placard with identification number
2) White square-on-point configuration containing the identification number
3) Orange panel containing the identification number.
(see Section IV, item 4).

c. Placards are not required for:

(1) Hazardous material shipments with less than 1001 lbs (454 kg) total weight, provided the hazard classes are included in item b above

(2) Class 6.2 (Infectious Substances)

(3) Class 9 (US/Canadian transportation) materials that display the identification number

(4) Limited Quantity (LTD QTY) shipments when identified as such on shipping documents

(5) Cryogenic atmospheric gases, other than Oxygen (Argon. Carbon Dioxide, Nitrogen)

(6) Combustible liquids in non-bulk packaging (i.e., drums), usually found in intermodal shipments, unless the material is a hazardous substance or hazardous waste

(7) Rail cars and intermodal tank containers of hazardous materials which have been cleaned and purged

(8) Shipments listed as Radioactive White I and Radioactive Yellow II on shipping documents

(9) Class 1.4S

(10) Shipments of molten sulfur moving to or from Canada, provided the letters and numerals "UN2448", or the numerals "2448" and the words "MOLTEN SULFUR" (or "MOLTEN SULPHUR") appear on each side of the tank car.

d. Placards may be displayed for hazardous materials, even when not required, as long as the placard is appropriate for the contents of the shipment. If displayed, then all instructions for that placard apply.

e. Certain hazard classes require the display of the primary placard on a white square background, including (see Figure 4, Placard Chart): *(when required to be affixed to the rail car)*

(1) Class 1.1 or 1.2 explosives

(2) Class 2.3 or 6.1 poison/toxic inhalation hazard zone A material

(3) Class 2.1 flammable gases loaded in DOT-113 tank cars, including tank cars containing only a residue of the material.

f. The DANGEROUS placard may be used instead of separate placards for each hazard class when a rail car, trailer, or container is loaded with non-bulk packages of two or more hazard classes from this section's item 2b.

***Note**:* When 2205 lbs (1000 kg) or more of one hazard class is loaded at one loading facility, the placards for that hazard class as specified in item 2b of this section must also be applied.

g. Some shipments of hazardous materials require subsidiary placards that represent secondary hazards. Subsidiary placards must not display a 4-digit identification number, but will display the hazard class or division number.

Note: Subsidiary placards must be displayed when the subsidiary hazard class is 2.3, 4.3, or 6.1 with the notation "POISON-INHALATION HAZARD" or "TOXIC-INHALATION HAZARD" present on the shipping documents.

h. For residue/empty hazardous materials shipments, the rail car, trailer, or container must remain placarded in the same manner as the loaded shipment, unless the packaging:

(1) has been cleaned of residue; or

(2) has been purged of vapor to remove any hazard; or

(3) has been refilled, with a material requiring different placards or no placards, to such an extent that any residue remaining in the packaging is no longer hazardous.

(4) contains a residue of an elevated temperature material. These shipments may remain placarded in the same manner as when it contained a greater quantity of the material even though the material no longer meets the definition for an elevated temperature material.

(5) contains a residue of a hazardous substance, Class 9, that does not meet the definition of another hazard class and is not a hazardous waste or marine pollutant. These shipments may remain marked, labeled, and/or placarded in the same manner as when it contained a greater quantity of the material even though the material no longer meets the definition for a hazardous substance.

3. Inspecting for Placards

a. Make sure that all required placards are:

(1) consistent with the shipping document information

(2) on both sides and both ends of the shipment

(3) matching on both sides and both ends of the shipment and when required the UN/NA numbers all match

(4) in placard holders or securely attached to the rail car, trailer, or container

(5) not damaged, faded - color should be similar to the color printed in this document (see Figure 4, Placard Chart), or obscured by dirt or car part

(6) oriented horizontally, so you can read them from left to right

(7) readily visible from the direction they face, except for placards on the ends of trailers and containers in or on a rail car.

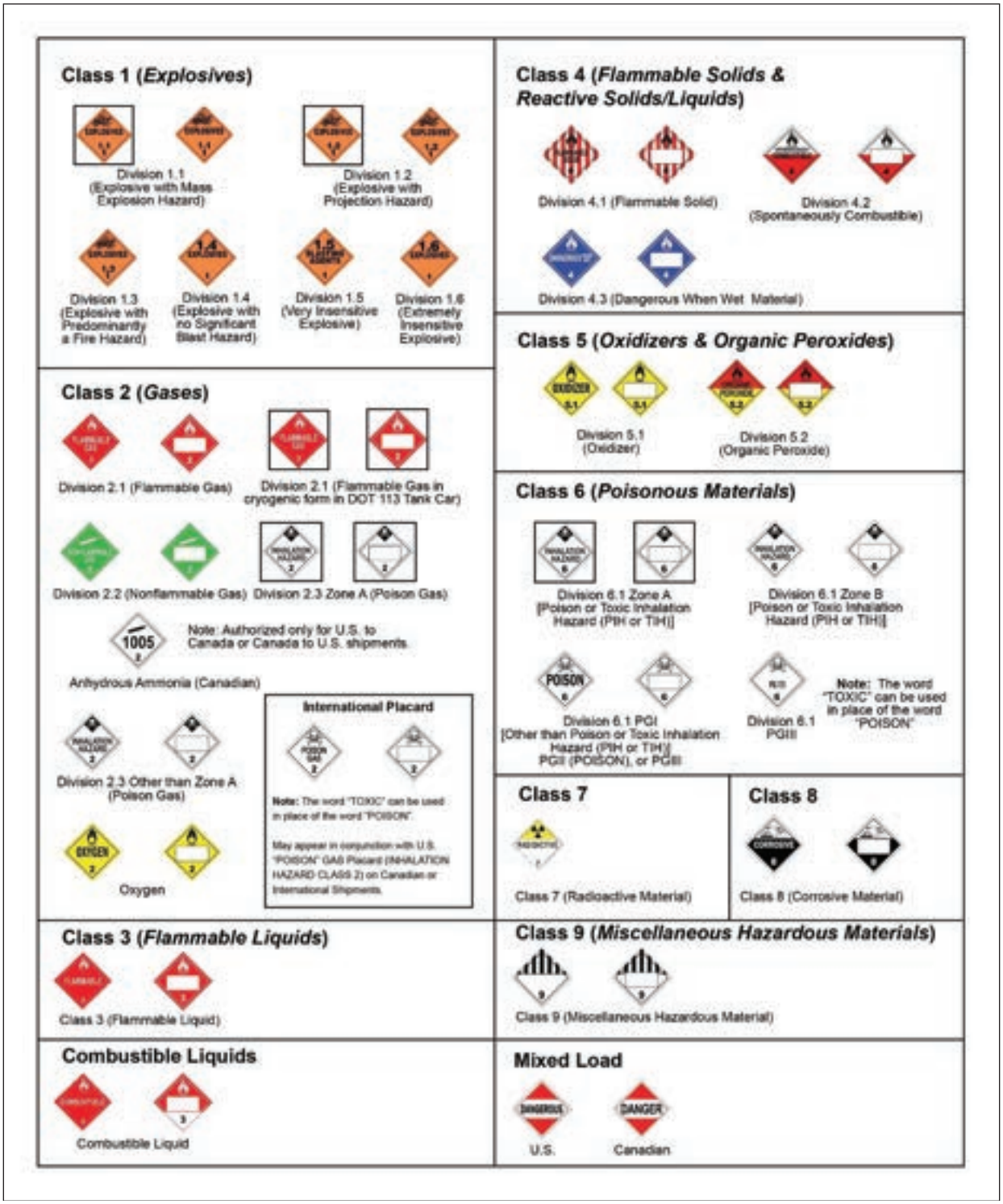


Figure 4. Placards for Hazardous Materials by Hazard Class

Text indicating the hazard is not required on placards other than the Class 7 and DANGEROUS placards; however, for shipments originating internationally, text may not appear on a Class 7 placard. The hazard class text does not have to be in English, except for the DANGEROUS placard, as long as the size, color, hazard class, and symbol are correct.

b. When picking up a hazardous material shipment at the customer's facility or siding, and a placard is not correct, does not meet the standards above, or is missing:

(1) Notify the customer, train dispatcher, yardmaster, or your supervisor, as appropriate.

(2) Do not accept the hazardous material shipment until corrections have been made.

c. When a placard does not meet the standards above or is discovered missing en route, notify the train dispatcher, yardmaster, or your supervisor, as appropriate. Corrections must be made at the next inspection point.

4. Marking Requirements and Inspecting for Markings

Marking - a descriptive commodity name, identification number, caution (such as inhalation hazard, elevated temperature material, marine pollutant, fumigant, non-odorized, sour crude oil), or tank car specification and qualification dates stencils displayed on hazardous material shipments.

Make sure the markings above are displayed on bulk packages as follows:

a. Identification Number Markings

(1) Identification number markings must appear on both sides and both ends either on the placard or in close proximity to the placard, when a placard is required:

(a) Bulk packages of hazardous materials (including Class 9 when no placard is required)

Note: Identification number markings are not required on the ends of multi-compartmented tank cars transporting more than one hazardous material having different identification numbers.

(b) Rail cars, trailers, and containers when 8,820 lbs (4000 kg) or more of non-bulk packages of hazardous materials, with the same proper shipping name and identification number, are loaded at one location and the transport vehicle does not contain any other hazardous or non-hazardous materials.

Exception: For shipments of molten sulfur from Canada, the identification number marking must appear only on both sides of the tank car.

(2) Identification numbers can be displayed in one of three ways, as Figure 5 shows:

Figure 5. Identification Numbers

(3) Identification numbers must not be displayed on:
   (a) EXPLOSIVES 1.1, 1.2, 1.3, 1.4, 1.5, or 1.6 placards
   (b) RADIOACTIVE placards
   (c) DANGEROUS placards
   (d) Subsidiary placards

(4) Make sure the identification numbers appear as required above and agree with the shipping document entries.

(5) When picking up a hazardous material shipment at the customer's facility, a siding or an interchange point and the identification number is not correct, is not legible, or is missing:
   (a) Notify the customer, train dispatcher, yardmaster, or your supervisor, as appropriate.
   (b) Do not accept the hazardous material shipment until corrections have been made.

(6) When an identification number is not correct, is not legible, or is missing en route, notify the train dispatcher, yardmaster, or your supervisor, as appropriate. Corrections must be made at the next inspection point.

Note: Missing identification numbers must be replaced and may be entered on the appropriate placard, orange panel, or white square-on-point configuration by hand using a black indelible marker.

b. MARINE POLLUTANT Mark

(1) For a material described on the shipping documents as a" MARINE POLLUTANT" and the shipment does not require a placard, make sure that the MARINE POLLUTANT mark (see Figure 6) appears on both sides and both ends of bulk packaging.

Figure 6. MARINE POLLUTANT Mark

Note*:* MARINE POLLUTANT marks are not required for DOMESTIC transportation when the bulk package displays a placard.

(2) When picking up a hazardous material shipment at the customer's facility or siding or at an interchange point, and a required MARINE POLLUTANT mark is not legible or is missing:
   (a) Notify the customer, train dispatcher, yardmaster, or your supervisor, as appropriate.
   (b) Do not accept the hazardous material shipment until corrections have been made.

(3) When a required MARINE POLLUTANT mark is not legible or is missing en route, notify the train dispatcher, yardmaster, or your supervisor, as appropriate. Corrections must be made at the next inspection point.

c. Elevated Temperature Material Mark

(1) For a material described on the shipping documents with the words "HOT," "ELEVATED TEMPERATURE," or "MOLTEN" and transported in a bulk packaging, the elevated temperature material mark must be displayed on two opposing sides of the bulk packaging, in one of the following valid formats:

(a) the word HOT stenciled on the packaging itself

(b) the words MOLTEN SULFUR (or MOLTEN SULPHUR) or MOLTEN ALUMINUM (or MOLTEN ALUMINIUM), as appropriate, stenciled on the packaging itself

(c) the international elevated temperature material symbol (see Figure 7)

(d) the word HOT displayed on a plain white-square-on-point configuration having the same outside dimensions as a placard (see Figure 7).

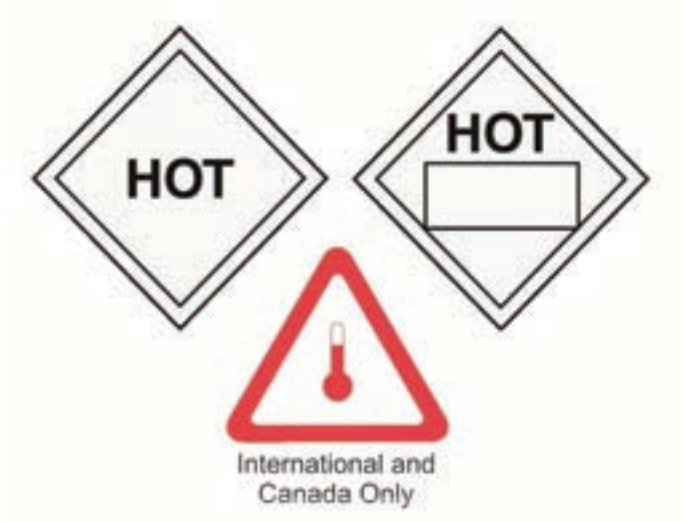


Figure 7. Elevated Temperature Material Mark

Note: Residue/empty shipments that last contained an elevated temperature material, such as asphalt, are not considered hazardous materials and do not require hazardous material shipping description entries on the shipping document. When the shipping document indicates empty, the shipment may be accepted and moved in rail transportation without the hazardous material shipping description entries, even though the elevated temperature material mark and identification number are displayed.

(2) When picking up a hazardous material shipment at a customer's facility or siding or at an interchange point and an elevated temperature material mark is not legible or is missing:

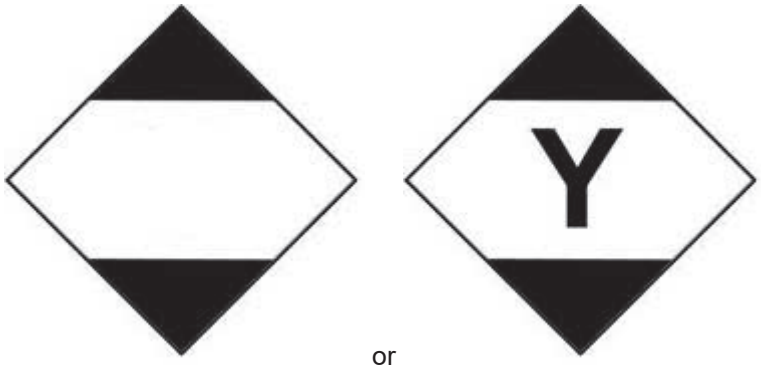
(a) Notify the customer, train dispatcher, yardmaster, or your supervisor, as appropriate.

(b) Do not accept the hazardous material shipment until corrections have been made.

(3) When an elevated temperature material mark is not legible or is missing en route, notify the train dispatcher, yardmaster, or your supervisor, as appropriate. Corrections must be made at the next inspection point.

d. LIMITED QUANTITIES Mark

(1) For a material listed on the shipping documents as "LIMITED QUANTITY" or "LTD QTY", the LIMITED QUANTITIES mark (see Figure 8) must be displayed on at least one side or end of trailers/containers as explained below.



or

Figure 8. LIMITED QUANTITIES Mark

(a) The LIMITED QUANTITIES mark is required:

(i) When the entire load of hazardous materials is limited quantities.

(ii) For a mix of non-hazardous materials and hazardous materials in limited quantity.

(b) The LIMITED QUANTITIES mark is not required when there are limited quantities and other hazardous materials NOT in limited quantities, but you would placard for the regular hazardous materials.

(2) A package displaying the LIMITED QUANTITIES mark is not subject to additional marking requirements for non-bulk packages (proper shipping name or identification number marking) unless it contains a hazardous substance or a hazardous waste.

e. INHALATION HAZARD Mark

(1) For a material described on the shipping documents as “POISON (TOXIC) – INHALATION HAZARD" or "INHALATION HAZARD," the words INHALATION HAZARD must appear (at least 3.9 inches in height for tank cars and at least 2 inches in height for intermodal tank containers) on both sides of the rail car, trailer, or container, near the placards.

Note: When the words INHALATION HAZARD appear on the placards, the INHALATION HAZARD mark is not required on the bulk packaging.

(2) When picking up a hazardous material shipment at the customer's facility or siding or at an interchange point and the words INHALATION HAZARD are illegible or missing:

(a) Notify the customer, train dispatcher, yardmaster, or your supervisor, as appropriate.

(b) Do not accept the shipment until corrections have been made.

(3) When the INHALATION HAZARD marking is illegible or missing en route, notify the train dispatcher, yardmaster, or your supervisor, as appropriate. Corrections must be made at the next inspection point.

f. Commodity Name

(1) For intermodal tank containers transporting any hazardous materials and for tank cars transporting certain hazardous materials, the commodity name must appear on two opposing sides of the intermodal tank container or tank car. The commodity name (at least 3.9 inches in height for tank cars and at least 2 inches in height for intermodal tank containers) must match the proper shipping name on the shipping documents and may include the technical name, although it is not specifically required.

(2) When accepting an intermodal tank container or tank car of hazardous materials from the shipper or in interchange and the commodity name is illegible or missing:
(a) Notify the customer, train dispatcher, yardmaster, or your supervisor, as appropriate.
(b) Do not accept the shipment until corrections have been made.

(3) When the commodity name on a tank car is discovered illegible or missing en route, notify the train dispatcher, yardmaster, or your supervisor, as appropriate. They will arrange to correct the problem at the next inspection point.

Note: See Appendix 1 for list of materials that require the commodity name on tank cars

g. Tank Car Specification and Qualification Dates Stencils

(1) Make sure the stencils describing the tank car specification DOT 111A100W1) and qualification dates are legible (see Figure 9). These stencils will appear on both sides of the tank car toward the end on the right as you face the car.

(2) Make sure the tank car qualification dates for pressure relief devices (PRD), tank, and interior heater coils are current (a car is currently within the qualification date until the last day of the year shown) (see Figure 9).

Note 1: When the car is loaded before the end of the year, it may be transported for unloading purposes but must be requalified before reloading.

Note 2: A tank car containing the residue of a hazardous material that is overdue its periodic qualification date may move and not be in violation of DOT regulations. The regulations only address loading a tank car overdue for its periodic qualification.

DOT 111A100W1

		STATION STENCIL	QUALIFIED	DUE
TANK QUALIFICATION		ABC-1	2021	2031
THICKNESS TEST		ABC-1	2021	2031
SERVICE EQUIPMENT		ABC-1	2021	2031
PRD: Valve	75 PSI	DEF-1	2021	2031
INT HTR		FGL-1	2021	2031
LINING		ABC-1	2021	2031
88.B.2 INSPECTION		ABC-1	2021	2031
STUB SILL INSPECTION		ABC-1	2021	2031

Figure 9. Tank Car Specification and Qualification Stencils

(3) When the qualification date is overdue, do not accept loaded tank cars from the shipper.

(4) When found en route, car may proceed to destination after contacting your supervisor.

h. FUMIGANT mark

(1) As information, the purpose of the FUMIGANT mark (see Figure 10) is to warn persons unloading the rail car, trailer, or container that it has been fumigated and that they must take appropriate precautions before unloading the car. The (*) on the mark will be replaced by the name of the fumigant.

(2) The FUMIGANT mark must be in English. However, EPA regulations allow another language in addition to the English version on the same FUMIGANT mark or an additional one.

Note: The FUMIGANT mark is required on each point of entry to a trailer/or container.

(3) Shipping Description Entries

(a) For U.S. shipments that are fumigated, information on the shipping documents is not required.

(b) For International (Canadian and IMDG) shipments verify that the information for the shipment on the shipping documents includes the following entries - UN3359,

Fumigated Unit, Class 9, name of the fumigant, amount of fumigant, date of fumigation, and any disposal information.

Figure 10. FUMIGANT Mark

i. Non - Odorized Mark

A tank car or intermodal tank container transporting non-odorized liquefied petroleum gas (LPG) must be legibly marked NON - ODORIZED or NOT- ODORIZED on two opposing sides, either near the commodity name or the placard(s).

The NON-ODORIZED or NOT - ODORIZED marks may appear on a tank car used for both non-odorized and odorized LPG.

Shippers must include on shipping documents information that a shipment is not odorized (i.e. provide “NON - ODORIZED” or “NOT - ODORIZED" notation).

j. Sour Crude Oil Mark

(1) US - A bulk packaging transporting petroleum crude oil containing hydrogen sulfide (i.e. sour crude oil) in sufficient concentration that its vapors may present an inhalation hazard must include a marking to warn of the toxic hazard (see Figure 11), which must be displayed at each location (manway) where exposure to hydrogen sulfide vapors may occur. The square-on-point must be black or red on a white or other contrasting background, and the skull and crossbones symbol must be black, located in the center of the square-on-point, and clearly visible

Figure 11. Sour Crude Oil Mark

(3) Canada - When bulk package of petroleum crude oil (UN1267 or UN3494) contains hydrogen sulphide in sufficient concentration that vapors from the crude oil can present an inhalation hazard, the words “toxic by inhalation” or “toxic — inhalation hazard” must be

included next to the placard for the primary class (Class 3). The marking can be done by use of an inhalation hazard placard or by marking on the car.

SECTION V. SWITCHING

1. General Requirement

Switch placarded hazardous material shipments only in compliance with the restrictions on the Switching Chart (see Figure 12).

Switching is defined as “the operation of moving rail cars within a yard in order to place them in a train or on a classification, repair, or storage track.” Switching also includes making pickups and setouts at a customer's facility or interchange points. Switching does **not** include moving rail cars to or from a shipper's facility or industry track into or out of the yard.

Reminder: When moving rail cars to or from a shipper’s facility or on an industrial lead into or out of the yard, comply with both the train placement restrictions in Section VI and the required documentation requirements in Section II.

WHEN RAIL CARS ARE CUT OFF IN MOTION, THE COUPLING SPEED MUST NOT EXCEED 4 MILES PER HOUR.

2. Safety

Before coupling, position yourself toward the end of a tank car, if possible, away from the manway and valves. Contents of tank cars may splash during or immediately following coupling, due to either improperly secured closures or the impact of coupling.

3. When to Use the Switching Chart

Refer to the Switching Chart:

a. when moving placarded hazardous material shipments in a yard to place them in a train or on a classification, repair, or storage track

b. when making pickups or setouts of placarded hazardous material shipments at a customer's facility, interchange point, or other setout point.

SWITCHING CHART

GROUP A	GROUP B		GROUP C	GROUP D	GROUP E		GROUP F
				 Note: Applies only to cars with spent nuclear fuel or high-level radioactive waste  DOT 113 Tank Car (Loads or Residue/Empty)	 Note: Only for Anhydrous Ammonia UN1005  *Anhydrous Ammonia (Canadian)		
Any Car	Loaded Tank Car	Other Loaded Car	Any Loaded Car	Any Car	Loaded Tank Car	Other Loaded Car	Any Car
X							
X		**X	X	X		**X	
					X		
	X				X		

Canada US

HOW TO USE THIS CHART

Select the applicable column and row on the Switching Chart. To do so:

1. Identify the placards and/or markings applied to the car
   Note: When placards are displayed, but are not required by regulation (permissive placarding), the rail car must be switched as required for the placard displayed.
2. Use the shipping document to determine whether car is loaded or residue/empty. Note: Residue/empty tank cars are identified on switch lists, track list, and track inquiries with an "E" or "DE" in the appropriate field. The notation "RESIDUE: LAST CONTAINED" on the shipping documents indicates a residue/empty shipment.
3. Identify the car type involved by observation (e.g. tank car, hopper car, gondola, etc.).
4. Find the applicable section on the chart, based on the placard or marking applied, the load/empty status, and the car type.
5. Follow the restrictions associated with the placard or marking as the "X"s in the columns indicate.

Note: The Word "TOXIC" can be used in place of the word "POISON" on placards.

Cars with placards displaying 4-digit identification numbers will be handled the same as cars with word description placards.

EQUIVALENT PLACARDS 

RESTRICTIONS

1) Separate these cars from an engine by at least one non-placarded car or by one GROUP F placarded or marked car.
   Do not place where there is any probable danger of fire (e.g. switch heaters).
   Do not place under bridges, under overpasses or along passenger stations.

2) These cars must not be:
   - Cut off in motion,
   - Struck by any free rolling car, or
   - Coupled into with more force than needed to make the coupling.

3) These cars must not be cut off in more than two car cuts.
   No more than two car cuts can couple into these cars.

4) When a person must ride a rail car to operate the hand brake:
   - Verify the hand brake is working properly.
   - Do not cut cars off until all preceding cars are clear of the lead.
   - Do not cut off any additional cars until the lead is clear.

* Authorized only for U.S. to Canada or Canada to U.S. shipments.
** Applies only to placarded flatcars, freight containers, trailers, portable tanks, tote bins, intermodal portable tanks, or U.N. portable tanks.

Figure 12. Switching Chart

SECTION VI. TRAIN PLACEMENT

1. General Requirement

Place placarded hazardous material shipments in a train so as to comply with the instructions on the Position-in-Train Chart (see Figure 13).

Note: Correct hazardous materials train placement errors at the first location that allows switching once the error is identified.

A **Train** is one or more engines coupled, with or without rail cars, displaying a marker, and requiring an appropriate air brake test.

2. When to Use the Position-in-Train Chart

Use the chart to make sure placement position in train is correct:

a. before a train departs the initial terminal

b. before a train departs an intermediate station where pickups and setouts were made en route

c. when delivering cars to or picking cars up at interchange tracks that are owned and operated by another railroad.

3. General Information

a. For train placement purposes, each platform or well of an intermodal rail car counts as one car.

b. A buffer car is a:

(1) non-placarded rail car

(2) rail car with a placard or marking shown in Group E

(3) residue/empty tank cars may be used as a buffer but may not be placed against an engine that is working or not working, occupied caboose or business car. See Instruction # 2 on the Position-in-Train Chart

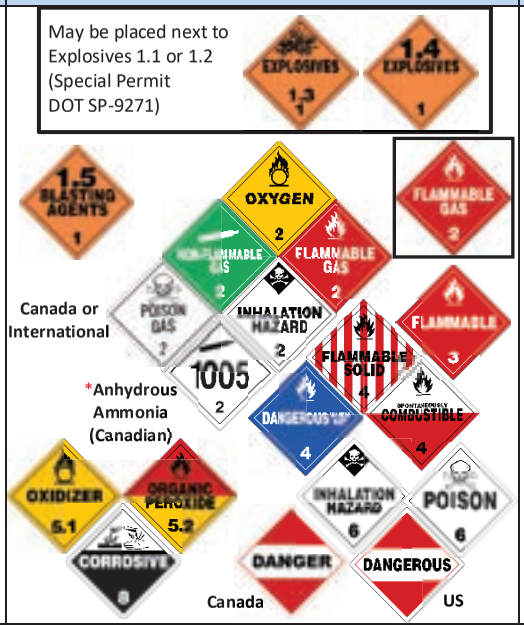
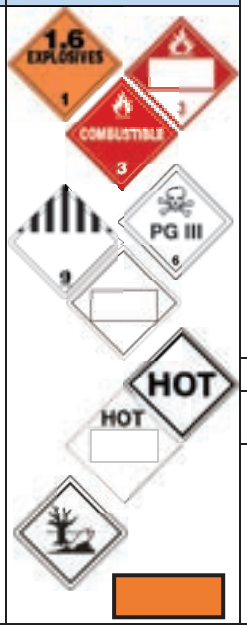
(4) placarded rail car and tank car, as long as it is in placard group E. See instruction #6 on the Position-in-Train Chart.

c. The word TOXIC can appear in place of the word POISON on placards.

d. A business car train is not a passenger train.

e. An engine, working or not working and regardless of placement in train, is always considered as an engine for train placement of hazardous materials.

POSITION-IN-TRAIN CHART

GROUP A	GROUP B			GROUP C			GROUP D	GROUP E
								
Any Car	Loaded Tank Car	Residue Tank Car	Other Loaded Car	Loaded Tank Car	Residue Tank Car	Other Loaded Car	Any Car	Any Car
X	X			X				
X	X	X		X	X		X	
X	X			X				
X	X			X				
X	X			X				
X	X		X	X		X	X	

HOW TO USE THIS CHART

Select the applicable column of the Position-in-Train chart. To do so:

1. Identify the placards and/or markings applied to the car.
2. Use the shipping document to determine whether car is loaded or residue/empty. Note: The notation: "RESIDUE: LAST/CONTAINED" on the shipping document indicate a residue/empty shipment.
3. Identify the car type involved by observation (e.g. tank car, hopper car, gondola, etc.).
4. Find the applicable section on the chart, based on the placard or marking applied, the load/empty status, and the car type.
5. Follow the restrictions associated with the placard or marking as the "X"s in the columns indicate.

*Authorized only for U.S. to Canada or Canada to U.S. shipments.

The Word "TOXIC" can be used in place of the word "POISON" on placards.

Cars with placards displaying 4-digit identification numbers will be handled the same as cars with word description placards.

EQUIVALENT PLACARDS 

RESTRICTIONS

1) A placarded car must not be nearer than the 6th car from an engine (working or not and regardless of placement in train) or occupied caboose/business car. If the train does not have at least five buffer cars, then all available buffer cars must be placed between the placarded car and the engine (working or not and regardless of placement in train). When an occupied caboose/business car is in the train, the available buffer cars must be equally divided to protect both the engine (working or not and regardless of placement in train and occupied caboose/business car from the hazardous material shipment. Exception: In a loaded or empty bulk commodity unit train, only one buffer car is required to be placed between the placarded car and the locomotive.

MUST NOT BE NEXT TO

2) Engine (working or not and regardless of placement in train), occupied caboose, or business car.

3) Open top cars (including bulkhead flats), when any of the contents protrude beyond the car ends or, if shifted, would protrude beyond the car ends.

4) Loaded flat cars, except closed TOFC/COFC equipment, multi-levels, and other specially-equipped cars with tie down devices for handling vehicles. Railroad wheels loaded on wheel car flats, in gondolas with no ends, or loaded with the axles above the top of the car.

5) Any rail cars, transport vehicles, or freight containers with temperature control equipment or internal combustion engine whether running or not. Note: Does not apply to cryogenic refrigerated equipment.

6) Any placarded car in another placarding Group, except it may be next to any residue placarded car or any car placarded or marked as a Group E.

Figure 13. Position-in-Train Chart

SECTION VII. KEY TRAINS

1. General Requirement

Trains carrying specified numbers of loaded rail cars, trailers, or containers of hazardous materials must be operated as "Key Trains."

2. Key Train Definition

A "Key Train" is any train as described in either a, b, or c below:

a. one (1) or more loads of spent nuclear fuel (SNF) or high level radioactive waste (HLRW) moving under the following Hazardous Materials Response Codes – 4929142, 4929143, 4929144, or 4929147

or

b. one (1) or more loaded tank cars containing materials that require the phrase "POISON/TOXIC-INHALATION HAZARD" on the shipping documents (Hazard Zone A, B, C, or D), anhydrous ammonia (UN1005), or ammonia solutions (UN3318)

or

c. twenty (20) or more loaded hazardous materials shipments or intermodal portable tank loads having any combination of hazardous material

Exception: Do not count box cars, trailers, or containers carrying mixed loads of hazardous materials when determining key train status.

3. Identifying Key Trains

a. A computer-generated train consist/train list will identify Key Train status in the header block on the first page.

b. When a computer-generated train consist/train list is not available or hazardous material cars are added to a train, the conductor must review the shipping documents for all hazardous material cars and determine Key Train status.

c. After picking up or setting out hazardous material shipments **en route**, the Key Train status may change. The conductor must determine whether or not Key Train status has changed and, if so, promptly notify the train dispatcher.

4. Instructions for Operating Key Trains

a. The maximum authorized speed for Key Trains is 50 MPH, unless further restricted.

Note: Where lower speed restrictions are in effect, or when the train is restricted to a lower speed for other reasons, the lower speed governs.

b. A key train will hold the main track, when practicable, unless a speed of greater than 10 MPH is authorized for the siding or auxiliary track.

c. Only cars equipped with roller bearings will be allowed in a Key Train.

d. When a defect in a Key Train is reported by a wayside/trackside warning detector but a visual inspection fails to confirm evidence of a defect, the train must not exceed 30 MPH until it has passed over the next wayside detector or is delivered to a terminal for a mechanical inspection. If the same car sets off the next detector or is found to be defective, it must be set out from the train.

e. Unless relieved of the requirement to do so by the operating railroad's train dispatcher, the crew operating a Key Train on a foreign railroad must, at the earliest opportunity, notify the foreign railroad's train dispatcher that the train is a Key Train as defined by the operating railroad.

SECTION VIII. EMERGENCY RESPONSE

1. General Requirement

When an emergency occurs, SAFETY IS OF FIRST IMPORTANCE.

a. Make an emergency call as radio rules require.

b. Look for a fire, vapor cloud or other release of materials.

c. Determine the status of crew members in the area.

d. Warn and keep everyone at a safe distance.

2. When a Fire or Vapor Cloud is Visible

a. Take the shipping documents (including the emergency response information) and the Emergency Response Guidebook and move yourself and other crew members uphill and upwind the evacuation distance recommended in the Emergency Response Guidebook. Stay out of ditches and low areas.

b. Do not smoke or use fusees.

c. Provide the train dispatcher or yardmaster with as much of the following information as is available:

(1) Specific location of the emergency (station, mile post location, nearest street or crossing)

(2) Type of emergency

(3) Status of crew members

(4) Cars involved, including each car's initials and numbers and their extent of involvement (leaking, derailed, or on fire)

(5) Surroundings (proximity to populated areas, local bodies of water, or nearby drainage ditches or storm sewers; description of terrain; location of access roads; weather conditions)

(6) Resources necessary to handle the situation (fire, ambulance, and law enforcement agencies)

(7) Location where a crew member with shipping documents will meet arriving emergency response personnel.

d. Once you are in a safe location:

(1) Identify yourself and cooperate with the local emergency response personnel as described in Section VIII item 4.

(2) Review your shipping documents and emergency response information.

(3) If necessary, move to the farthest distance recommended in:

(a) information from the Emergency Response Guidebook

or

(b) other supplementary emergency response information printed as part of the train list/consist or provided by the customer – for example, a Safety Data Sheet (SDS).

3. When No Fire or Vapor Cloud is Visible

a. Review the shipping documents for hazardous material shipments.

b. Take the shipping documents (including the emergency response information) and the Emergency Response Guidebook and inspect the train to identify the rail cars, trailers, or containers involved, and look for indications of the release of hazardous materials.

c. If you encounter a hazardous material release, unusual smells, or noises during this inspection:

Provide the train dispatcher or yardmaster with as much of the following information as is available:

(1) Specific location of the emergency (station, mile post location, nearest street or crossing)

(2) Type of emergency

(3) Avoid contact with the material and its vapors.

(4) Move yourself and other crew members uphill and upwind the evacuation distance recommended in the Emergency Response Guidebook. Stay out of ditches and low areas.

(5) Eliminate any ignition sources (no smoking, no fusees).

(6) Warn all bystanders to stay away.

d. After completing the inspection, notify the train dispatcher or yardmaster with as much of this information as is available:

(1) Status of crew members

(2) Cars involved, including each car's initials and numbers and their extent of involvement (leaking, derailed, or on fire)

(3) Surroundings (proximity to populated areas, local bodies of water, or nearby drainage ditches or storm sewers; description of terrain; location of access roads; weather conditions)

(4) Resources necessary to handle the situation (fire, ambulance, and law enforcement agencies)

(5) Location where a crew member with shipping documents will meet arriving emergency response personnel.

e. Once you are in a safe location:

(1) Identify yourself and cooperate with the local emergency response personnel as described in Section VIII item 4.

(2) Review your shipping documents and emergency response information.

(3) If necessary, move to the farthest distance recommended in:

(a) information from the Emergency Response Guidebook

or

(b) other supplementary emergency response information printed as part of the train list/consist or provided by the customer – for example, a Safety Data Sheet (SDS).

4. Cooperating with Local Emergency Responders

a. Immediately share any requested information from the shipping documents with emergency response personnel.

(1) Provide an extra copy of the train list/consist, when available.

Note: Retain any waybills and a copy of the train list/consist until you can deliver them to the first railroad manager on the scene.

(2) Immediately share a copy of the emergency response information provided with the shipment.

b. Help emergency response personnel identify cars and the commodities involved. Use shipping documents or observations from a safe location to accomplish this task.

c. Give the first railroad manager on the scene a description of the incident and indicate any assistance you provided emergency responders.

d. Remain at the scene, at a safe distance, until a railroad manager relieves you.

e. A railroad spokesperson will handle discussing the incident with the media or other non-emergency response personnel.

5. Handling Leaking Hazardous Material Shipments

Take these actions when there is any sign of leakage:

a. Do not allow the hazardous material shipment to continue in transportation until the leak is controlled.

Note: Leaking hazardous material shipments may be moved, with proper railroad authority, only as far as necessary to reduce or eliminate the immediate threat of harm to human health, the environment, or railroad operations. Movement of leaking hazardous material shipments may require government approval.

b. When it is necessary to move a leaking hazardous material shipment, use an adequate number of buffer cars between the locomotive and the leaking car, to prevent chemical exposure.

APPENDICES

1. List of materials that require the commodity name on tank cars

Division 2.1 materials

Division 2.3 materials

Acrolein, stabilized

Ammonia, anhydrous, liquefied

Ammonia solutions (more than 50% ammonia)

Bromine or Bromine solutions

Bromine chloride

Chloroprene, stabilized

Dispersant gas or Refrigerant gas

Formic acid

Hydrocyanic acid, aqueous solutions

Hydrofluoric acid, solution

Hydrogen cyanide, stabilized (less than 3% water)

Hydrogen fluoride, anhydrous

Hydrogen peroxide, aqueous solutions (greater than 20% hydrogen peroxide)

Hydrogen peroxide, stabilized

Hydrogen peroxide and peroxyacetic acid mixtures

Nitric acid (other than red fuming)

Phosphorus, amorphous

Phosphorus, white dry or Phosphorus, white, under water or Phosphorus white, in solution, or Phosphorus, yellow dry or Phosphorus, yellow, under water or Phosphorus, yellow, in solution

Phosphorus white, molten

Potassium nitrate and sodium nitrate mixtures

Potassium permanganate

Sulfur trioxide, stabilized

Sulfur trioxide, uninhibited

GLOSSARY

Note: This glossary defines/explains the terms as used in this document.

Basic description – the identification number, proper shipping name, hazard class/division number, and packing group (if assigned) prescribed for a hazardous material.

Buffer car – a non-placarded rail car, a railcar with a placard or marking shown in Group F on the Switching Chart or Group E on the Position-in-Train Chart, a residue/empty tank with no other restrictions, or a placarded rail car with no other restrictions.

Bulk packaging - packaging with capacity greater than 119 gallons (450 liters) for liquids, 882 pounds (400 kilograms) for solids, or a water capacity of greater than 1000 pounds (454 kilograms) for gases. For example, bulk bags, intermodal (IM) portable tanks, portable tanks, portable bins, gondola cars, hopper cars, or tank cars.

Carrier – a person (individual, corporation, company, etc.) who transports property in commerce by rail car, aircraft, motor vehicle, or vessel.

Commodity name – the proper shipping name or an authorized common name of a hazardous material.

Container – any freight container (box) or intermodal tank container (intermodal (IM) portable tank, portable tank, UN portable tank, or portable bin).

Dangerous goods – term used for “hazardous materials” in countries other than the United States.

Division – a subdivision of a hazard class; typically two numerals separated by a decimal point (2.1, 2.2, 2.3, 5.1, 5.2, etc.). For Class 1 (explosive materials), a “compatibility group letter” will be shown after the second numeral (1.1A, 1.4G, etc.).

Documentation – includes complete shipping documents with the appropriate shipping description entries and acceptable emergency response information.

Elevated temperature material – a material which, when offered for transportation or when transported as a bulk package, is:

- a liquid at a temperature at or above 212°F (100°C);
- a liquid with a flash point at or above 100°F (38°C) that is intentionally heated and offered for transportation or transported at or above its flash point; or,
- a solid at a temperature at or above 464°F (240°C).

Contact with an elevated temperature material may result in thermal burns, in addition to other hazards associated with the material.

Emergency – an unforeseen combination of circumstances or the resulting state that calls for immediate action (derailment and leaks).

Emergency response information - hazard and response information for each hazardous material, contained in the Emergency Response Guidebook (ERG) and other supplementary train documentation, to assist response personnel at hazardous material incidents.

Emergency response telephone number – the telephone number of an entity who is either knowledgeable of a hazardous material being shipped and has comprehensive emergency response and incident mitigation information for that material, or has immediate access to an entity who possesses such knowledge and information.

Engine – means a locomotive propelled by any form of energy and used by a railroad.

Freight container – a reusable container having a volume of 64 cubic feet or more, designed and constructed to permit being lifted with its contents intact and intended primarily for containment of packages (in unit form) during transportation.

Fumigant – a poisonous/toxic agent in vapor form intended to destroy insects and vermin.

Hazard class - the category of hazard assigned to a material. A hazard class may be subdivided into divisions. When talking about hazard classes/divisions, the hazard class/division can be expressed as a number or with words (Class 3 (three) or Flammable Liquid; Division 2.1 (two-point-one) or Flammable Gas). A material will have a primary hazard class/division and may have one or more subsidiary hazard classes/divisions which represent additional hazards associated with the material.

Hazardous material - a substance or material which the Secretary of Transportation has determined to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce. The term “hazardous material” includes hazardous substances, hazardous wastes, elevated temperature materials, and marine pollutants.

Hazardous material shipment - a hazardous material in rail cars, trailers, or containers in rail transportation. All hazardous material shipments require shipping documents. When moved in rail cars, trailers, or containers, hazardous material shipments may or may not be placarded or marked with an identification number.

Hazardous substance – a hazardous material that, as determined by the U.S. Environmental Protection Agency, has a detrimental effect on the environment. To be regulated in transportation, the quantity in one package must equal or exceed the material’s “Reportable Quantity” (“RQ”).

Hazardous waste – a material subject to the Hazardous Waste Manifest Requirements of the U.S. Environmental Protection Agency due to its potential threat to public health or the environment.

Hazardous waste manifest - a document specifically for tracking hazardous wastes in transportation. It contains the shipping description and identifies the waste generator, each transporter, and the designated (disposal) facility.

Hazard zone - one of four levels of inhalation hazard (Hazard Zones A through D) assigned to gases, and one of two levels of hazard (Hazard Zones A and B) assigned to liquids that are poisonous/toxic by inhalation. For example, when the hazard zone is "A," it is shown on the shipping document as "Zone A." Zone A is the most hazardous, and Zone D is the least hazardous.

Identification number – a 4-digit number preceded by “UN”, “NA” or “ID” assigned to a hazardous material.

Improvised Explosive Device (IED) – is a device fabricated in an improvised manner incorporating explosives or destructive, lethal, noxious, pyrotechnic, or incendiary chemicals in its design. This device generally includes a power supply, a switch or timer, and a detonator or initiator.

Inhalation Hazard – term used to identify certain gases and liquids that may cause health problems if breathed in very low concentrations for short periods of time.

Interchange - the process of transferring rail cars to or from another railroad.

Intermodal tank container – an intermodal (IM) portable tank, portable tank, UN portable tank, or portable bin

International shipment – a shipment being made between two or more countries or between places in one country through another country.

Limited quantity (LTD QTY) – a term used to indicate a hazardous material shipment which is allowed an exception to certain regulatory requirements because of the small amount of the material in a package.

Marine pollutant – a hazardous material that has a detrimental effect on marine/aquatic life.

Marking – a descriptive commodity name, identification number, instructions, cautions (such as marine pollutant, inhalation hazard, elevated temperature material, limited quantities, fumigant, non-odorized, sour crude oil), weight, tank car specification and qualification dates stencils, or UN marks, or combinations thereof, required for display on hazardous material shipments.

Movement Approval – a one-time authorization to move a non-conforming package not meeting the applicable hazardous material regulations. This provides no relief of any regulations other than specifically stated in the approval.

N.O.S. - initials, found on shipping documents, which mean "Not Otherwise Specified."

Non-bulk packaging - packaging with a capacity equal to or less than 119 gallons (450 liters) for liquids, 882 pounds (400 kilograms) for solids, or a water capacity of equal to or less than 1000 pounds (454 kilograms) for gases. For example, bags, bottles, boxes, cylinders, or drums.

Package – the packaging plus its contents. Packaging is the receptacle and any other components or materials necessary for the receptacle to perform its containment function.

Packing group - a grouping of hazardous materials according to the degree of danger:

- Packing Group I (shown as "PG I" or "I" on the shipping documents) indicates great danger.
- Packing Group II (shown as "PG II" or "II" on the shipping documents) indicates medium danger.
- Packing Group III (shown as "PG III" or "III" on the shipping documents) indicates minor danger.

Placard – a sign measuring at least 250 mm (9.8 in) by 250 mm (9.8 in) square-on-point, communicating a hazard by symbol, color, hazard class/division number and possibly text. Some placards must be displayed on a square background which is white with a black border.

Placarded car - a rail car displaying placards in accordance with DOT regulations.

Poison Inhalation Hazard (PIH) or Toxic Inhalation Hazard (TIH) - term used to identify certain gases and liquids that may cause health problems if breathed in very low concentrations for short periods of time.

Position-in-Train document – a document showing the current position of all hazardous material shipments within the train. This document could be the train list/consist or a separate document specifically for this purpose.

Primary hazard – see definition of “hazard class”.

Proper shipping name – the name of a hazardous material as specified by the regulations.

Radio waybill – a form used to record shipping description entries provided orally.

Rail car – equipment used in rail transportation. For example, box car, flat car, gondola car, hopper car, tank car, or caboose, but not an engine**.**

Reportable quantity (RQ) – the minimum quantity (in pounds or kilograms) in one package, required for a hazardous material to meet the definition of a “hazardous substance”.

Residue – the hazardous material remaining in a packaging, including a tank car, after its contents have been unloaded to the maximum extent possible. It may be indicated on the shipping documents by the phrase "RESIDUE: LAST CONTAINED . . ." in association with the basic description.

Shipper's Certification - a signed (or electronically printed) declaration on the shipping document provided by the shipper to the first transporter for a loaded hazardous material shipment. It indicates compliance with the DOT regulations. The certification must be signed by hand or mechanically. It may read either:

> "This is to certify that the above-named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation."
>
> **or**
>
> "I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name, and are classified, packaged, marked, and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations."
>
> ***Note***: A shipper’s certification is required on any shipping document that the customer provides to the crew for loaded hazardous material cars.

Shipping description entries – the specific information required on a shipping document, including the “basic description”, number and type of packages, total quantity; and additional entries that may be applicable to the shipment (such as “RQ”, “Limited Quantity”/” LTD QTY”, “Marine Pollutant”, “Poison/Toxic Inhalation Hazard Zone A (or B, C or D)”, etc.).

Shipping document – any document providing the required entries for a hazardous material shipment**.** This document can be in paper or electronic form. If in electronic form, the carrier must have authorization from DOT.

Special Car Handling Instructions (SCHI) Code *(specific to BNSF operations)* – A two-letter code used to identify the primary placard required for a hazardous material shipment.

Special Permit – A document issued by the Department of Transportation (DOT) permitting a person to perform a function that is not otherwise permitted under the DOT's regulations.

Subsidiary hazard – see definition of "hazard class".

Subsidiary placard – a placard that identifies a specific material's subsidiary hazard(s).

Switching - the operation of moving rail cars within a yard, at a customer's facility, or at an interchange point, in order to place them in a train or on a classification, repair, or storage track. It does **not** include moving rail cars to or from a shipper's facility or industry track into or out of the yard.

Technical name - a recognized chemical name or microbiological name used in scientific and technical handbooks, journals, and texts to further identify a hazardous material.

Total quantity notation – the total weight or volume, including the unit of measurement, of the hazardous material contained in a package, such as "100 LBS", "55 GAL", "5 KG", or "208 L". For bulk packages and cylinders, merely an indication of the total quantity is required, such as "1 IM Tank" or "2 IBCs"; or, "10 cylinders" or "10 cyl." For non-bulk packages, number and type of packages are also required, such as "12 DRUMS (UN 1A1)" or "15 BOXES". An indication of total quantity is not required for packages containing only residue.

Toxic Inhalation Hazard (TIH) or Poison Inhalation Hazard (PIH) - term used to identify certain gases and liquids that may cause health problems if breathed in very low concentrations for short periods of time.

Trailer – a cargo carrying body with permanent wheels on the rear end (also called a van or semitrailer).

Train - one or more engines coupled, with or without rail cars, displaying a marker, and requiring an appropriate air brake test.

Yard - a system of tracks, other than main tracks and sidings, used for making and breaking up trains and for other purposes, such as repair or storage of cars.

changed from aeronautical to non-aeronautical use and release the lands from the conditions of the Airport Improvement Program Grant Agreement Grant Assurances. In accordance with 49 U.S.C. 47107(c)(2)(B)(i) and (iii), the airport will receive fair market value for the property, which will be subsequently reinvested in another eligible airport improvement project for general aviation facilities at the Ottumwa Regional Airport.

Any person may inspect, by appointment, the request in person at the FAA office listed above under **FOR FURTHER INFORMATION CONTACT**. In addition, any person may, upon appointment and request, inspect the application, notice and other documents determined by the FAA to be related to the application in person at the Ottumwa Regional Airport.

Issued in Kansas City, MO on July 26, 2013.

Jim A. Johnson,

Manager, Airports Division.

[FR Doc. 2013–19003 Filed 8–6–13; 8:45 am]

BILLING CODE 4910 13 P

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

[FHWA Docket No. FHWA 2013 0041]

Buy America Policy

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Notice of extension of deadline.

SUMMARY: The FHWA is extending the deadline for comments regarding the continued need, in whole or in part, for the general waivers from Buy America for manufactured products; for ferry boat equipment; and for pig iron and processed, pelletized, and reduced iron ores, which was published on July 10, 2013. The original deadline for submitting comments was August 9, 2013. This notice extends the deadline by 30 calendar days to September 8, 2013.

DATES: Comments must be received on or before September 8, 2013. Late filed comments will be considered to the extent practicable.

ADDRESSES: Mail or hand deliver comments to the U.S. Department of Transportation, Dockets Management Facility, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590, or submit electronically at *http://www.regulations.gov* or fax comments to (202) 493–2251. All comments should include the docket number that appears in the heading of this document. All comments received will be available for examination and copying at the above address from 9 a.m. to 5 p.m., e.t., Monday through Friday, except Federal holidays. Those desiring notification or receipt of comments must include a self-addressed, stamped postcard or you may print the acknowledgment page that appears after submitting comments electronically. You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70, Page 19477–78).

FOR FURTHER INFORMATION CONTACT: Mr. Gerald Yakowenko, Contract Administration Team Leader, Office of Program Administration, (202) 366–1562, or Mr. Michael Harkins, Office of the Chief Counsel, (202) 366–4928, Federal Highway Administration, 1200 New Jersey Avenue SE., Washington, DC 20590. Office hours are from 8 a.m. to 4:30 p.m., e.t., Monday through Friday, except Federal holidays.

SUPPLEMENTARY INFORMATION:

Electronic Access and Filing

This document and all comments received may be viewed online through the Federal eRulemaking portal at: *http:www.regulations.gov.* Regulations.gov is available 24 hours each day, 365 days each year. Electronic submission and retrieval help and guidelines are available under the help section of the Web site. An electronic copy of this document may also be downloaded by accessing the Office of the Federal Register's home page at: *http://www.archives.gov/federal-register/,* or the Government Printing Office's Web page at: *http://www.gpo.gov/fdsys.*

Background

On July 10, 2013, at 78 FR 41492, the FHWA published in the **Federal Register** a notice seeking comments regarding the continued need, in whole or in part, for the general waivers from Buy America for manufactured products; for ferry boat equipment; and for pig iron and processed, pelletized, and reduced iron ores. This notice also sought comment on the continuing need for the FHWA's minimal use threshold (currently established at $2,500 or 1/10 of 1 percent of the total contract value, whichever is greater). The original deadline for comments was August 8, 2013. In a letter dated July 23, 2013, the American Association of State Highway and Transportation Officials (AASHTO) submitted a comment to the docket for this notice requesting a 30-day extension to submit comments. This notice grants AASHTO's request and extends the deadline by 30 calendar days to September 8, 2013.

Issued on: August 2, 2013.

Victor M. Mendez,

FHWA Administrator.

[FR Doc. 2013–19176 Filed 8–5–13; 4:15 pm]

BILLING CODE 4910 22 P

DEPARTMENT OF TRANSPORTATION

Federal Railroad Administration

[FRA Emergency Order No. 28, Notice No. 1]

Emergency Order Establishing Additional Requirements for Attendance and Securement of Certain Freight Trains and Vehicles on Mainline Track or Mainline Siding Outside of a Yard or Terminal

The Federal Railroad Administration (FRA) of the United States Department of Transportation (DOT) has determined that public safety compels issuance of this Emergency Order (EO), which requires railroads operating on the general system to implement additional processes and procedures to ensure that certain unattended trains and vehicles [1] on mainline track or mainline siding outside of a yard or terminal are properly secured against unintended movement. FRA re-examined its regulations governing the securement of such equipment in light of the July 6, 2013, derailment in Lac-Mégantic, Quebec, Canada, which demonstrated the terrible consequences that can arise when a railroad accident results in a sudden release of flammable liquids. FRA's inspection data since January 2010 shows significant non-compliance with FRA's securement regulations, 49 CFR 232.103(n), with nearly 4,950 recorded defects in that time. Moreover, FRA has seen a number of serious accidents during rail transportation of flammable liquids since 2009, and there has been significant growth in these types of rail shipments since 2011. These factors lead FRA to the conclusion that additional action is necessary to eliminate an immediate hazard of death, personal injury, or significant harm to the environment, particularly in instances where certain hazardous materials are involved. As a result, FRA is ordering that each railroad take the following actions on mainline track or mainline siding outside of a yard or terminal to ensure

[1] A vehicle, as defined in 49 U.S.C. 20301, ''means a car, locomotive, tender, or similar vehicle.''

the safe transportation by rail of hazardous material:

1. No train or vehicle transporting hazardous materials as described in Appendix A shall be left unattended on a mainline track or mainline siding outside of a yard or terminal until the railroad develops, adopts, complies with and makes available to FRA upon request, a plan that identifies specific locations and circumstances when such trains or vehicles may be left unattended. The plan shall contain a sufficient safety justification for any determination allowing such trains or vehicles to be unattended. FRA will monitor such plans and if FRA determines that adequate justification is not provided, the railroad shall ensure that trains and equipment are attended until appropriate modifications to the plan are completed. FRA does not intend to grant approval to any plan. Each railroad shall notify FRA when it has developed a plan under this provision prior to the railroad operating pursuant to the plan.

2. Develop processes for the securement of unattended trains or vehicles transporting hazardous materials as described in Appendix A on mainline track or mainline siding outside of a yard or terminal if permitted by the railroad's plan required by this order that contains the following requirements:

a. The controlling locomotive cab must be locked or the reverser on the controlling locomotive must be removed and secured, and

b. Employees who are responsible for securing trains and vehicles transporting hazardous materials as described in Appendix A must communicate to the train dispatcher the number of hand brakes applied, the tonnage and length of the train or vehicle, the grade and terrain features of the track, any relevant weather conditions, and the type of equipment being secured; train dispatchers must record the information provided; and train dispatchers or other qualified railroad employees must verify and confirm with the train crew that the securement meets the railroad's requirements.

3. Review and verify, and adjust, as necessary, existing procedures and processes related to the number of hand brakes to be set on all unattended trains and vehicles and ensure the means of verifying that number is appropriate.

4. Implement operating rules and practices requiring the discussion of securement for any job that will impact or require the securement of any train or vehicle in the course of the work being performed.

5. Develop procedures to ensure that a qualified railroad employee inspects all equipment that any emergency responder has been on, under, or between for proper securement before the train or vehicle is left unattended.

Additionally, each railroad must provide notice of this EO to all employees affected by this EO to ensure that they have knowledge of the EO's requirements.

Authority

Authority to enforce Federal railroad safety laws has been delegated by the Secretary of Transportation to the Administrator of FRA. 49 CFR 1.89. Railroads are subject to FRA's safety jurisdiction under the Federal railroad safety laws. 49 U.S.C. 20101, 20103. FRA is authorized to issue emergency orders where an unsafe condition or practice ''causes an emergency situation involving a hazard of death, personal injury, or significant harm to the environment.'' 49 U.S.C. 20104. These orders may immediately impose ''restrictions and prohibitions . . . that may be necessary to abate the situation.'' *Id.*

Lac-Mégantic Derailment

FRA has re-examined its requirements for securing trains and vehicles on mainline track and mainline sidings outside of a yard or terminal in the aftermath of the catastrophic July 6, 2013, accident involving loaded tank cars containing petroleum crude oil that occurred in the town of Lac-Mégantic, Quebec, Canada, on track owned by Montreal, Maine & Atlantic Railway Corporation (MMA), a company incorporated in the United States. While Canadian authorities are still investigating the accident and no final conclusions have been made, the following is known based on preliminary information released by the Transportation Safety Board of Canada.

According to Rail Safety Advisory Letters issued by the Transportation Safety Board of Canada on July 19, 2013, the incident is summarized as follows. At approximately 10:45 p.m. Eastern Daylight Time (EDT) on July 5, 2013, MMA train 2 was proceeding eastward from Montreal, Quebec, to St. John, New Brunswick. The train was approximately 4,700 feet long and weighed over 10,000 tons. It consisted of five locomotives, a loaded box car, and 72 loaded tank cars containing petroleum crude oil (U.S. DOT Hazard Class 3, UN 1267). At approximately 11:00 p.m. the train stopped near milepost 7.40 near Nantes, Quebec. At that location the operator of the train secured it and departed, leaving the train unattended on mainline track with a descending grade of approximately 1.2 percent.

At around 11:50 p.m. a local resident reported a fire on the controlling locomotive (MMA 5017) of the train. The local fire department was called and responded with another MMA employee. At approximately midnight, the controlling locomotive was shut down and the fire extinguished. After the fire was extinguished, the fire department and the MMA employee left the site.

At approximately 1:00 a.m. the next day (the early morning of July 6th) it appears that the train began rolling and picking up speed down the descending grade toward the town of Lac-Mégantic, Quebec, which sits approximately 30 miles from the United States-Canada border. Near the center of town, the box car and 63 of the loaded tank cars derailed. The locomotives, which separated from the train, traveled an additional ½ mile before coming to a stop. A number of derailed tank cars released product resulting in multiple explosions and subsequent fires. At this time, it is estimated that there were 42 fatalities and that 5 persons are still missing. There was also extensive damage to the town, and approximately 2,000 people were evacuated from the surrounding area. While the investigation is ongoing and the Transportation Safety Board of Canada has not reached any final conclusions, it has made a determination that the braking force applied to the train was insufficient to hold it on the 1.2-percent descending slope between Nantes and Lac-Mégantic.

In response to this accident, Transport Canada (the Canadian government department responsible for regulating transportation safety in Canada) issued an emergency railroad directive pursuant to Section 33 of the Canadian Railway Safety Act.[2] While Transport Canada explained in the emergency directive that the cause of the accident in Lac-Mégantic remains unknown, the emergency directive stated that:

[I]n light of the catastrophic results of the Lac-Mégantic accident and in the interest of ensuring the continued safety and security of railway transportation, there is an immediate need to clarify the regime respecting unattended locomotives on main track and sidings and the transportation of dangerous

[2] Available online at: *http://www.tc.gc.ca/eng/mediaroom/backgrounders-safety-locomotives-7292.html.* Additionally, in response to this accident, the Transportation Safety Board of Canada issued Rail Safety Advisory Letter—09/13 regarding the securement of equipment and trains left unattended; available online at: *http://www.tsb.gc.ca/eng/medias-media/sur-safe/letter/rail/2013/r13d0054/r13d0054-617-09-13.asp.*

goods in tank cars using a one person crew to address any threat to the safety and security of railway operations.

As such, Transport Canada exercised its statutory emergency directive authority to order railroad companies operating in Canada to comply with certain requirements related to unauthorized entry into locomotive cabs, directional controls on locomotives, the application of hand brakes to cars left unattended for more than one hour, setting of the automatic brake and independent brake on any locomotive attached to cars that is left unattended for one hour or less, attendance related to locomotives attached to loaded tank cars transporting dangerous goods on main track, and the number of crew members assigned to a locomotive attached to loaded tank cars transporting dangerous goods on a main track or siding.

In addition, Transport Canada issued an accompanying order pursuant to paragraph 19(a)(1) of the Canadian Railway Safety Act directing railroad companies in Canada to formulate or revise certain railroad operating rules, respecting the safety and security of unattended locomotives, uncontrolled movements, and crew size requirements. The order provides that rules should be based on an assessment of safety and security risks, and shall at a minimum ensure that the cab(s) of unattended controlling locomotives are secure against unauthorized entry; ensure that the reversers of unattended locomotives are removed and secured; prevent uncontrolled movements of railway equipment by addressing the application of hand brakes; ensure the security of stationary railway equipment transporting dangerous goods; and provide for minimum operating crew requirements considering technology, length of train, speeds, classification of dangerous goods being transported, and other risk factors.

DOT is taking actions consistent with Transport Canada to ensure the safe transportation of products by rail in the United States, with a particular focus on certain hazardous materials that present an immediate danger for communities and the environment in the event of a train accident. Through this EO, FRA is addressing the immediate dangers that arise from unattended equipment that is left unsecured. Additionally, FRA and the Pipeline and Hazardous Materials Safety Administration (PHMSA) are issuing a joint Safety Advisory to railroads and commodity shippers detailing eight recommended actions the industry should take to better ensure the safe transport of hazardous materials. These recommendations include the following: Reviewing the details and lessons learned from the Lac-Mégantic accident; reviewing crew staffing levels; removing and securing the train's ''reverser'' when unattended; a thorough review of all railroad operating procedures, testing and operating rules around securing a train; reviewing Transport Canada's directives to secure and safely operate a train; and conducting a system-wide assessment of security risks when a train is unattended and identifying mitigation efforts for those risks. Additionally, the Safety Advisory recommends testing and sampling of crude oil for proper classification for shipment, as well as a review of all shippers' and carriers safety and security plans. Finally, FRA is convening an emergency meeting of FRA's Railroad Safety Advisory Committee to begin the deliberative process with FRA's stakeholders, including railroad management, railroad labor, shippers, car owners, and others, as the agency considers recommendations in the Safety Advisory that should be made a part of its regulations.

Safety Concerns Arising Out of the Lac-Mégantic Derailment

Generally, the transportation of hazardous materials by rail is extremely safe. The vast majority of hazardous materials shipped by rail each year arrive at their destinations safely and without incident. Indeed, in calendar year 2011, there were only 20 accidents in which a hazardous material was released out of approximately 2.2 million shipments of hazardous material transported by rail in the United States. However, the Lac-Mégantic incident demonstrates the substantial potential for danger that exists when an unattended train rolls away and derails resulting in the sudden release of hazardous materials into the environment. Although the Lac-Mégantic incident occurred in Canada, the freight railroad operating environment in Canada is similar to that in the United States, and a number of railroads operate in both countries.[3] Freight railroads in the United States also transport a substantial amount and variety of hazardous materials, including materials poisonous by inhalation (PIH), materials or toxic by inhalation (TIH), and explosive materials. Moreover, an increasing proportion of the hazardous materials being transported by rail is classified as flammable.[4]

The MMA train in the Lac-Mégantic incident was transporting 72 carloads of petroleum crude oil with five locomotives and a loaded box car. A similar type of train consist is commonly found on rail lines in the United States because crude oil is often transported in units of cars or by a unit train consisting virtually entirely of tank cars containing crude oil. Crude oil is often classified by an offeror as a flammable liquid; per PHMSA's Hazmat Regulations (HMR), however, its packing group can be I, II, or III depending on the blend of constituent crude oils. According to the Association of American Railroads (AAR), crude oil traffic increased 443 percent in the United States between 2005 and 2012. Much of this growth has occurred because of developments in North Dakota, as the Bakken formation in the Williston Basin has become a major source for oil production in the United States. Texas also has contributed to the growth of crude oil shipments by rail. As a result, carloads of crude oil increased from approximately 65,600 in 2011 to approximately 257,450 in 2012. The Bakken crude oil from North Dakota is primarily shipped via rail to refineries located near the U.S. Gulf Coast—particularly in Texas and Louisiana—or also to pipeline connections, most notably to connections located in Oklahoma. Crude oil is also shipped via rail to refineries on the East Coast and, to a lesser extent, refineries in other regions of the U.S.[5]

All indications from the U.S. Energy Information Administration (EIA) within the U.S. Department of Energy are that rail export capacity for Bakken crude oil from the Williston Basin will continue to expand to meet production.[6]

[3] As an example, MMA operates both in the United States and Canada, with approximately 510 miles of track in Maine, Vermont, and Quebec, and the tank cars transporting the crude oil that derailed in Lac-Mégantic originated in the Williston Basin of North Dakota.

[4] PHMSA prescribes a comprehensive regulatory safety system that categorizes hazardous materials into nine hazard classes based on the type of hazards presented by the materials. See 49 CFR Parts 172 and 173. Under PHMSA's regulations, crude oil, in most forms, meets the definition of a ''Class 3'' hazardous material, which signifies that it is a flammable liquid. Ethanol, discussed below, also is a Class 3 hazardous material. PIH materials, referenced above, include ''Class 2 and Division 2.3'' gases and ''Class 6, and Division 6.1'' poisons other than gases. Chlorine gas and anhydrous ammonia are two examples of PIH materials (Division 2.3) that are commonly transported by rail.

[5] *See* AAR's May 2013 paper ''Moving Crude Oil by Rail'' available online at: *https://www.aar.org/keyissues/Documents/Background-Papers/Crude-oil-by-rail.pdf.*

[6] *See* EIA reports ''Bakken crude oil price differential to WTI narrows over last 14 months,'' available online at: *http://www.eia.gov/todayinenergy/detail.cfm?id=10431;* and ''Rail delivery of U.S. oil and petroleum products continues to increase, but pace slows,'' available

Rail exports from the North Dakota region are forecast to increase over the next two years (as are pipeline exports). Much of the near-term growth in rail originations right now is a function of how quickly tank car manufacturers can produce new cars to meet the demand for tank cars, primarily for transporting Bakken crude oil. The rise in rail originations in crude oil is subject to changes in the number of tank cars available, price of crude oil, and overall production of crude oil in that region, and is also dependent on whether, or how quickly, additional pipeline export capacity from that region comes online. However, for the foreseeable future, all indications are for continued growth of rail originations of crude in that region as new tank car fleets come online to meet demand.

As demonstrated by the Lac-Mégantic derailment, in a catastrophic incident, crude oil is problematic when released because it is flammable. This risk is compounded because it is commonly shipped in large units. Similar dangers exist with other hazardous materials such as ethanol, which is another flammable liquid that is commonly transported by rail. More carloads of ethanol were transported via rail than any other hazardous material in 2012. Ethanol experienced an increase in traffic of 442 percent between 2005 and 2010. Although in 2012 the number of carloads dropped by 11 percent from 2010 levels, there were still approximately 366,000 carloads transported by rail. Since 2009, there have been at least four serious mainline derailments resulting in the breach of tank cars containing ethanol. While FRA recognizes that none of these four derailments resulted from a roll-away situation, they are instructive on the destructive potential of a derailment involving tank cars containing flammable products:

• On June 19, 2009, in Cherry Valley, IL, a Canadian National Railway train derailed 19 tank cars loaded with ethanol. Thirteen of the 19 derailed cars caught fire, and there were reports of explosions. One person died, and there were 9 reported injuries related to the fire. Additionally, approximately 600 residences were evacuated within a ½-mile radius of the derailment.

• On February 6, 2011, in Arcadia, OH, a Norfolk Southern Railway Co. (Norfolk Southern) train operating on single main track derailed 33 tank cars loaded with ethanol. The derailment caused a major fire and forced the evacuation of a one-mile radius around the derailment.

• On July 11, 2012, in Columbus, OH, a Norfolk Southern train derailed while operating on main track. Thirteen tank cars containing ethanol derailed resulting in a fire and the evacuation of 100 people within a one-mile radius of the derailment.

• On August 5, 2012, in Plevna, MT, a BNSF Railway Co. train derailed 18 cars while en route from Baker, MT. Seventeen of the 18 cars were tank cars loaded with denatured alcohol, a form of ethanol. Five of the cars caught on fire resulting in explosions, the burning of surrounding property not within the railroad's right-of-way, and the evacuation of the immediate area.

Although these accidents were serious, their results had potential for more catastrophic outcomes. The catastrophic releases created the potential for additional deaths, injuries, property damage, and environmental damage.

There are other hazardous materials that have similar potential for catastrophic danger. For example, accidents involving trains transporting other hazardous materials, including PIH materials, such as chlorine and anhydrous ammonia, can also result in serious consequences as evidenced by the following accidents:

• On July 18, 2001, 11 of 60 cars in a CSX Transportation, Inc. freight train derailed while passing through the Howard Street Tunnel in downtown Baltimore, MD. The train included 8 tank cars loaded with hazardous material; 4 of these were among the cars that derailed. A leak in a tank car containing tripropylene resulted in a chemical fire. A break in a water main above the tunnel flooded both the tunnel and the streets above it, resulting in the tunnel collapsing.

• On January 18, 2002, a Canadian Pacific Railway train containing 15 tank cars of anhydrous ammonia derailed half a mile from the city limits of Minot, ND due to a breaking of the rail at a joint. Five of these tank cars ruptured catastrophically, resulting in an ammonia vapor that spread 5 miles downwind over an area where 11,600 people lived. The accident caused one death, 11 serious injuries, and 322 minor injuries. Environmental cleanup costs reported to the National Transportation Safety Board (NTSB) were $8 million.

• On June 28, 2004, near Macdona, TX, a Union Pacific Railroad Company train passed a stop signal and collided with a BNSF train. A chlorine car was punctured and the chlorine gas that was released killed three and injured 32.

• On January 6, 2005, in Graniteville, SC, a Norfolk Southern train collided with another Norfolk Southern train that was parked on a customer side track, derailing both locomotives and 16 cars of the moving train. The accident was caused by a misaligned switch. Three tank cars containing chlorine derailed, one of which was punctured. The resulting chlorine exposure caused 9 deaths, approximately 554 people were taken to local hospitals, and an additional 5,400 people within a one-mile radius of the site were evacuated by law enforcement personnel. FRA's analysis of the total cost of the accident was $126 million, including fatalities, injuries, evacuation costs, property damage, environmental cleanup, and track out of service.

While train accidents involving hazardous materials are caused by a variety of factors, nearly one-half of all accidents are related to railroad human factors or equipment defects. FRA's data shows that since 2009, human factors have been the most common cause of reportable train accidents. Based on FRA's accident reporting data for the period from 2009 through 2012, 35.7 percent of train accidents were human factor-caused. With regard to the securement of unattended equipment, specifically, FRA accident data indicates that approximately 8.5 percent of human factor-caused train accidents from calendar year 2011 until April 2013 were the result of improper securement. This EO is intended to address some of the human factors failures that may cause unattended equipment to be improperly secured to protect against a derailment situation similar to that which occurred in Lac-Mégantic.

Securement Requirements

As previously noted, FRA has issued regulations designed to ensure that trains and vehicles are properly secured before being left unattended. *See* § 232.103(n). ''Unattended equipment'' is defined as ''equipment left standing and unmanned in such a manner that the brake system of the equipment cannot be readily controlled by a qualified person.'' *Id.* Section 232.103(n) addresses the securement of unattended equipment by stating that a train's air brakes must not be depended on to hold equipment standing unattended on a grade and further requires the application of a sufficient number of hand brakes to hold the equipment with the air brakes released and the ventilation of the brake pipe pressure to zero with the angle cock opened on one end of a cut of cars when not connected to a locomotive or other

online at: *http://www.eia.gov/todayinenergy/detail.cfm?id=12031.*

compressed air source. The regulations also require railroads to develop a process or procedure for verifying that the hand brakes that are applied are sufficient to hold the equipment with the air brakes released. When dealing with locomotives and locomotive consists, § 232.103(n)(3) establishes specific additional requirements:

- All hand brakes must be fully applied on all locomotives in the lead consist of an unattended train.
- All hand brakes must be fully applied on all locomotives in an unattended locomotive consist outside of yard limits.
- The minimum requirement for an unattended locomotive consist within yard limits is that the hand brake must be fully applied on the controlling locomotive.
- Railroads must develop, adopt, and comply with procedures for securing any unattended locomotive that is not equipped with an operative hand brake.

Additionally, FRA requires each railroad to adopt and comply with instructions addressing the throttle position, status of the reverse lever (commonly referred to as a ''reverser''), position of the generator field switch, status of the independent brakes, position of the isolation switch, and position of the automatic brake valve of an unattended locomotive. *See* § 232.103(n)(4).

In FRA's view, these regulations—when followed—substantially reduce the risk of movement of unattended equipment. However, FRA has found there is significant non-compliance among the railroads with respect to FRA's securement regulations. With limited resources, FRA can inspect only a small percentage of trains and vehicles for regulatory compliance. However, even with its limited resources, FRA has recorded nearly 4,950 securement defects in the course of its inspections since January 2010, an average of approximately 1,483 defects per year. With increased shipments of hazardous materials such as crude oil and ethanol, securement non-compliance, particularly on mainline track and mainline sidings outside of a yard or terminal, has become a serious, immediate safety concern. Therefore, additional measures are necessary to protect the health and safety of railroad employees, the general public, and the environment.

First, in this EO, FRA is prohibiting railroads from leaving trains or vehicles that are transporting hazardous materials as described in Appendix A unattended on mainline track or mainline siding outside of a yard or terminal unless the railroad adopts and complies with a plan that identifies the specific locations and circumstances for which it is safe and suitable for leaving such trains or vehicles unattended. The plan must contain sufficient analysis of the safety risks and any mitigating circumstances the railroad has considered in making its determination. FRA does not intend to grant approval to any plan, per se. However, FRA will monitor such plans and if FRA determines that adequate justification is not provided, the railroad shall ensure that trains and equipment are attended until appropriate modifications are made to the railroad's plan.

Second, FRA is requiring railroads to develop specific processes for employees responsible for securing any unattended train or vehicles transporting hazardous materials as described in Appendix A that must be left on mainline track or a mainline siding outside of a yard or terminal. The employees responsible for securing the train or vehicles must lock the controlling locomotive cab door before leaving it unattended or remove and secure the reverser. The reverser is the directional control for the locomotive. Removing it would put the locomotive in neutral, preventing it from moving forward or backward under the power of the engine. Additionally, employees must communicate to the train dispatcher the number of hand brakes applied, the tonnage of the train or vehicle, the grade and terrain features of the track, any other relevant weather conditions, and the type of equipment being secured. The dispatcher is then required to record the information provided by the employee. Finally, the dispatcher or other qualified railroad employee must verify and confirm with the train crew that the securement meets the railroad's requirements. This requirement provides a check on those individuals setting hand brakes to ensure appropriate securement procedures are followed. The requirement is similar to FRA's existing regulations that require employees to report to the train dispatcher when a main track switch in non-signaled territory has been restored to normal position and locked. FRA believes this type of notification and verification requirement will help ensure that employees responsible for securing equipment containing hazardous materials will follow appropriate procedures because the employee will need to fully consider the securement procedures in order to relay what was done to the dispatcher. Further, the dispatcher or other qualified railroad employee (e.g. a trainmaster, road foreman of engines, or another train crew employee) will be in a position to ensure that a sufficient number of hand brakes have been applied.

Third, this E.O. requires that railroads review, verify, and adjust, as necessary, existing requirements and instructions related to the number of hand brakes to be set on unattended trains and vehicles and that railroads review and adjust, as necessary, the procedures for verifying that the number of hand brakes is sufficient to hold the train or vehicle with the air brakes released. FRA's concern is that existing railroad processes and procedures related to setting and verifying hand brakes on unattended trains and equipment may not be sufficient to hold all trains and vehicles in all circumstances. FRA expects that the procedures and number of hand brakes required to be set will vary significantly, depending on a variety of factors, including, but not limited to: The length and weight of the train or vehicle(s), the location, the grade and other terrain features of the track, the weather conditions, the type of equipment being secured, and whether the hand brakes apply on one or more trucks of a piece of equipment. The procedures should also ensure that an additional margin of safety is provided when determining the number of hand brakes to be set in order to compensate for the differing ability of individuals to set a hand brake at a specified level. FRA also expects railroads to develop appropriate procedures to be followed by their employees to test or verify that the number of hand brakes set will hold the equipment with the air brakes released.

Fourth, this E.O. requires railroads to implement operating rules and practices requiring the job briefing of securement among crewmembers and other involved railroad employees before engaging in any job that will impact or require the securement of any train or vehicle in the course of the work being performed. This requirement is analogous to other Federal regulations that require crewmembers to have a job briefing before performing various tasks, such as confirming the position of a main track switch before leaving an area. The purpose of this job briefing requirement is to make certain that all crewmembers and other involved railroad employees are aware of what is necessary to properly secure the equipment in compliance with § 232.103(n).

Finally, FRA is requiring railroads to develop procedures to ensure that a qualified railroad employee inspects all equipment that any emergency responder has been on, under, or

between for proper securement before the rail equipment or train is left unattended. One of the facts that has come to light in the aftermath of the Lac-Mégantic derailment is that first responders were at milepost 7.4 near Nantes (along with an MMA employee) to check a report of a fire on the train. This was well after the operator had secured the train and left it unattended. Because it may be necessary for emergency responders to modify the state of the equipment if it is necessary for them to go on, under, or between equipment in order to perform their jobs, it is critical for the railroad to have a qualified employee inspect the equipment after the emergency responders have completed their jobs to ensure that the equipment is properly secured before it is again left unattended.

Finding and Order

While FRA recognizes that the transportation of hazardous materials by rail is extremely safe and that the vast majority of hazardous materials shipped by rail each year arrive at their destinations safely and without incident, FRA finds that there are gaps in the regulatory scheme that create an emergency situation involving a hazard of death, personal injury, or significant harm to the environment, with respect to securement of unattended vehicles and trains transporting a hazardous material of the type described in Appendix A to this E.O. on mainline track and mainline sidings outside of a yard or terminal. Accordingly, pursuant to the authority of 49 U.S.C. 20104, delegated to the FRA Administrator by the Secretary of Transportation, 49 CFR 1.89, it is hereby ordered that each railroad must institute and carry out the following measures, effective within 30 days after the date of this order:

1. No train or vehicles transporting the type and quantity of hazardous materials described in Appendix A (Appendix A Materials) shall be left unattended on a mainline track or mainline siding outside of a yard or terminal until the railroad develops, adopts, complies with and makes available to FRA upon request a plan that identifies specific locations and circumstances when such trains or vehicles may be left unattended. The plan shall contain a sufficient safety justification for any determination allowing such trains or vehicles to be unattended. FRA will monitor such plans and if FRA determines that adequate justification is not provided, the railroad shall ensure that trains and equipment are attended until appropriate modifications to the plan are completed. FRA does not intend to grant approval to any plan. Railroads shall notify FRA when the railroad has developed a plan under this provision prior to the railroad operating pursuant to the plan.

2. Railroads shall develop processes for securing unattended trains or vehicles transporting Appendix A Materials on a mainline track or mainline siding outside of a yard or terminal if permitted by the railroad's plan required under paragraph (1) of this order that contains the following requirements:

a. The controlling locomotive cab must be locked or the reverser on the controlling locomotive must be removed and secured.

b. Employees who are responsible for securing trains and vehicles transporting Appendix A Materials must communicate to the train dispatcher the number of hand brakes applied, the tonnage and length of the train or vehicle, the grade and terrain features of the track, any relevant weather conditions, and the type of equipment being secured; train dispatchers must record the information provided; and train dispatchers or other qualified railroad employees must verify and confirm with the train crew that the securement meets the railroad's requirements.

3. Railroads shall review and verify, and adjust, as necessary, existing procedures and processes related to the number of hand brakes to be set on all unattended trains and equipment and shall ensure the means of verifying that number is appropriate.

4. Railroads shall implement operating rules and practices requiring the job briefing of securement for any job that will impact or require the securement of any train or vehicle in the course of the work being performed.

5. Railroads shall develop procedures to ensure that a qualified railroad employee inspects all equipment that any emergency responder has been on, under, or between for proper securement before the train or vehicle is left unattended.

6. Notice of this E.O. shall be provided to all employees affected by this E.O..

Relief

Petitions for special approval to take actions not in accordance with this E.O. may be submitted to the Associate Administrator for Railroad Safety/Chief Safety Officer (Associate Administrator), who shall be authorized to dispose of those requests without the necessity of amending this E.O.. In reviewing any petition for special review, the Associate Administrator shall grant petitions only in which a petitioner has clearly articulated an alternative action that will provide, in the Associate Administrator's judgment, at least a level of safety equivalent to that provided by this E.O..

Penalties

Any violation of this order or the terms of any written plan adopted pursuant to this order to provide alternate protection shall subject the person committing the violation to a civil penalty of up to $105,000. 49 U.S.C. 21301. Any individual who willfully violates a prohibition stated in this order is subject to civil penalties under 49 U.S.C. 21301. In addition, such an individual whose violation of this order demonstrates the individual's unfitness for safety-sensitive service may be removed from safety-sensitive service on the railroad under 49 U.S.C. 20111. If appropriate, FRA may pursue criminal penalties under 49 U.S.C. 522(a) and 49 U.S.C. 21311(a), as well as 18 U.S.C. 1001, for the knowing and willful falsification of a report required by this order. FRA may, through the Attorney General, also seek injunctive relief to enforce this order. 49 U.S.C. 20112.

Effective Date and Notice to Affected Persons

Upon issuance of this E.O., railroads shall immediately initiate steps to implement this E.O.. Railroads shall complete implementation no later than September 1, 2013. Notice of this E.O. will be provided by publishing it in the **Federal Register**.

Review

Opportunity for formal review of this E.O. will be provided in accordance with 49 U.S.C. 20104(b) and section 554 of title 5 of the United States Code. Administrative procedures governing such review are found at 49 CFR part 211. *See* 49 CFR 211.47, 211.71, 211.73, 211.75, and 211.77.

Issued in Washington, DC, on August 2, 2013.

Joseph C. Szabo,

Administrator.

Appendix A to Emergency Order 28

(1) Five or more tank car loads of any one or any combination of materials poisonous by inhalation as defined in 49 CFR 171.8, and including anhydrous ammonia (UN 1005) and ammonia solutions (UN 3318); or

(2) 20 rail car loads or intermodal portable tank loads of any one or any combination of materials listed in (1) above, or, any Division 2.1 flammable gas, Class 3 flammable liquid or combustible liquid, Class 1.1 or 1.2

explosive, or hazardous substance listed in 49 CFR 173.31(f)(2).[7]

[FR Doc. 2013–19215 Filed 8–6–13; 8:45 am]

BILLING CODE 4910 06 P

DEPARTMENT OF TRANSPORTATION

Federal Railroad Administration

[Safety Advisory 2013 06]

Pipeline and Hazardous Materials Safety Administration

[Docket No. PHMSA 2013 0196; Notice No. 13 13]

Lac-Mégantic Railroad Accident Discussion and DOT Safety Recommendations

AGENCY: Federal Railroad Administration (FRA) and Pipeline and Hazardous Materials Safety Administration (PHMSA), Department of Transportation (DOT).

ACTION: Notice of Safety Advisory and Announcement of Emergency Meeting of the Railroad Safety Advisory Committee.

SUMMARY: A recent catastrophic railroad accident occurred in Canada when an unattended freight train containing hazardous materials rolled down a descending grade and subsequently derailed. It is currently estimated that this accident resulted in 42 fatalities, and 5 persons are still reported to be missing. In response, FRA issued Emergency Order No. 28 regarding the securement of trains, and FRA and PHMSA (collectively, DOT) are also issuing this safety advisory. This safety advisory discusses the circumstances surrounding the accident and makes certain safety-related recommendations to railroads operating in the United States. This safety advisory also provides notice of FRA's intent to schedule an emergency meeting of the Railroad Safety Advisory Committee to discuss this accident and potential regulatory actions to prevent similar future accidents from occurring.

FOR FURTHER INFORMATION CONTACT: Thomas J. Herrmann, Acting Director, Office of Safety Assurance and Compliance, Office of Railroad Safety, FRA, 1200 New Jersey Avenue SE., Washington, DC 20590, telephone (202) 493–6404; Joseph St. Peter, Trial Attorney, Office of Chief Counsel, FRA, 1200 New Jersey Avenue SE., Washington, DC 20590, telephone (202) 493–6047; or Charles Betts, Director, Standards and Rulemaking Division, Office of Hazardous Materials Safety, PHMSA, 1200 New Jersey Avenue SE., Washington, DC 20590, telephone (202) 366–8553.

SUPPLEMENTARY INFORMATION:

Incident Summary

On July 6, 2013, a catastrophic accident involving a freight train containing loaded tank cars of petroleum crude oil occurred in the town of Lac-Mégantic, Quebec, on the Montreal, Maine & Atlantic Railway (MMA). While the accident is still being investigated by Canadian authorities and no final determinations have been made, the following is known based on preliminary information released by the Transportation Safety Board of Canada.[1]

According to Rail Safety Advisory Letters issued by the Transportation Safety Board of Canada on July 19, 2013, the incident is summarized as follows. At approximately 10:45 p.m. (EDT) on July 5, 2013, an MMA train was proceeding eastward from Montreal, Quebec, to St. John, New Brunswick. The train was approximately 4,700 feet long, weighed over 10,000 tons and consisted of five locomotives, a loaded box car, and 72 loaded tank cars containing petroleum crude oil (Class 3, UN 1267). At approximately 11:00 p.m. the train stopped near mile post 7.40 near Nantes, Quebec. At that location the single operator secured the train and departed, leaving the train unattended on mainline track with a descending grade of approximately 1.2 percent.

At approximately 11:50 p.m., a local resident reported a fire on the lead locomotive (MMA 5017) of the train and the local fire department was called and responded with another MMA employee. At approximately midnight, in accordance with established operating procedures, the lead locomotive was shut down and the fire extinguished. After the fire was extinguished, the fire department and the MMA employee left the site.

At approximately 1:00 a.m. the next day, it appears that the train began rolling and picking up speed down the descending grade toward the town of Lac-Mégantic, Quebec. Near the center of town, the train derailed. The locomotives separated from the train and came to a stop approximately ½ mile from the derailment site. The box car and 63 of the loaded tank cars derailed. A number of derailed tank cars released product resulting in multiple explosions and subsequent fires. At this time, it is estimated that there were 42 fatalities and 5 persons are still missing. There was also extensive damage to the town, and approximately 2,000 people were evacuated from the surrounding area.

Transport Canada Emergency Directive

In response to this accident, Transport Canada (the Canadian government department responsible for regulating transportation safety in Canada) issued an emergency railroad directive pursuant to Section 33 of the Canadian Railway Safety Act.[2] The directive ordered railroad companies in Canada to ensure that:

- Within five days of the issuance of the directive, all unattended controlling locomotives on a main track and sidings are protected from unauthorized entry into the cab;
- The directional controls, commonly known as reversers, are removed from any unattended locomotives, preventing them from moving forward or backward, on a main track or sidings;
- Their company's special instructions on hand brakes are applied to any locomotive attached to one or more cars that are left unattended for more than one hour on a main track or sidings;
- In addition to complying with their company's special instructions on hand brakes referred to in the item immediately above, the automatic brake is set in full service position and the independent brake is fully applied for any locomotive attached to one or more cars that are left unattended for one hour or less on a main track or sidings;
- No locomotive attached to one or more loaded tank cars transporting dangerous goods is left unattended on a main track; and
- No locomotive attached to one or more loaded tank cars transporting dangerous goods is operated on a main track or siding with fewer than two persons qualified under their company's requirements for operating employees.

Transport Canada explained in the emergency directive that the cause of

[7] *See* 49 CFR 173.115 for the definition of Division 2.1 flammable gas, 173.120 for definition of Class 3 flammable liquid; and 173.50 for the definition of the various classes of explosives.

[1] This accident occurred in Canada and DOT is neither responsible for determining, nor has jurisdiction to investigate, the cause of this accident. Further, Canadian authorities have not yet determined the cause of this accident. As such, nothing in this safety advisory is intended to attribute a definitive cause to this accident or place responsibility for the incident on the acts or omissions of any specific person or entity.

[2] Available online at: *http://www.tc.gc.ca/eng/mediaroom/backgrounders-safety-locomotives-7292.html.* Additionally, in response to this accident, the Transportation Safety Board of Canada issued Rail Safety Advisory Letter—09/13 regarding the securement of equipment and trains left unattended; available online at: *http://www.tsb.gc.ca/eng/medias-media/sur-safe/letter/rail/2013/r13d0054/r13d0054-617-09-13.asp.*

2023

Select Committee on Rail Safety

TESTIMONY FOR HEARING DATED APRIL 26, 2023

CLYDE WHITAKER – DIRECTOR - SMART TRANSPORTATION OHIO STATE LEGISLATIVE BOARD

Good afternoon, Chairman Reineke, Vice Chair Rulli, and Ranking Member Antonio, and Members of the Committee. Thank you for allowing me the opportunity to testify once again before you.

My name is Clyde Whitaker, and I am the Ohio State Legislative Director for SMART Transportation Division which represents approximately 3,000 railroad workers in the crafts of conductor, locomotive engineer, yardmaster, and trainperson. One of my primary roles is to protect, improve, and ensure the safety of our members.

Just as an educational piece to explain some terminology used in previous hearings. The FRA has essentially four classes of railroads each with their very criteria with a monetary amount and mileage.

Industrial railroads are like those at AK Steel which have their very own crews and are captive to their private property in most cases. Class 1 railroads make the largest profit gain and mileage such as Norfolk Southern, they are like the main artery. Class II railroads are regional carriers that are essentially a mid-sized railroad sometimes in multiple states. Then Class III which are shortlines with a lessor revenue, they feed freight cars into the larger system.

What I gather from previous testimony is that Class III railroads cannot afford Two-Person crews or wayside defect detectors. I do not know of any railroad in Ohio operating with only one person. So, insert status quo. Now when we think of short line railroads we think of a "Ma & Pa" type operation. Sometimes that is the case, most of the time not so much.

Out of the 24 class III railroads listed on the Ohio Association of Railroads website.

- 2 are owned by the Watco RR Company with a 2022 profit of 1.6 billion dollars.
- 3 are owned by the Omnitrax Company making 100 million in 2022.
- 2 are owned by RJ Corman which profited 300 million in 2022.
- 10 are owned by Genesee & Wyoming, which was purchased in late 2019 by a private entity. Before going private in 4th Quarter of 2019 they made 352.4 million.

These are the folks that own the shortlines and they are trying to pull the wool over people's eyes crying they can't afford it. When in reality they're owned by companies that should have a Class I status. However, they keep the companies divided so they receive incentives from government.

I want to switch gears and speak on training, derailments, and retention of employees into the industry. Here is how that ties together. Pre-PSR era (Precision Scheduled Railroading) took hold at NS you had 40% more employees, you had more trains operating, and numbers were decent but not the best. We had experienced people which most received 20 weeks of training. Now we have 40% less people working, and they only train them for 8 weeks.

Now we have less trains and we see a huge uptick in derailments. Keep in mind the railroad reports derailments to FRA, the railroads are in charge of their metrics and record keeping. These what I call fender benders in the rail yard, almost every single one comes back to quality of training. Which is a process FRA and Congress must tackle by overhauling 49CFR Parts 240 and 242.

In your brief I have enclosed a graph with numbers pulled from the STB (Surface Transportation Board). Between the period of April 2022 – March 2023 the Norfolk Southern hired 4, 119 new conductors. Now 3,142 employees departed for various reasons of rules infractions, derailments, or other issues. They had 1,017 resign. This is only a 23.71% retention rate of 977 people. Overall a 701 person change in the numbers retained.

I have sat before the US Senate Commerce Commission and this body as well listening to Mr. Shaw talk out both sides of his mouth. He has made note of how important the three-man crew on the train was. He makes mention of how he goes into crew rooms talking to crews. He brags on the hiring, I'm sorry but over 3,000 people leaving that you hired is not something to boast upon.

The reason people are leaving or simple they feel demoralized and hopeless. Are people going to convey that to Mr. Shaw in a crew room, absolutely not, because they need the job and are in fear of retaliation once he leaves.

Mr. Shaw stated he doesn't fully back legislation such as the Brown/Vance Rail Safety Bill of 2023 due to Two-Person Crew. This is part of the hiring and retention issue. Who in their right mindset would go work for someone that is trying to eliminate the position in which they're hiring for? People my age are leaving the industry because they want job security, paid sick leave, quality of life, a schedule, etc.

Furthermore, people they do hire need to feel more comfortable with their surroundings, application of rules, and overall more training to prevent small derailments.

When it comes to Two-Person crews. Mr. Shaw and his industry leaders state there is no data and they will believe in the science. Here is some data of one-man crews in the cab of a locomotive of incidents I'm aware of:

- 2008 Chatsworth CA (25 killed 135 injured)
- 2017 Washington state train derailment (3killed 62 injured)(not qualified)
- 2015 Philadelphia (8 killed, hundreds injured)
- 2013 Lac-Megantic' (Quebec) 47 people dead, an entire town turned to ash, and over 800 evacuated.
- After the Canadian disaster they instituted a law of two-person crew on every train.

Mr. Shaw has just been on a public relations propaganda tour. The Confidential Close call reporting was pushed by FRA as a voluntary program in 2002. The C3RS program was recently pushed by the rail unions, media, and FRA. Now the railroads are joining, again all because they have been shamed into it.

The wayside defect detectors according to Mr. Shaw were all working as intended. From my understanding they were. However, the issue is thresholds and how the technology is used. Until Ohio passed Substitute HB23 there was no regulation and the railroads had free reign to do as they please in this regard.

Keep in mind they set the rules and they don't have to obey them. Just after E. Palestine we had a westbound train on NS traveling to Bellevue, OH. the train dispatcher reported to the crew, stop your train you have a trending hot box. Moments after the Chief Dispatcher ordered the crew to continue on west and the Rockport yard mechanical team would inspect the train. Is this the "Right thing to do", Mr. Shaw speaks of?

Approximately 5 miles later an east bound train of Two-Person crew noticed the wheel set on fire just like the train in East Palestine. The crew stopped their train and walked the car several miles and set the car out for repair.

They didn't learn their lesson and I'm sure Mr. Shaw had no clue to this event. However, during the March 22nd US Senate Commerce Committee and mentioned this issue. Yet I have not received a call from Mr. Shaw or his staff to discuss this issue. Senator Hicks-Hudson hit the nail on the head when she said there is a big disconnect between the ground and those at the top.

The final topic I have is railcar inspections. Identifying defects is the goal of inspections, to prevent derailments. It is documented the industry wants to minimize the time it takes to perform them or the elimination of them altogether.

Compound this with the fact that the railroads are on a determined course to grow these trains to astronomical lengths and you have a predictable outcome, like we have seen in East Palestine; or the derailment in Sandusky that occurred in October of last year; or the derailment in Springfield.

Which the NS attempted to place blame on the manufacture of one of the railcar manufactures. Which the manufacture was exonerated from fault. Instead the focus is now on train makeup.

But what's even more scary is that the practices, rules and procedures that were in place when these accidents occurred are still in place today. This tells me that the frequency of derailments that we are experiencing in this country is not going to stop anytime soon, and, in fact, may only end up getting worse.

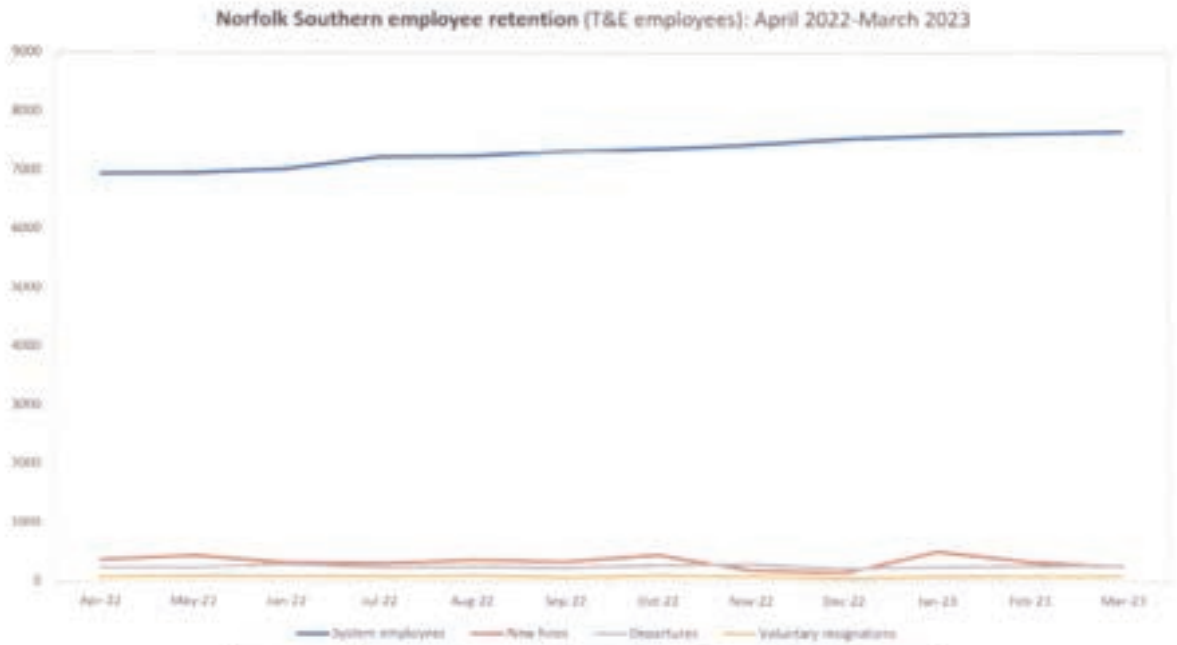
The bottom line is this Mr. Shaw and other railroad CEO's need to do is support the Brown/Vance Rail Safety Act of 2023 in its entirety. They need to encourage C3RS with their employees. They need to commit to a better training program involving all stake holders. Volunteer fire departments need more funding.

Other rail safety measures we need to focus on are safe zones for railroad workers for defined clearance to avoid fatalities and personal injuries.

One item of consideration that I do agree with Mr. Arnold. Is that ORDC needs adequate funding for grade crossing projects. We have many

road crossings such as Union St. in Walbridge, OH. which is a danger to rail crews and the public.

I thank you for your time and I will answer any questions you may have.



Month	System employees	New hires	Departures	Voluntary resignations
Apr-22	6954	367	240	69
May-22	6966	446	245	83
Jun-22	7032	334	303	84
Jul-22	7236	313	243	82
Aug-22	7248	370	253	100
Sep-22	7336	340	245	77
Oct-22	7380	461	291	102
Nov-22	7440	201	304	88
Dec-22	7539	159	224	66
Jan-23	7607	517	252	88
Feb-23	7631	348	272	84
Mar-23	7655	263	270	94

ASSOCIATION OF AMERICAN RAILROADS

Ohio

Freight Rail 2021 Data

Freight railroads	43
Freight railroad mileage	5,139
Freight rail employees	5,036
Average wages and benefits per employee	$128,510
Railroad retirement beneficiaries	21,000
Railroad retirement benefits paid	$537 million

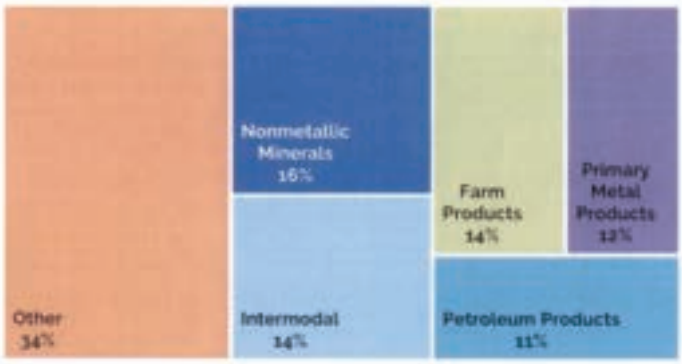
Quick Facts

Privately Owned: Freight railroads operate on a nearly 140,000-mile network they almost exclusively own, maintain and pay for themselves.

Sustainable: Railroads are the most fuel efficient way to move freight over land. It would have taken approximately 2.9 million additional trucks to handle the 52.8 million tons of freight that originated by rail in Ohio in 2021.

Economic Driver: Railroads haul 1/3 of U.S. exports and serve nearly every sector of the economy, from moving the food we eat to the chemicals that treat our water.

Rail Traffic Originated in 2021 — Total Tons: 52.8 million — Total Carloads: 1,081,600

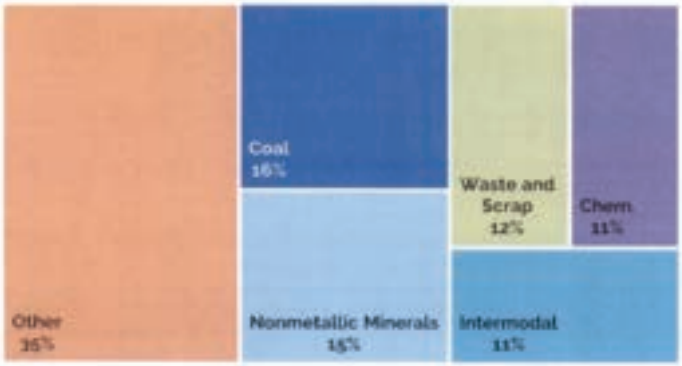


Commodity	Tons (mil)	Carloads
Nonmetallic Minerals	8.3	80,400
Intermodal	7.6	552,200
Farm Products	7.2	69,600
Primary Metal Products	6.2	67,600
Petroleum Products	5.6	70,300
Other	17.8	241,500

Source: AAR analysis of industry data

(% based on tonnage)

Rail Traffic Terminated in 2021 — Total Tons: 60.9 million — Total Carloads: 1,069,200



Commodity	Tons (mil)	Carloads
Coal	9.6	81,900
Nonmetallic Minerals	9.2	88,700
Waste and Scrap	7.4	80,900
Chemicals	7.0	73,200
Intermodal	6.7	486,300
Other	21.0	258,200

Source: AAR analysis of industry data

(% based on tonnage)

ASSOCIATION OF AMERICAN RAILROADS

Freight Railroads in Ohio

	Miles Operated In Ohio in 2021
Class I Railroads	
Canadian National	4
Canadian Pacific Railway	30
CSX Transportation	1,752
Norfolk Southern Corp.	1,906
	3,692
Regional Railroads	
Wheeling & Lake Erie Railway	524
	524
Short Line Railroads	
Akron Barberton Cluster Railway	68
Ann Arbor Railroad	5
Ashland Railway	56
Ashtabula, Carson & Jefferson Railroad	6
Belpre Industrial Parkersburg Railroad	48
Bucyrus Industrial Railroad	5
Camp Chase Railway	15
Central Railroad Company of Indiana	29
Chicago, Ft. Wayne & Eastern Railroad	139
Cincinnati Eastern Railroad	69
Cleveland & Cuyahoga Railway	35
Cleveland Port Railway	1
Cleveland Works Railway	10
Columbus & Ohio River Railroad	316
Grand River Railway	3
Indiana & Ohio Railway	594
Indiana Eastern Railroad	14
Indiana Northeastern Railroad	11
Kanawha River Railroad	127
Katahdin Railcar Services	12
Lake Terminal Railroad	6
Mahoning Valley Railway	53
Napoleon, Defiance and Western Railway	55
Newburgh & South Shore Railroad	5
Northern Ohio & Western Railway	25
Ohio Central Railroad	122
Ohio South Central Railroad	64
Ohio Southern Railroad	42
Ohio Terminal Railway	13
R. J. Corman Railroad - Cleveland Line	69
R. J. Corman Railroad - Western Ohio Lines	93
Republic Short Line	1
South Point & Ohio Railroad	1
Toledo Industrial Railroad	1
Warren and Trumbull Railroad	4
Youngstown & Austintown Railroad	5
Youngstown & Southeastern Railroad	35
Youngstown Belt Railroad	31
	2,188

Ohio 2021 Totals	Number of Freight Railroads	Miles Operated: Excluding Trackage Rights	Miles Operated: Including Trackage Rights
Class I	4	2,812	3,692
Regional	1	392	524
Short Line	38	1,935	2,188
Total	43	5,139	6,404

Class I Railroad: A railroad with 2021 operating revenues of at least $943.9 million. **Regional Railroad**: A non-Class I line-haul railroad that has annual revenues of at least $40 million, or that operates at least 350 miles of road and revenues of at least $20 million. **Short Line Railroad**: A railroad which is neither a Class I nor a Regional Railroad.

ASSOCIATION OF AMERICAN RAILROADS

Freight Railroads in Ohio

Map is based on the 2022 North American Rail Network published by the U.S. Department of Transportation. Some mileage figures are AAR estimates.

Jan. 2023

ASSOCIATION OF AMERICAN RAILROADS

Equipment Instructions
March 09, 2023
EI-0033

File Number: TWBL-18A.6

Subject: NSC Loose Wheels

To: All Subscribers

A member railroad has experienced three loose wheels in the subject car series. These cars are new builds. This advisory is issued to inspect and remove from service wheel sets that were mounted by National Steel Car (NSC-T) in the date range between 08-22 and 03-23 inclusive. These wheels sets are at an increased risk of an out of gage derailment.

All cars included in this advisory must be inspected for the wheel sets in question and reported as outlined below. Any cars, loaded or empty, found so equipped must have the NSC-T mounted wheel sets removed immediately as directed below. If available, replace suspect wheel sets with new wheel sets. Handle in accordance with the instructions for identification, inspection and counter billing outlined below.

Suspect Wheel Set Determination:

1. Car Series:
   NS 162390 – 162749
   NKLX 400000 – 400314
2. H-36 Wheel
3. Wheel Shop Mark: NSC T
4. Wheel Mounting Dates: 08-22 to 03-23 inclusive. (on one field side hub face)

Inspection Procedure and Determination

1. Inspect all wheel sets of each suspect car for wheel shop mark and wheel mounting date stamp. Both are located on the field side hub face of only one wheel per wheel set. The mate wheel will not have a mounting stamp. Refer to AAR Field Manual, Rule 41, Figure 41.44.

2. If the mark is NSC T, remove the wheel set. The T may be several inches to the right from NSC and may look like the number “1”.

3. If wheel mounting information is illegible remove the wheel set.

Instructions

1) Cars inspected and not equipped with suspect wheel sets

a. Any car inspected and found to not be equipped with a suspect wheel set is to be removed from this Maintenance Advisory by reporting Activity Code MR.
    i. Report to car owner using normal AAR Billing

Inspection
Job Code 4454
Why Made Code 13, "Attention Required as Directed by EA"
Responsibility Code 1, "Owner's Responsibility"

2) Cars found with suspect wheel sets
a. Replace all suspect wheel sets with new wheel sets if available. Bill with all normally required AAR CRB details.
    i. Report to car owner using normal AAR billing

Wheel set replacement
Applicable Rule 44 Job Code
Why Made Code 13, "Attention Required as Directed by EA"
Responsibility Code 1, "Owner's Responsibility"

Wheels Replaced
Applicable Rule 41 Job Code
Why Made Code 13, "Attention Required as Directed by EA"
Responsibility Code 1, "Owner's Responsibility"

Roller Bearings replaced
Applicable Rule 36 Job Code
Why Made Code 13, "Attention Required as Directed by EA"
Responsibility Code 1, "Owner's Responsibility"

Axle replacement
Applicable Rule 43 Job Code
Why Made Code 13, "Attention Required as Directed by EA"
Responsibility Code 1, "Owner's Responsibility"

Jacking Charge
Job Code 4458
Why Made Code 09, "Account Repairs"
Responsibility Code 1, "Owner's Responsibility"

b. Remove car from this Equipment Advisory by reporting Activity Code MH
c. Mark axles of captured wheel sets with orange tape and mark "EI-33" on the wheel plates to ensure proper handling by the receiving wheel shop.

d. Mark the wheel plates and axle with the car number, the Why Made Code and location removed.
e. Send wheel sets matching the suspect wheel set information to wheel shop for quarantine.

3) Wheel Shops
   a. Quarantine any wheel sets matching the suspect wheel set information.
   b. Send notification to wabl@aar.com with EI-33 as the subject, include equipment name and number, and how many wheel sets removed. (Example email subject header: EI-33, NS XXXXXX, # wheel sets)

4) Car Owner Counter Billing Procedures
   a. Car owners should request counter billing authority per AAR Office Manual Rule 112.

AAR and the WABL Committee will continue to monitor the situation and issue supplement(s) to this Advisory as warranted.

Questions regarding this Equipment Instruction Advisory should be directed to the WABL Committee Manager at wabl@aar.com.

Sincerely,
Ron Hynes
Assistant Vice President – Technical Services
Phone: 202-639-2144
Email: RHynes@aar.org

Safety and Operations
Association of American Railroads
425 Third Street, SW, Suite 1000
Washington, DC, 20024

In accordance with AAR Interchange Rule 125, this Equipment Instructions is assigned SEVERITY CODE(S) and ESCALATION INTERVAL(S):
XX - Restricted at Interchange

Assignment Marks Associated with this Advisory:
AAR Only

Periodic Inspections:
There are no periodic inspection codes for this advisory.

Inspection Marks Associated with this Advisory:
Open

Allowable Final Inspection Codes Associated with this Advisory:
MH - Car inspected, defect found, repaired and returned to service.
MR - Car inspected, no defect found, and returned to service.

Equipment Locations Associated for Inspection Reporting:

Mechanical Designations Associated with this Advisory:

Component Registry:
This Equipment Instructions Advisory is NOT designated a Component Registry Advisory.

Cars Remaining on EI-0033 List
Total Assigned: 0
Total Remaining: 0
Severity XX: 0