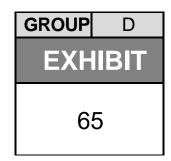


NATIONAL TRANSPORTATION SAFETY BOARD Investigative Hearing

Norfolk Southern Railway general merchandise freight train 32N derailment with subsequent hazardous material release and fires, in East Palestine, Ohio, on February 3, 2023



Agency / Organization

Federal Railroad Administration

Title

Excerpts from Federal Railroad Administration, Office of Research and Development, Final Report DOT/FRA/ORD-07/27: Tank Car Vent and Burn Process Study: Phase II

Excerpts from DOT/FRA/ORD-07/27: Tank Car Vent and Burn Process Study: Phase II

Recommendations

- Incident commanders should use the Vent and Burn Checklist, as shown in Appendix A.
- Incident commanders should use the Vent and Burn Flow Chart or process map, as shown in Appendix B.
- Incident commanders should use the Vent and Burn Database as a valuable resource as they prepare for a vent and burn event.
- Incident commanders should use the Vent and Burn Report Form, as shown in Appendix D, to document the important variables and events surrounding a vent and burn incident. This form should then be filed with the AX Subcommittee of the Tank Car Committee and to the AAR/RSI Tank Car Safety Research Project in order to build a comprehensive database of vent and burn events.

Vent and Burn Checklist Excerpts:

Damage Assessment

Is tank car being impinged upon by fire?	Yes	Close to Fire	No	
Are contents of tank car burning?	Yes		No	
Is tank car venting continuously?	Yes		No	
Is shell rupture imminent?	Yes	Possible	No	
Is tank damaged?	Yes	Somewhat	No	
Has tank specification and construction material been determined?	Yes		No	
Is ambient temperature cold enough to cause brittle fracture?	Yes	Possible	No	

Location/Environment/Site Assessment

Is the tank close to other tank cars?	Yes	Somewhat	No
Is the tank near buildings or structures?	Yes	Somewhat	No
Is tank near habitation?	No	Within .025 mile	Within 0.5 mile
Have inhabitants been evacuated?	Yes	In process	No
Is excavation of burn pit possible?	No	Within .025 mile	Within 0.5 mile
Is accident scene close to water sources?	No	Within .025 mile	Within 0.5 mile
Will windspeed and direction produce dangerous product fallout?	Yes	Somewhat	No

Product Considerations

Is product combustible?	Yes		No
Is product polymerization a possibility?	Yes		No
Will controlled release exceed toxicity levels?	Yes		No
Will products of combustion exceed toxicity levels?	Yes		No
What is the permeability of the soil?	High	Medium	Low
What is the viscosity of the product?	High	Medium	Low

Vent and Burn Flow Chart Excerpts:

