



Approved: July 24, 2024

Preliminary Report RRD24LR012

This information is preliminary and subject to change.

CPKC Derailment with Subsequent Hazardous Materials Release and Fire

Bordulac, North Dakota
July 5, 2024

On July 5, 2024, about 3:36 a.m. local time, eastbound Canadian Pacific Kansas City Railroad (CPKC) freight train 242-03 derailed 29 railcars on the main track of the Carrington Subdivision near Bordulac, North Dakota.¹ (See figure.) The derailed equipment included 17 tank cars transporting hazardous materials. There was a postaccident release of methanol and anhydrous ammonia from multiple tank cars and a subsequent pool fire surrounding the derailed cars. There were no initial reports of injuries.² First responders initiated a voluntary evacuation of two homes for 2 days. CPKC estimated damages to be about \$3.6 million. At the time of the accident, visibility conditions were dark and clear; the weather was 59°F with no precipitation. However, the track and the surrounding area were wet from earlier rainfall.

¹ (a) All times in this report are local time. (b) Train 242-03 was traveling from Minot, North Dakota, to Enderlin, North Dakota.

² Although there were no injuries from the accident itself; some workers were potentially exposed to hazardous materials during clean-up operations and sought medical attention.



Figure. Aerial view of derailment site. (Courtesy: Foster County Emergency Management.)

The crew of train 242-03 consisted of one engineer and one conductor. Train 242-03 comprised 1 head-end locomotive, 1 rear distributed power locomotive, 126 loaded railcars, and 25 empty railcars. The derailed equipment included 12 covered hoppers of propylene (plastic) pellets and of the 17 tank cars transporting hazardous materials of which 6 were carrying methanol and 11 were carrying anhydrous ammonia. Train 242-03 was traveling about 45 mph at the time of the derailment. As a designated key train, its maximum speed was restricted to 50 mph.³ At the time of the derailment, an automatic emergency brake application was initiated.⁴ Train movements near the derailment site are authorized by wayside signals.

The derailed tank cars are reported to include DOT-111, DOT-112, and DOT-117 cars. National Transportation Safety Board (NTSB) investigators will confirm tank car types when they perform detailed damage assessments of all the tank cars involved in the accident.

³ A *key train*, as defined by the United States Hazardous Materials Instructions Section 7, is a designation assigned to trains carrying certain amounts of hazardous materials. Key trains have additional operational restrictions including a 50 mph maximum speed.

⁴ An *emergency braking application* uses the maximum braking force available and is designed to stop a train as quickly as possible.

The NTSB completed a preliminary examination of the outward-facing image recorders from the accident train and two prior trains that traversed the accident location as well as from a manned CPKC geometry car that traversed the track about 20 hours before the accident. The NTSB conducted interviews of the CPKC engineer, conductor, superintendent, manager of bridge maintenance, and track inspector; reviewed locomotive event recorder data; examined the track and infrastructure at the accident location; and performed mechanical evaluations of the railcars not involved in the derailment.

The NTSB's investigation is ongoing. Future investigative activity will focus on detailed tank car damage assessments with the parties, review of maintenance and inspection records, additional infrastructure examinations, and further examination of the onboard image recorders and postaccident unmanned aircraft system videos.

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 Federal Railroad Administration; CPKC; the International Association of Sheet Metal, Air, Rail and Transportation Workers; Brotherhood of Maintenance of Way Employees; the Brotherhood of Locomotive Engineers and Trainmen; the Pipeline and Hazardous Materials Safety Administration; Union Tank Car Company; and Trinity Industries Leasing Company.⁵

⁵ The Brotherhood of Maintenance of Way Employees Division spells the word "Employees" in its name with one final e.