



U.S. Department of Transportation  
Research and Special Programs Administration

# Hazardous Materials Incident Report

Form Approval OMB No. 3137-0039

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 2137-0039. The filling out of this information is mandatory and will take 96 minutes to complete.

## INSTRUCTIONS

Submit this report to the Information Systems Manager, U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Office of Hazardous Materials Safety, DHM-63, Washington, D.C. 20590-0001. If space provided for any item is inadequate, use a separate sheet of paper, identifying the entry number being completed. Copies of this form and instructions can be obtained from the Office of Hazardous Materials Website at <http://hazmat.dot.gov>. If you have any questions, you can contact the Hazardous Materials Information Center at 1-800-HMR-4922 (1-800-467-4922) or online at <http://hazmat.dot.gov>.

## PART I - REPORT TYPE

1. Incident Id: E-2024070638

2. This is to report: A

## PART II - GENERAL INCIDENT INFORMATION

3. Date of Incident:  
07/05/2024

4. Time of Incident (use 24-hour time):  
03:42

5. Enter National Response Center Report Number  
(if applicable):  
1403817

6. If you submitted a report to another Federal DOT agency, enter  
the agency and report number:

7. Location of Incident:

City: BORDULAC  
County: FOSTER  
State: ND

Zip Code: (if known): 58421

Street Address/Mile Marker/Yard Name/Airport/Body of Water/River Mile:  
MP 342.86 Carrington Sub

8. Mode of Transportation: Rail

9. Transportation Phase: In Transit

10. Carrier/Reporter:

Name: SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad)

Street: 120 S 6TH ST STE 900

City: MINNEAPOLIS

State: MN

Zip Code: 55402

Federal DOT Id Number: 108106

Hazmat Registration Number: 060608550023QB

11. Shipper/Offorer:

Name: Methanex Corp

Street: 3806 BOX SPRINGS RD

City: MEDICINE HAT

State: ZZ

Zip Code: T1A7H1

Waybill/Shipping Paper: multiple

Hazmat Registration Number:

12. Origin (if different from shipper address)

Street:

City:

State:

Zip Code:

13. Destination:

Street: 4113 FOUR MILE RD

City: GRAYLING

State: MI

Zip Code: 49738

14. Proper Shipping Name of Hazardous  
Material: METHANOL

15. Technical/Trade Name:

16. Hazardous Class/Division: Flammable - Combustible Liquid

17. Identification Number: (E.g. UN2764, NA 2020) UN1230

18. **Packing Group:** (if applicable) II

19. **Quantity Released:** (Include Measurement Units) 121712.86 Liquid - Gallon

20. **Was the material shipped as a hazardous waste?** False  
If yes, provide the EPA Manifest Number:

21. **Is this a Toxic by Inhalation (TIH) material?** False  
If yes, provide the Hazard Zone:

22. **Was the material shipped under an Exemption, Approval, or Competent Authority Certificate?** False  
If yes, provide the Exemption, Approval, or CA number:

23. **Was this an undeclared hazardous materials shipment?** False

**PART III - PACKAGING INFORMATION**

24. **Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:**  
Tank Car

25. **See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident.**  
Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in part VI.

What Failed: -  
How Failed: -  
Causes of Failure: -

26a. **Provide the packaging identification markings, if available.**

Identification Markings: 117R100W

(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. **For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:**

Single Package or Outer Packaging:	Single Package or Inner Packaging (if any):
------------------------------------	---

Packaging Type: Material of Construction: Head Type (Drums only):	Packaging Type: Material of Construction:
---	--

27. **Describe the package capacity and the quantity:**

Single Package or Outer Packaging:	Single Package or Inner Packaging (if any):
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Package Capacity: 30080 Liquid - Gallon Amount in Package: 26911 Liquid - Gallon Number in Shipment: 1 Number Failed: 1	Package Capacity: Amount in Package: Number in Shipment: Number Failed:
--	--

28. **Provide packaging construction and test information, as appropriate:**

Manufacturer: NA Serial Number: PROX 45220 Material of Construction: NA (if Tank Car, CTMV, Portable Tank, or Cylinder) Design Pressure: (if Tank Car, CTMV, Portable Tank) Shell Thickness: 0.5 INCH (if Tank Car, CTMV, Portable Tank) Head Thickness: 0.531 INCH (if Tank Car, CTMV) Service Pressure: (if Cylinder) If valve or device failed: Type: NA Model: NA Manufacturer: NA	Manufacture Date: Last Test Date:
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29. **If the packaging is for Radioactive Materials, complete the following:**

Packaging Category: Packaging Certification: Certification Number: Nuclide(s) Present: Activity: Critical Safety Index:	Transport Index:
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## PART IV – CONSEQUENCES

### 30. Result of Incident (check all that apply):

- |                           |       |  |      |
|---------------------------|-------|--|------|
| - Spillage:               | True  | - Fire:                                  | True |
| - Explosion:              | False | - Material Entered Waterway/Storm Sewer: | True |
| - Vapor (Gas) Dispersion: | True  | - Environmental Damage:                  | True |
| - No Release:             | False |  |      |

### 31. Emergency Response: The following entities responded to the incident: (Check all that apply)

- Fire/EMS Report #: True NA  
Police Report #: True NA  
In-house cleanup: True  
Other Cleanup:

### 32. Damages Was the total damage cost more than \$500? True

- If yes, enter the following information: (If no, go to question 33.)
- |                           |                  |
|---------------------------|------------------|
| Material Loss:            | \$ 1,700,000.00  |
| Carrier Damage:           | \$ 0.00          |
| Property Damage:          | \$ 421,400.00    |
| Response Cost:            | \$ 11,916,459.00 |
| Remediation/Cleanup Cost: | \$ 5,750,000.00  |
- (See damage definitions in the instructions)

### 33a. Did the hazardous material cause or contribute to a human fatality? False

- If yes, enter the number of fatalities resulting from the hazardous material:
- |                 |  |
|-----------------|--|
| Employees:      |  |
| Responders:     |  |
| General Public: |  |

### 33b. Were there human fatalities that did not result from the hazardous material? False

If yes, how many?

### 34. Did the hazardous material cause or contribute to personal injury? False

If yes, enter the number of injuries resulting from the hazardous material:

#### Hospitalized (Admitted Only):

- |                 |  |
|-----------------|--|
| Employees:      |  |
| Responders:     |  |
| General Public: |  |

#### Non-Hospitalized:

(e.g.: On site first aid or Emergency Room observation and release)

- |                 |  |
|-----------------|--|
| Employees:      |  |
| Responders:     |  |
| General Public: |  |

### 35. Did the hazardous material cause or contribute to an evacuation? False

If yes, provide the following information:

- |   |   |
|---|---|
| Total number of general public evacuated: |   |
| Total number of employees evacuated:      |   |
| Total evacuated:                          | 0 |
| Duration of the evacuation:               |   |

### 36. Was a major transportation artery or facility closed? True

If yes, how many? 79.75

### 37. Was the material involved in a crash or derailment? True

If yes, provide the following information:

- |                             |               |
|-----------------------------|---------------|
| Estimated speed (mph):      | 42            |
| Weather conditions:         | mostly cloudy |
| Vehicle overturned?         | True          |
| Vehicle left roadway/track? | True          |

## PART V - AIR INCIDENT INFORMATION (please refer to S 175.31 to report a discrepancy for air shipments)

### 38. Was the shipment on a passenger aircraft?

If yes, was it tendered as cargo, or as passenger baggage?

### 39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?

### 40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)

- |  |  |
|--|--|
| - Shipment had not been transported      | - Transported by air (first flight)              |
| - Transport by air (subsequent flights)  | - Initial transport by highway to cargo facility |
| - Transfer at sort center/cargo facility |  |

## **PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE**

- Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

**Describe:**

On 7/5/2024 at 3:42 AM Central Time, Canadian Pacific Kansas City Railroad (CPKC) train 242-03 derailed 29 rail cars at milepost 342.86 on the Carrington Sub near the town of Bordulac, North Dakota. Derailed cars included six loaded tank cars transporting UN1230, Methanol, 3, PG II, RQ (Methanol), eleven loaded tank cars transporting UN1005, Ammonia, Anhydrous, 2.3(8), Toxic Inhalation Hazard, Zone D, Marine Pollutant (Ammonia, Anhydrous), RQ (Ammonia), and twelve loaded hopper cars transporting non-hazmat Polyethylene pellets. CPKC mobilized internal and railroad qualified external resources to investigate the damage and mitigate released lading. Fire was reported immediately after the derailment, with multiple cars on fire. Many of the derailed tank cars experienced heat impingement. Because of this, pressure built within tank cars caused pressure relief devices to release product into the atmosphere. Additionally, releases occurred from holes and punctures in tank shells, and from damage incurred to manways, valves, pressure regulating devices, and other tank car appurtenances. The NTSB is investigating this incident and has requested that CPKC refrain from modifying any tank cars until it has completed its work. Because of this, CPKC has not been able to fully assess damage which might have occurred under tank jackets. The following information is the best information available at this time.

The cars detailed below released the listed amounts in gallons from the following locations:

- 1) PROX 45220, loaded Methanol, Release=0.00 - minor damage to tank car did not result in a release.
- 2) CTCX 300362, loaded Methanol, Release=13,558.25 - heat impingement affected integrity of manway gasket (121-Gasket 308-Leaked 512-Fire, Temperature, or Heat) & pressure Relief Device (PRD) activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat).
- 3) TILX 355610, loaded Methanol, Release=26,035.55 - tank shell was punctured on the right side between the housing and the B-End, and on the left side of the tank car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), liquid line valve separated from the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), PRD sheared off at the pressure plate (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment), & 4/6 manway securement bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 4) MFCX 132265, loaded Methanol, Release=26,526.48 - tank shell was punctured on the B-End & A-End (150-Tank Shell 309-Punctured 509-Derailment), the liquid valve sheared off at the flange (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), & the vapor valve & PRD sheared off at pressure plate (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment) (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment)
- 5) CTCX 300358, loaded Methanol, Release=27,849.02 - tank shell breached on bottom left between the housing and the A-End (150-Tank Shell 303 Burst or Ruptured 509-Derailment) & was punctured on the bottom right side of the car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), & the bottom outlet valve was sheared at the flange. (106 Bottom Outlet Valve 312 Torn Off or Damaged 509-Derailment)
- 6) CTCX 732476, loaded Methanol, Release=27,743.57 - tank shell was compressed to the point of failure between the manway and the B-End of the car. (150-Tank Shell 305 Crushed 509-Derailment) and breached between the manway and the B-End of the car (150-Tank Shell 303 Burst or Ruptured 509-Derailment), the tank shell was also punctured on A-End, right side, near the end tank weld (150-Tank Shell 309-Punctured 509-Derailment), the vapor and liquid valves sheared off at pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment), & 2/6 manway Bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 7) UTLX 971162, loaded Ammonia, Release=1861.12 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 8) TILX 500864, loaded Ammonia, Release=1025.34 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 9) TILX 500752, loaded Ammonia, Release=731.53 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 10) TILX 500890, loaded Ammonia, Release=692.84 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 11) SHQX 10732, loaded Ammonia, Release=6472.15 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 12) TILX 500730, loaded Ammonia, Release=30213.15 - B-End liquid line valve sheared off at the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) & 9/20 pressure plate bolts sheared off (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 13) TILX 501050, loaded Ammonia, Release=30232.30 - unknown release point under jacket (150-Tank Shell 310 Ripped or Torn 509-Derailment) & PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 14) UTLX 971273, loaded Ammonia, Release=29246.03 - tank shell was punctured during wrecking, not during initial accident (150-Tank Shell 309-Punctured 509-Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared
- 15) TILX 501231, loaded Ammonia, Release=1857.25 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 16) SHQX 10754, loaded Ammonia, Release=7783.75 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 17) SHQX 10805, loaded Ammonia, Release=30290.72 - tank shell tear on tank bulge on the top left side of the car near the A-End (150 Tank Shell 310 Ripped or Torn 509 Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared

File Note: Item 19-the quantity released was estimated based on the best information available at the time of filing. The shipments were offered as a 'bulk' shipment, aka one car load, therefore the exact amount offered in these packages is not known to the carrier. This carrier does not have access to mass balance data which can exactly quantify this value.

## PART VII - RECOMMENDATIONS/ACTIONS TAKEN TO PREVENT RECURRENCE

- Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

### Describe:

This incident is currently under investigation - no root cause has been determined.

## PART VIII – CONTACT INFORMATION

Contact's Name:	Chad Cliburn
Contact's Title:	Consultant, EHS
Business Name and Address:	SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad) 120 S 6TH ST STE 900 MINNEAPOLIS MN 55402
E-mail Address:	[REDACTED]@cpkcr.com
Telephone Number:	[REDACTED]
Fax Number:	
Hazmat Registration Number:	060608550023QB
Date:	07/25/2024
Preparer is:	Carrier



U.S Department of Transportation  
Research and Special Programs Administration

# Hazardous Materials Incident Report

Form Approval OMB No. 3137-0039

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## INSTRUCTIONS

Submit this report to the Information Systems Manager, U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Office of Hazardous Materials Safety, DHM-63, Washington, D.C. 20590-0001. If space provided for any item is inadequate, use a separate sheet of paper, identifying the entry number being completed. Copies of this form and instructions can be obtained from the Office of Hazardous Materials Website at <http://hazmat.dot.gov>. If you have any questions, you can contact the Hazardous Materials Information Center at 1-800-HMR-4922 (1-800-467-4922) or online at <http://hazmat.dot.gov>.

## PART I - REPORT TYPE

1. **Incident Id:** E-2024070638  
2. **This is to report:** A

## PART II - GENERAL INCIDENT INFORMATION

<p>3. <b>Date of Incident:</b> 07/05/2024</p> <p>5. <b>Enter National Response Center Report Number (if applicable):</b> 1403817</p> <p>7. <b>Location of Incident:</b>                                            City: BORDULAC                                            County: FOSTER                                            State: ND                                            Zip Code: (if known): 58421          Street Address/Mile Marker/Yard Name/Airport/Body of Water/River Mile:          MP 342.86 Carrington Sub</p> <p>8. <b>Mode of Transportation:</b> Rail</p> <p>9. <b>Transportation Phase:</b> In Transit</p> <p>10. <b>Carrier/Reporter:</b>                                            Name: SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad)                                            Street: 120 S 6TH ST STE 900                                            City: MINNEAPOLIS                                            State: MN                                            Zip Code: 55402          Federal DOT Id Number: 108106</p> <p>11. <b>Shipper/Offeror:</b>                                            Name: Methanex Corp                                            Street: 3806 BOX SPRINGS RD                                            City: MEDICINE HAT                                            State: ZZ                                            Zip Code: T1A7H1          Waybill/Shipping Paper: multiple</p> <p>12. <b>Origin (if different from shipper address)</b>                                            Street:                                            City:                                            State:                                            Zip Code:</p> <p>13. <b>Destination:</b>                                            Street: 4113 FOUR MILE RD                                            City: GRAYLING                                            State: MI                                            Zip Code: 49738</p> <p>14. <b>Proper Shipping Name of Hazardous Material:</b> METHANOL</p> <p>15. <b>Technical/Trade Name:</b></p> <p>16. <b>Hazardous Class/Division:</b> Flammable - Combustible Liquid</p> <p>17. <b>Identification Number:</b> (E.g. UN2764, NA 2020) UN1230</p> <p>18. <b>Packing Group:</b> (if applicable) II</p>	<p>4. <b>Time of Incident (use 24-hour time):</b> 03:42</p> <p>6. <b>If you submitted a report to another Federal DOT agency, enter the agency and report number:</b></p> <p>Hazmat Registration Number: 060608550023QB</p> <p>Hazmat Registration Number:</p>
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19. Quantity Released: (Include Measurement Units) 121712.86 Liquid - Gallon

20. Was the material shipped as a hazardous waste? False

If yes, provide the EPA Manifest Number:

21. Is this a Toxic by Inhalation (TIH) material? False

If yes, provide the Hazard Zone:

22. Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? False

If yes, provide the Exemption, Approval, or CA number:

23. Was this an undeclared hazardous materials shipment? False

### PART III - PACKAGING INFORMATION

24. Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:

Tank Car

25. See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident.

Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in part VI.

What Failed: - 134-Liquid Valve; 144-Pressure Relief Valve or Device - Reclosing; 150-Tank Shell; 158-Vapor Valve

How Failed: - 309-Punctured; 312-Torn Off or Damaged; 312-Torn Off or Damaged; 312-Torn Off or Damaged

Causes of Failure: - Derailment; Derailment; Derailment; Derailment

26a. Provide the packaging identification markings, if available.

Identification Markings: 111S100W1

(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Packaging Type:  
Material of Construction:  
Head Type (Drums only):

Packaging Type:  
Material of Construction:

27. Describe the package capacity and the quantity:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Package Capacity: 31820 Liquid - Gallon  
Amount in Package: 28226 Liquid - Gallon  
Number in Shipment: 1  
Number Failed: 1

Package Capacity:  
Amount in Package:  
Number in Shipment:  
Number Failed:

28. Provide packaging construction and test information, as appropriate:

Manufacturer: NA  
Serial Number: MFCX 132265  
Material of Construction: NA (if Tank Car, CTMV, Portable Tank, or Cylinder)  
Design Pressure: (if Tank Car, CTMV, Portable Tank)  
Shell Thickness: 0.5 INCH (if Tank Car, CTMV, Portable Tank)  
Head Thickness: 0.5 INCH (if Tank Car, CTMV)  
Service Pressure: (if Cylinder)

Manufacture Date:  
Last Test Date:

If valve or device failed:  
Type: NA  
Model: NA  
Manufacturer: NA

29. If the packaging is for Radioactive Materials, complete the following:

Packaging Category:  
Packaging Certification:  
Certification Number:  
Nuclide(s) Present:  
Activity:  
Critical Safety Index:

Transport Index:

**PART IV – CONSEQUENCES**

**30. Result of Incident (check all that apply):**

- Spillage: True
- Explosion: False
- Vapor (Gas) Dispersion: True
- No Release: False
- Fire: True
- Material Entered Waterway/Storm Sewer: True
- Environmental Damage: True

**31. Emergency Response: The following entities responded to the incident: (Check all that apply)**

- Fire/EMS Report #: True NA
- Police Report #: True NA
- In-house cleanup: True
- Other Cleanup:

**32. Damages Was the total damage cost more than \$500? True**

- If yes, enter the following information: (If no, go to question 33.)
- Material Loss: \$ 1,700,000.00
  - Carrier Damage: \$ 0.00
  - Property Damage: \$ 421,400.00
  - Response Cost: \$ 11,916,459.00
  - Remediation/Cleanup Cost: \$ 5,750,000.00
- (See damage definitions in the instructions)*

**33a. Did the hazardous material cause or contribute to a human fatality? False**

- If yes, enter the number of fatalities resulting from the hazardous material:
- Employees:
  - Responders:
  - General Public:

**33b. Were there human fatalities that did not result from the hazardous material? False**

If yes, how many?

**34. Did the hazardous material cause or contribute to personal injury? False**

If yes, enter the number of injuries resulting from the hazardous material:

**Hospitalized (Admitted Only):**

- Employees:
- Responders:
- General Public:

**Non-Hospitalized:**

*(e.g.: On site first aid or Emergency Room observation and release)*

- Employees:
- Responders:
- General Public:

**35. Did the hazardous material cause or contribute to an evacuation? False**

If yes, provide the following information:

- Total number of general public evacuated:
- Total number of employees evacuated:
- Total evacuated: 0
- Duration of the evacuation:

**36. Was a major transportation artery or facility closed? True**

If yes, how many? 79.75

**37. Was the material involved in a crash or derailment? True**

If yes, provide the following information:

- Estimated speed (mph): 42
- Weather conditions: mostly cloudy
- Vehicle overturned? True
- Vehicle left roadway/track? True

**PART V - AIR INCIDENT INFORMATION (please refer to S 175.31 to report a discrepancy for air shipments)**

**38. Was the shipment on a passenger aircraft?**

If yes, was it tendered as cargo, or as passenger baggage?

**39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?**

**40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)**

- Shipment had not been transported
- Transported by air (first flight)
- Transport by air (subsequent flights)
- Initial transport by highway to cargo facility
- Transfer at sort center/cargo facility

## **PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE**

- Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

**Describe:**

On 7/5/2024 at 3:42 AM Central Time, Canadian Pacific Kansas City Railroad (CPKC) train 242-03 derailed 29 rail cars at milepost 342.86 on the Carrington Sub near the town of Bordulac, North Dakota. Derailed cars included six loaded tank cars transporting UN1230, Methanol, 3, PG II, RQ (Methanol), eleven loaded tank cars transporting UN1005, Ammonia, Anhydrous, 2.3(8), Toxic Inhalation Hazard, Zone D, Marine Pollutant (Ammonia, Anhydrous), RQ (Ammonia), and twelve loaded hopper cars transporting non-hazmat Polyethylene pellets. CPKC mobilized internal and railroad qualified external resources to investigate the damage and mitigate released lading. Fire was reported immediately after the derailment, with multiple cars on fire. Many of the derailed tank cars experienced heat impingement. Because of this, pressure built within tank cars caused pressure relief devices to release product into the atmosphere. Additionally, releases occurred from holes and punctures in tank shells, and from damage incurred to manways, valves, pressure regulating devices, and other tank car appurtenances. The NTSB is investigating this incident and has requested that CPKC refrain from modifying any tank cars until it has completed its work. Because of this, CPKC has not been able to fully assess damage which might have occurred under tank jackets. The following information is the best information available at this time.

The cars detailed below released the listed amounts in gallons from the following locations:

- 1) PROX 45220, loaded Methanol, Release=0.00 - minor damage to tank car did not result in a release.
- 2) CTCX 300362, loaded Methanol, Release=13,558.25 - heat impingement affected integrity of manway gasket (121-Gasket 308-Leaked 512-Fire, Temperature, or Heat) & pressure Relief Device (PRD) activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat).
- 3) TILX 355610, loaded Methanol, Release=26,035.55 - tank shell was punctured on the right side between the housing and the B-End, and on the left side of the tank car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), liquid line valve separated from the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), PRD sheared off at the pressure plate (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment), & 4/6 manway securement bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 4) MFCX 132265, loaded Methanol, Release=26,526.48 - tank shell was punctured on the B-End & A-End (150-Tank Shell 309-Punctured 509-Derailment), the liquid valve sheared off at the flange (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), & the vapor valve & PRD sheared off at pressure plate (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment) (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment)
- 5) CTCX 300358, loaded Methanol, Release=27,849.02 - tank shell breached on bottom left between the housing and the A-End (150-Tank Shell 303 Burst or Ruptured 509-Derailment) & was punctured on the bottom right side of the car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), & the bottom outlet valve was sheared at the flange. (106 Bottom Outlet Valve 312 Torn Off or Damaged 509-Derailment)
- 6) CTCX 732476, loaded Methanol, Release=27,743.57 - tank shell was compressed to the point of failure between the manway and the B-End of the car. (150-Tank Shell 305 Crushed 509-Derailment) and breached between the manway and the B-End of the car (150-Tank Shell 303 Burst or Ruptured 509-Derailment), the tank shell was also punctured on A-End, right side, near the end tank weld (150-Tank Shell 309-Punctured 509-Derailment), the vapor and liquid valves sheared off at pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment), & 2/6 manway Bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 7) UTLX 971162, loaded Ammonia, Release=1861.12 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 8) TILX 500864, loaded Ammonia, Release=1025.34 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 9) TILX 500752, loaded Ammonia, Release=731.53 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 10) TILX 500890, loaded Ammonia, Release=692.84 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 11) SHQX 10732, loaded Ammonia, Release=6472.15 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 12) TILX 500730, loaded Ammonia, Release=30213.15 - B-End liquid line valve sheared off at the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) & 9/20 pressure plate bolts sheared off (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 13) TILX 501050, loaded Ammonia, Release=30232.30 - unknown release point under jacket (150-Tank Shell 310 Ripped or Torn 509-Derailment) & PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 14) UTLX 971273, loaded Ammonia, Release=29246.03 - tank shell was punctured during wrecking, not during initial accident (150-Tank Shell 309-Punctured 509-Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared
- 15) TILX 501231, loaded Ammonia, Release=1857.25 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 16) SHQX 10754, loaded Ammonia, Release=7783.75 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 17) SHQX 10805, loaded Ammonia, Release=30290.72 - tank shell tear on tank bulge on the top left side of the car near the A-End (150 Tank Shell 310 Ripped or Torn 509 Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared

File Note: Item 19-the quantity released was estimated based on the best information available at the time of filing. The shipments were offered as a 'bulk' shipment, aka one car load, therefore the exact amount offered in these packages is not known to the carrier. This carrier does not have access to mass balance data which can exactly quantify this value.

## PART VII - RECOMMENDATIONS/ACTIONS TAKEN TO PREVENT RECURRENCE

- Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

### Describe:

This incident is currently under investigation - no root cause has been determined.

## PART VIII – CONTACT INFORMATION

Contact's Name:	Chad Cliburn
Contact's Title:	Consultant, EHS
Business Name and Address:	SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad) 120 S 6TH ST STE 900 MINNEAPOLIS MN 55402
E-mail Address:	[REDACTED]@cpkcr.com
Telephone Number:	[REDACTED]
Fax Number:	
Hazmat Registration Number:	060608550023QB
Date:	07/25/2024
Preparer is:	Carrier



U.S Department of Transportation  
Research and Special Programs Administration

# Hazardous Materials Incident Report

Form Approval OMB No. 3137-0039

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 2137-0039. The filling out of this information is mandatory and will take 96 minutes to complete.

## INSTRUCTIONS

Submit this report to the Information Systems Manager, U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Office of Hazardous Materials Safety, DHM-63, Washington, D.C. 20590-0001. If space provided for any item is inadequate, use a separate sheet of paper, identifying the entry number being completed. Copies of this form and instructions can be obtained from the Office of Hazardous Materials Website at <http://hazmat.dot.gov>. If you have any questions, you can contact the Hazardous Materials Information Center at 1-800-HMR-4922 (1-800-467-4922) or online at <http://hazmat.dot.gov>.

## PART I - REPORT TYPE

1. **Incident Id:** E-2024070638  
2. **This is to report:** A

## PART II - GENERAL INCIDENT INFORMATION

<p>3. <b>Date of Incident:</b> 07/05/2024</p> <p>5. <b>Enter National Response Center Report Number (if applicable):</b> 1403817</p> <p>7. <b>Location of Incident:</b>                                            City: BORDULAC                                            County: FOSTER                                            State: ND                                            Zip Code: (if known): 58421          Street Address/Mile Marker/Yard Name/Airport/Body of Water/River Mile:          MP 342.86 Carrington Sub</p> <p>8. <b>Mode of Transportation:</b> Rail</p> <p>9. <b>Transportation Phase:</b> In Transit</p> <p>10. <b>Carrier/Reporter:</b>                                            Name: SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad)                                            Street: 120 S 6TH ST STE 900                                            City: MINNEAPOLIS                                            State: MN                                            Zip Code: 55402          Federal DOT Id Number: 108106</p> <p>11. <b>Shipper/Offeror:</b>                                            Name: Methanex Corp                                            Street: 3806 BOX SPRINGS RD                                            City: MEDICINE HAT                                            State: ZZ                                            Zip Code: T1A7H1          Waybill/Shipping Paper: multiple</p> <p>12. <b>Origin (if different from shipper address)</b>                                            Street:                                            City:                                            State:                                            Zip Code:</p> <p>13. <b>Destination:</b>                                            Street: 4113 FOUR MILE RD                                            City: GRAYLING                                            State: MI                                            Zip Code: 49738</p> <p>14. <b>Proper Shipping Name of Hazardous Material:</b> METHANOL</p> <p>15. <b>Technical/Trade Name:</b></p> <p>16. <b>Hazardous Class/Division:</b> Flammable - Combustible Liquid</p> <p>17. <b>Identification Number:</b> (E.g. UN2764, NA 2020) UN1230</p> <p>18. <b>Packing Group:</b> (if applicable) II</p>	<p>4. <b>Time of Incident (use 24-hour time):</b> 03:42</p> <p>6. <b>If you submitted a report to another Federal DOT agency, enter the agency and report number:</b></p> <p>Hazmat Registration Number: 060608550023QB</p> <p>Hazmat Registration Number:</p>
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19. Quantity Released: (Include Measurement Units) 121712.86 Liquid - Gallon

20. Was the material shipped as a hazardous waste? False

If yes, provide the EPA Manifest Number:

21. Is this a Toxic by Inhalation (TIH) material? False

If yes, provide the Hazard Zone:

22. Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? False

If yes, provide the Exemption, Approval, or CA number:

23. Was this an undeclared hazardous materials shipment? False

**PART III - PACKAGING INFORMATION**

24. Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:

Tank Car

25. See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident.

Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in part VI.

What Failed: - 106-Bottom Outlet Valve; 150-Tank Shell; 150-Tank Shell

How Failed: - 303-Burst or Ruptured; 309-Punctured; 312-Torn Off or Damaged

Causes of Failure: - Derailment; Derailment; Derailment

26a. Provide the packaging identification markings, if available.

Identification Markings: 117R100W

(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Packaging Type:  
Material of Construction:  
Head Type (Drums only):

Packaging Type:  
Material of Construction:

27. Describe the package capacity and the quantity:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Package Capacity: 30060 Liquid - Gallon  
Amount in Package: 27849 Liquid - Gallon  
Number in Shipment: 1  
Number Failed: 1

Package Capacity:  
Amount in Package:  
Number in Shipment:  
Number Failed:

28. Provide packaging construction and test information, as appropriate:

Manufacturer: NA  
Serial Number: CTCX 300358  
Material of Construction: NA (if Tank Car, CTMV, Portable Tank, or Cylinder)  
Design Pressure: (if Tank Car, CTMV, Portable Tank)  
Shell Thickness: 0.438 INCH (if Tank Car, CTMV, Portable Tank)  
Head Thickness: 0.438 INCH (if Tank Car, CTMV)  
Service Pressure: (if Cylinder)

Manufacture Date:  
Last Test Date:

If valve or device failed:  
Type: NA  
Model: NA  
Manufacturer: NA

29. If the packaging is for Radioactive Materials, complete the following:

Packaging Category:  
Packaging Certification:  
Certification Number:  
Nuclide(s) Present:  
Activity:  
Critical Safety Index:

Transport Index:

**PART IV – CONSEQUENCES**

**30. Result of Incident (check all that apply):**

- |                           |       |  |      |
|---------------------------|-------|--|------|
| - Spillage:               | True  | - Fire:                                  | True |
| - Explosion:              | False | - Material Entered Waterway/Storm Sewer: | True |
| - Vapor (Gas) Dispersion: | True  | - Environmental Damage:                  | True |
| - No Release:             | False |  |      |

**31. Emergency Response: The following entities responded to the incident: (Check all that apply)**

- Fire/EMS Report #: True NA  
Police Report #: True NA  
In-house cleanup: True  
Other Cleanup:

**32. Damages Was the total damage cost more than \$500? True**

- If yes, enter the following information: (If no, go to question 33.)
- |                           |                  |
|---------------------------|------------------|
| Material Loss:            | \$ 1,700,000.00  |
| Carrier Damage:           | \$ 0.00          |
| Property Damage:          | \$ 421,400.00    |
| Response Cost:            | \$ 11,916,459.00 |
| Remediation/Cleanup Cost: | \$ 5,750,000.00  |
- (See damage definitions in the instructions)

**33a. Did the hazardous material cause or contribute to a human fatality? False**

- If yes, enter the number of fatalities resulting from the hazardous material:
- Employees:  
Responders:  
General Public:

**33b. Were there human fatalities that did not result from the hazardous material? False**

If yes, how many?

**34. Did the hazardous material cause or contribute to personal injury? False**

If yes, enter the number of injuries resulting from the hazardous material:

**Hospitalized (Admitted Only):**

- Employees:  
Responders:  
General Public:

**Non-Hospitalized:**

(e.g.: On site first aid or Emergency Room observation and release)

- Employees:  
Responders:  
General Public:

**35. Did the hazardous material cause or contribute to an evacuation? False**

If yes, provide the following information:

- Total number of general public evacuated:  
Total number of employees evacuated:  
Total evacuated: 0  
Duration of the evacuation:

**36. Was a major transportation artery or facility closed? True**

If yes, how many? 79.75

**37. Was the material involved in a crash or derailment? True**

If yes, provide the following information:

- Estimated speed (mph): 42  
Weather conditions: mostly cloudy  
Vehicle overturned? True  
Vehicle left roadway/track? True

**PART V - AIR INCIDENT INFORMATION (please refer to S 175.31 to report a discrepancy for air shipments)**

**38. Was the shipment on a passenger aircraft?**

If yes, was it tendered as cargo, or as passenger baggage?

**39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?**

**40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)**

- |  |  |
|--|--|
| - Shipment had not been transported      | - Transported by air (first flight)              |
| - Transport by air (subsequent flights)  | - Initial transport by highway to cargo facility |
| - Transfer at sort center/cargo facility |  |

## **PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE**

- Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

**Describe:**

On 7/5/2024 at 3:42 AM Central Time, Canadian Pacific Kansas City Railroad (CPKC) train 242-03 derailed 29 rail cars at milepost 342.86 on the Carrington Sub near the town of Bordulac, North Dakota. Derailed cars included six loaded tank cars transporting UN1230, Methanol, 3, PG II, RQ (Methanol), eleven loaded tank cars transporting UN1005, Ammonia, Anhydrous, 2.3(8), Toxic Inhalation Hazard, Zone D, Marine Pollutant (Ammonia, Anhydrous), RQ (Ammonia), and twelve loaded hopper cars transporting non-hazmat Polyethylene pellets. CPKC mobilized internal and railroad qualified external resources to investigate the damage and mitigate released lading. Fire was reported immediately after the derailment, with multiple cars on fire. Many of the derailed tank cars experienced heat impingement. Because of this, pressure built within tank cars caused pressure relief devices to release product into the atmosphere. Additionally, releases occurred from holes and punctures in tank shells, and from damage incurred to manways, valves, pressure regulating devices, and other tank car appurtenances. The NTSB is investigating this incident and has requested that CPKC refrain from modifying any tank cars until it has completed its work. Because of this, CPKC has not been able to fully assess damage which might have occurred under tank jackets. The following information is the best information available at this time.

The cars detailed below released the listed amounts in gallons from the following locations:

- 1) PROX 45220, loaded Methanol, Release=0.00 - minor damage to tank car did not result in a release.
- 2) CTCX 300362, loaded Methanol, Release=13,558.25 - heat impingement affected integrity of manway gasket (121-Gasket 308-Leaked 512-Fire, Temperature, or Heat) & pressure Relief Device (PRD) activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat).
- 3) TILX 355610, loaded Methanol, Release=26,035.55 - tank shell was punctured on the right side between the housing and the B-End, and on the left side of the tank car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), liquid line valve separated from the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), PRD sheared off at the pressure plate (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment), & 4/6 manway securement bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 4) MFCX 132265, loaded Methanol, Release=26,526.48 - tank shell was punctured on the B-End & A-End (150-Tank Shell 309-Punctured 509-Derailment), the liquid valve sheared off at the flange (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), & the vapor valve & PRD sheared off at pressure plate (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment) (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment)
- 5) CTCX 300358, loaded Methanol, Release=27,849.02 - tank shell breached on bottom left between the housing and the A-End (150-Tank Shell 303 Burst or Ruptured 509-Derailment) & was punctured on the bottom right side of the car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), & the bottom outlet valve was sheared at the flange. (106 Bottom Outlet Valve 312 Torn Off or Damaged 509-Derailment)
- 6) CTCX 732476, loaded Methanol, Release=27,743.57 - tank shell was compressed to the point of failure between the manway and the B-End of the car. (150-Tank Shell 305 Crushed 509-Derailment) and breached between the manway and the B-End of the car (150-Tank Shell 303 Burst or Ruptured 509-Derailment), the tank shell was also punctured on A-End, right side, near the end tank weld (150-Tank Shell 309-Punctured 509-Derailment), the vapor and liquid valves sheared off at pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment), & 2/6 manway Bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 7) UTLX 971162, loaded Ammonia, Release=1861.12 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 8) TILX 500864, loaded Ammonia, Release=1025.34 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 9) TILX 500752, loaded Ammonia, Release=731.53 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 10) TILX 500890, loaded Ammonia, Release=692.84 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 11) SHQX 10732, loaded Ammonia, Release=6472.15 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 12) TILX 500730, loaded Ammonia, Release=30213.15 - B-End liquid line valve sheared off at the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) & 9/20 pressure plate bolts sheared off (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 13) TILX 501050, loaded Ammonia, Release=30232.30 - unknown release point under jacket (150-Tank Shell 310 Ripped or Torn 509-Derailment) & PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 14) UTLX 971273, loaded Ammonia, Release=29246.03 - tank shell was punctured during wrecking, not during initial accident (150-Tank Shell 309-Punctured 509-Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared
- 15) TILX 501231, loaded Ammonia, Release=1857.25 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 16) SHQX 10754, loaded Ammonia, Release=7783.75 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 17) SHQX 10805, loaded Ammonia, Release=30290.72 - tank shell tear on tank bulge on the top left side of the car near the A-End (150 Tank Shell 310 Ripped or Torn 509 Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared

File Note: Item 19-the quantity released was estimated based on the best information available at the time of filing. The shipments were offered as a 'bulk' shipment, aka one car load, therefore the exact amount offered in these packages is not known to the carrier. This carrier does not have access to mass balance data which can exactly quantify this value.

## PART VII - RECOMMENDATIONS/ACTIONS TAKEN TO PREVENT RECURRENCE

- Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

### Describe:

This incident is currently under investigation - no root cause has been determined.

## PART VIII – CONTACT INFORMATION

Contact's Name:	Chad Cliburn
Contact's Title:	Consultant, EHS
Business Name and Address:	SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad) 120 S 6TH ST STE 900 MINNEAPOLIS MN 55402
E-mail Address:	[REDACTED]@cpkcr.com
Telephone Number:	[REDACTED]
Fax Number:	
Hazmat Registration Number:	060608550023QB
Date:	07/25/2024
Preparer is:	Carrier



U.S Department of Transportation  
Research and Special Programs Administration

# Hazardous Materials Incident Report

Form Approval OMB No. 3137-0039

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 2137-0039. The filling out of this information is mandatory and will take 96 minutes to complete.

## INSTRUCTIONS

Submit this report to the Information Systems Manager, U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Office of Hazardous Materials Safety, DHM-63, Washington, D.C. 20590-0001. If space provided for any item is inadequate, use a separate sheet of paper, identifying the entry number being completed. Copies of this form and instructions can be obtained from the Office of Hazardous Materials Website at <http://hazmat.dot.gov>. If you have any questions, you can contact the Hazardous Materials Information Center at 1-800-HMR-4922 (1-800-467-4922) or online at <http://hazmat.dot.gov>.

## PART I - REPORT TYPE

1. **Incident Id:** E-2024070638  
2. **This is to report:** A

## PART II - GENERAL INCIDENT INFORMATION

3. **Date of Incident:** 07/05/2024  
4. **Time of Incident (use 24-hour time):** 03:42

5. **Enter National Response Center Report Number (if applicable):** 1403817  
6. **If you submitted a report to another Federal DOT agency, enter the agency and report number:**

7. **Location of Incident:**  
City: BORDULAC  
County: FOSTER  
State: ND  
Zip Code: (if known): 58421  
Street Address/Mile Marker/Yard Name/Airport/Body of Water/River Mile:  
MP 342.86 Carrington Sub

8. **Mode of Transportation:** Rail  
9. **Transportation Phase:** In Transit

10. **Carrier/Reporter:**  
Name: SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad)  
Street: 120 S 6TH ST STE 900  
City: MINNEAPOLIS  
State: MN  
Zip Code: 55402  
Federal DOT Id Number: 108106  
Hazmat Registration Number: 060608550023QB

11. **Shipper/Offeror:**  
Name: Methanex Corp  
Street: 3806 BOX SPRINGS RD  
City: MEDICINE HAT  
State: ZZ  
Zip Code: T1A7H1  
Waybill/Shipping Paper: multiple  
Hazmat Registration Number:

12. **Origin (if different from shipper address)**  
Street:  
City:  
State:  
Zip Code:

13. **Destination:**  
Street: N59 W14765 W BOBOLINK AVE  
City: MENOMONEE FALLS  
State: WI  
Zip Code: 53051

14. **Proper Shipping Name of Hazardous Material:** METHANOL  
15. **Technical/Trade Name:**  
16. **Hazardous Class/Division:** Flammable - Combustible Liquid  
17. **Identification Number:** (E.g. UN2764, NA 2020) UN1230  
18. **Packing Group:** (if applicable) II

19. Quantity Released: (Include Measurement Units) 121712.86 Liquid - Gallon

20. Was the material shipped as a hazardous waste? False

If yes, provide the EPA Manifest Number:

21. Is this a Toxic by Inhalation (TIH) material? False

If yes, provide the Hazard Zone:

22. Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? False

If yes, provide the Exemption, Approval, or CA number:

23. Was this an undeclared hazardous materials shipment? False

**PART III - PACKAGING INFORMATION**

24. Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:

Tank Car

25. See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident.

Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in part VI.

What Failed: - 105-Bolts or Nuts; 134-Liquid Valve; 150-Tank Shell; 150-Tank Shell; 150-Tank Shell; 158-Vapor Valve

How Failed: - 303-Burst or Ruptured; 305-Crushed; 309-Punctured; 312-Torn Off or Damaged; 312-Torn Off or Damaged; 312-Torn Off or Damaged

Causes of Failure: - Derailment; Derailment; Derailment; Derailment; Derailment; Derailment

26a. Provide the packaging identification markings, if available.

Identification Markings: 117R100W

(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:

<b>Single Package or Outer Packaging:</b>	<b>Single Package or Inner Packaging (if any):</b>
---	--

Packaging Type:  
Material of Construction:  
Head Type (Drums only):

Packaging Type:  
Material of Construction:

27. Describe the package capacity and the quantity:

<b>Single Package or Outer Packaging:</b>	<b>Single Package or Inner Packaging (if any):</b>
---	--

Package Capacity: 30070 Liquid - Gallon  
Amount in Package: 27744 Liquid - Gallon  
Number in Shipment: 1  
Number Failed: 1

Package Capacity:  
Amount in Package:  
Number in Shipment:  
Number Failed:

28. Provide packaging construction and test information, as appropriate:

Manufacturer: NA  
Serial Number: CTCX 732476  
Material of Construction: NA (if Tank Car, CTMV, Portable Tank, or Cylinder)  
Design Pressure: (if Tank Car, CTMV, Portable Tank)  
Shell Thickness: 0.438 INCH (if Tank Car, CTMV, Portable Tank)  
Head Thickness: 0.438 INCH (if Tank Car, CTMV)  
Service Pressure: (if Cylinder)

Manufacture Date:  
Last Test Date:

If valve or device failed:  
Type: NA  
Model: NA  
Manufacturer: NA

29. If the packaging is for Radioactive Materials, complete the following:

Packaging Category:  
Packaging Certification:  
Certification Number:  
Nuclide(s) Present:  
Activity:  
Critical Safety Index:

Transport Index:

**PART IV – CONSEQUENCES**

**30. Result of Incident (check all that apply):**

- Spillage: True
- Explosion: False
- Vapor (Gas) Dispersion: True
- No Release: False
- Fire: True
- Material Entered Waterway/Storm Sewer: True
- Environmental Damage: True

**31. Emergency Response: The following entities responded to the incident: (Check all that apply)**

- Fire/EMS Report #: True NA
- Police Report #: True NA
- In-house cleanup: True
- Other Cleanup:

**32. Damages Was the total damage cost more than \$500? True**

- If yes, enter the following information: (If no, go to question 33.)
- Material Loss: \$ 1,700,000.00
  - Carrier Damage: \$ 0.00
  - Property Damage: \$ 421,400.00
  - Response Cost: \$ 11,916,459.00
  - Remediation/Cleanup Cost: \$ 5,750,000.00
- (See damage definitions in the instructions)*

**33a. Did the hazardous material cause or contribute to a human fatality? False**

- If yes, enter the number of fatalities resulting from the hazardous material:
- Employees:
  - Responders:
  - General Public:

**33b. Were there human fatalities that did not result from the hazardous material? False**

If yes, how many?

**34. Did the hazardous material cause or contribute to personal injury? False**

If yes, enter the number of injuries resulting from the hazardous material:

**Hospitalized (Admitted Only):**

- Employees:
- Responders:
- General Public:

**Non-Hospitalized:**

*(e.g.: On site first aid or Emergency Room observation and release)*

- Employees:
- Responders:
- General Public:

**35. Did the hazardous material cause or contribute to an evacuation? False**

If yes, provide the following information:

- Total number of general public evacuated:
- Total number of employees evacuated:
- Total evacuated: 0
- Duration of the evacuation:

**36. Was a major transportation artery or facility closed? True**

If yes, how many? 79.75

**37. Was the material involved in a crash or derailment? True**

If yes, provide the following information:

- Estimated speed (mph): 42
- Weather conditions: mostly cloudy
- Vehicle overturned? True
- Vehicle left roadway/track? True

**PART V - AIR INCIDENT INFORMATION (please refer to S 175.31 to report a discrepancy for air shipments)**

**38. Was the shipment on a passenger aircraft?**

If yes, was it tendered as cargo, or as passenger baggage?

**39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?**

**40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)**

- Shipment had not been transported
- Transported by air (first flight)
- Transport by air (subsequent flights)
- Initial transport by highway to cargo facility
- Transfer at sort center/cargo facility

## **PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE**

- Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

**Describe:**

On 7/5/2024 at 3:42 AM Central Time, Canadian Pacific Kansas City Railroad (CPKC) train 242-03 derailed 29 rail cars at milepost 342.86 on the Carrington Sub near the town of Bordulac, North Dakota. Derailed cars included six loaded tank cars transporting UN1230, Methanol, 3, PG II, RQ (Methanol), eleven loaded tank cars transporting UN1005, Ammonia, Anhydrous, 2.3(8), Toxic Inhalation Hazard, Zone D, Marine Pollutant (Ammonia, Anhydrous), RQ (Ammonia), and twelve loaded hopper cars transporting non-hazmat Polyethylene pellets. CPKC mobilized internal and railroad qualified external resources to investigate the damage and mitigate released lading. Fire was reported immediately after the derailment, with multiple cars on fire. Many of the derailed tank cars experienced heat impingement. Because of this, pressure built within tank cars caused pressure relief devices to release product into the atmosphere. Additionally, releases occurred from holes and punctures in tank shells, and from damage incurred to manways, valves, pressure regulating devices, and other tank car appurtenances. The NTSB is investigating this incident and has requested that CPKC refrain from modifying any tank cars until it has completed its work. Because of this, CPKC has not been able to fully assess damage which might have occurred under tank jackets. The following information is the best information available at this time.

The cars detailed below released the listed amounts in gallons from the following locations:

- 1) PROX 45220, loaded Methanol, Release=0.00 - minor damage to tank car did not result in a release.
- 2) CTCX 300362, loaded Methanol, Release=13,558.25 - heat impingement affected integrity of manway gasket (121-Gasket 308-Leaked 512-Fire, Temperature, or Heat) & pressure Relief Device (PRD) activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat).
- 3) TILX 355610, loaded Methanol, Release=26,035.55 - tank shell was punctured on the right side between the housing and the B-End, and on the left side of the tank car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), liquid line valve separated from the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), PRD sheared off at the pressure plate (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment), & 4/6 manway securement bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 4) MFCX 132265, loaded Methanol, Release=26,526.48 - tank shell was punctured on the B-End & A-End (150-Tank Shell 309-Punctured 509-Derailment), the liquid valve sheared off at the flange (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), & the vapor valve & PRD sheared off at pressure plate (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment) (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment)
- 5) CTCX 300358, loaded Methanol, Release=27,849.02 - tank shell breached on bottom left between the housing and the A-End (150-Tank Shell 303 Burst or Ruptured 509-Derailment) & was punctured on the bottom right side of the car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), & the bottom outlet valve was sheared at the flange. (106 Bottom Outlet Valve 312 Torn Off or Damaged 509-Derailment)
- 6) CTCX 732476, loaded Methanol, Release=27,743.57 - tank shell was compressed to the point of failure between the manway and the B-End of the car. (150-Tank Shell 305 Crushed 509-Derailment) and breached between the manway and the B-End of the car (150-Tank Shell 303 Burst or Ruptured 509-Derailment), the tank shell was also punctured on A-End, right side, near the end tank weld (150-Tank Shell 309-Punctured 509-Derailment), the vapor and liquid valves sheared off at pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment), & 2/6 manway Bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 7) UTLX 971162, loaded Ammonia, Release=1861.12 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 8) TILX 500864, loaded Ammonia, Release=1025.34 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 9) TILX 500752, loaded Ammonia, Release=731.53 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 10) TILX 500890, loaded Ammonia, Release=692.84 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 11) SHQX 10732, loaded Ammonia, Release=6472.15 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 12) TILX 500730, loaded Ammonia, Release=30213.15 - B-End liquid line valve sheared off at the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) & 9/20 pressure plate bolts sheared off (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 13) TILX 501050, loaded Ammonia, Release=30232.30 - unknown release point under jacket (150-Tank Shell 310 Ripped or Torn 509-Derailment) & PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 14) UTLX 971273, loaded Ammonia, Release=29246.03 - tank shell was punctured during wrecking, not during initial accident (150-Tank Shell 309-Punctured 509-Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared
- 15) TILX 501231, loaded Ammonia, Release=1857.25 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 16) SHQX 10754, loaded Ammonia, Release=7783.75 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 17) SHQX 10805, loaded Ammonia, Release=30290.72 - tank shell tear on tank bulge on the top left side of the car near the A-End (150 Tank Shell 310 Ripped or Torn 509 Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared

File Note: Item 19-the quantity released was estimated based on the best information available at the time of filing. The shipments were offered as a 'bulk' shipment, aka one car load, therefore the exact amount offered in these packages is not known to the carrier. This carrier does not have access to mass balance data which can exactly quantify this value.

## PART VII - RECOMMENDATIONS/ACTIONS TAKEN TO PREVENT RECURRENCE

- Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

### Describe:

This incident is currently under investigation - no root cause has been determined.

## PART VIII – CONTACT INFORMATION

Contact's Name:	Chad Cliburn
Contact's Title:	Consultant, EHS
Business Name and Address:	SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad) 120 S 6TH ST STE 900 MINNEAPOLIS MN 55402
E-mail Address:	[REDACTED]@cpkcr.com
Telephone Number:	[REDACTED]
Fax Number:	
Hazmat Registration Number:	060608550023QB
Date:	07/25/2024
Preparer is:	Carrier



U.S Department of Transportation  
Research and Special Programs Administration

# Hazardous Materials Incident Report

Form Approval OMB No. 3137-0039

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 2137-0039. The filling out of this information is mandatory and will take 96 minutes to complete.

## INSTRUCTIONS

Submit this report to the Information Systems Manager, U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Office of Hazardous Materials Safety, DHM-63, Washington, D.C. 20590-0001. If space provided for any item is inadequate, use a separate sheet of paper, identifying the entry number being completed. Copies of this form and instructions can be obtained from the Office of Hazardous Materials Website at <http://hazmat.dot.gov>. If you have any questions, you can contact the Hazardous Materials Information Center at 1-800-HMR-4922 (1-800-467-4922) or online at <http://hazmat.dot.gov>.

## PART I - REPORT TYPE

1. **Incident Id:** E-2024070638  
2. **This is to report:** A

## PART II - GENERAL INCIDENT INFORMATION

<p>3. <b>Date of Incident:</b> 07/05/2024</p> <p>5. <b>Enter National Response Center Report Number (if applicable):</b> 1403817</p> <p>7. <b>Location of Incident:</b>                                            City: BORDULAC                                            County: FOSTER                                            State: ND                                            Zip Code: (if known): 58421          Street Address/Mile Marker/Yard Name/Airport/Body of Water/River Mile:          MP 342.86 Carrington Sub</p> <p>8. <b>Mode of Transportation:</b> Rail</p> <p>9. <b>Transportation Phase:</b> In Transit</p> <p>10. <b>Carrier/Reporter:</b>                                            Name: SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad)                                            Street: 120 S 6TH ST STE 900                                            City: MINNEAPOLIS                                            State: MN                                            Zip Code: 55402          Federal DOT Id Number: 108106</p> <p>11. <b>Shipper/Offeror:</b>                                            Name: Methanex Corp                                            Street: 3806 BOX SPRINGS RD                                            City: MEDICINE HAT                                            State: ZZ                                            Zip Code: T1A7H1          Waybill/Shipping Paper: multiple</p> <p>12. <b>Origin (if different from shipper address)</b>                                            Street:                                            City:                                            State:                                            Zip Code:</p> <p>13. <b>Destination:</b>                                            Street: 614 SHIPYARD RD                                            City: SENECA                                            State: IL                                            Zip Code: 61360</p> <p>14. <b>Proper Shipping Name of Hazardous Material:</b> METHANOL</p> <p>15. <b>Technical/Trade Name:</b></p> <p>16. <b>Hazardous Class/Division:</b> Flammable - Combustible Liquid</p> <p>17. <b>Identification Number:</b> (E.g. UN2764, NA 2020) UN1230</p> <p>18. <b>Packing Group:</b> (if applicable) II</p>	<p>4. <b>Time of Incident (use 24-hour time):</b> 03:42</p> <p>6. <b>If you submitted a report to another Federal DOT agency, enter the agency and report number:</b></p> <p>Hazmat Registration Number: 060608550023QB</p> <p>Hazmat Registration Number:</p>
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19. Quantity Released: (Include Measurement Units) 121712.86 Liquid - Gallon

20. Was the material shipped as a hazardous waste? False

If yes, provide the EPA Manifest Number:

21. Is this a Toxic by Inhalation (TIH) material? False

If yes, provide the Hazard Zone:

22. Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? False

If yes, provide the Exemption, Approval, or CA number:

23. Was this an undeclared hazardous materials shipment? False

**PART III - PACKAGING INFORMATION**

24. Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:

Tank Car

25. See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident.

Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in part VI.

What Failed: - 121-Gasket; 144-Pressure Relief Valve or Device - Reclosing

How Failed: - 308-Leaked; 313-Vented

Causes of Failure: - Fire, Temperature, or Heat; Fire, Temperature, or Heat

26a. Provide the packaging identification markings, if available.

Identification Markings: 117R100W

(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Packaging Type:  
Material of Construction:  
Head Type (Drums only):

Packaging Type:  
Material of Construction:

27. Describe the package capacity and the quantity:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Package Capacity: 30071 Liquid - Gallon  
Amount in Package: 27758 Liquid - Gallon  
Number in Shipment: 1  
Number Failed: 1

Package Capacity:  
Amount in Package:  
Number in Shipment:  
Number Failed:

28. Provide packaging construction and test information, as appropriate:

Manufacturer: NA  
Serial Number: CTCX 300362  
Material of Construction: NA (if Tank Car, CTMV, Portable Tank, or Cylinder)  
Design Pressure: (if Tank Car, CTMV, Portable Tank)  
Shell Thickness: 0.438 INCH (if Tank Car, CTMV, Portable Tank)  
Head Thickness: 0.438 INCH (if Tank Car, CTMV)  
Service Pressure: (if Cylinder)

Manufacture Date:  
Last Test Date:

If valve or device failed:  
Type: NA  
Model: NA  
Manufacturer: NA

29. If the packaging is for Radioactive Materials, complete the following:

Packaging Category:  
Packaging Certification:  
Certification Number:  
Nuclide(s) Present:  
Activity:  
Critical Safety Index:

Transport Index:

**PART IV – CONSEQUENCES**

**30. Result of Incident (check all that apply):**

- |                           |       |  |      |
|---------------------------|-------|--|------|
| - Spillage:               | True  | - Fire:                                  | True |
| - Explosion:              | False | - Material Entered Waterway/Storm Sewer: | True |
| - Vapor (Gas) Dispersion: | True  | - Environmental Damage:                  | True |
| - No Release:             | False |  |      |

**31. Emergency Response: The following entities responded to the incident: (Check all that apply)**

- Fire/EMS Report #: True NA  
Police Report #: True NA  
In-house cleanup: True  
Other Cleanup:

**32. Damages Was the total damage cost more than \$500? True**

- If yes, enter the following information: (If no, go to question 33.)
- |                           |                  |
|---------------------------|------------------|
| Material Loss:            | \$ 1,700,000.00  |
| Carrier Damage:           | \$ 0.00          |
| Property Damage:          | \$ 421,400.00    |
| Response Cost:            | \$ 11,916,459.00 |
| Remediation/Cleanup Cost: | \$ 5,750,000.00  |
- (See damage definitions in the instructions)

**33a. Did the hazardous material cause or contribute to a human fatality? False**

- If yes, enter the number of fatalities resulting from the hazardous material:
- Employees:  
Responders:  
General Public:

**33b. Were there human fatalities that did not result from the hazardous material? False**

If yes, how many?

**34. Did the hazardous material cause or contribute to personal injury? False**

If yes, enter the number of injuries resulting from the hazardous material:

**Hospitalized (Admitted Only):**

- Employees:  
Responders:  
General Public:

**Non-Hospitalized:**

(e.g.: On site first aid or Emergency Room observation and release)

- Employees:  
Responders:  
General Public:

**35. Did the hazardous material cause or contribute to an evacuation? False**

If yes, provide the following information:

- Total number of general public evacuated:  
Total number of employees evacuated:  
Total evacuated: 0  
Duration of the evacuation:

**36. Was a major transportation artery or facility closed? True**

If yes, how many? 79.75

**37. Was the material involved in a crash or derailment? True**

If yes, provide the following information:

- Estimated speed (mph): 42  
Weather conditions: mostly cloudy  
Vehicle overturned? True  
Vehicle left roadway/track? True

**PART V - AIR INCIDENT INFORMATION (please refer to S 175.31 to report a discrepancy for air shipments)**

**38. Was the shipment on a passenger aircraft?**

If yes, was it tendered as cargo, or as passenger baggage?

**39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?**

**40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)**

- |  |  |
|--|--|
| - Shipment had not been transported      | - Transported by air (first flight)              |
| - Transport by air (subsequent flights)  | - Initial transport by highway to cargo facility |
| - Transfer at sort center/cargo facility |  |

## **PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE**

- Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

**Describe:**

On 7/5/2024 at 3:42 AM Central Time, Canadian Pacific Kansas City Railroad (CPKC) train 242-03 derailed 29 rail cars at milepost 342.86 on the Carrington Sub near the town of Bordulac, North Dakota. Derailed cars included six loaded tank cars transporting UN1230, Methanol, 3, PG II, RQ (Methanol), eleven loaded tank cars transporting UN1005, Ammonia, Anhydrous, 2.3(8), Toxic Inhalation Hazard, Zone D, Marine Pollutant (Ammonia, Anhydrous), RQ (Ammonia), and twelve loaded hopper cars transporting non-hazmat Polyethylene pellets. CPKC mobilized internal and railroad qualified external resources to investigate the damage and mitigate released lading. Fire was reported immediately after the derailment, with multiple cars on fire. Many of the derailed tank cars experienced heat impingement. Because of this, pressure built within tank cars caused pressure relief devices to release product into the atmosphere. Additionally, releases occurred from holes and punctures in tank shells, and from damage incurred to manways, valves, pressure regulating devices, and other tank car appurtenances. The NTSB is investigating this incident and has requested that CPKC refrain from modifying any tank cars until it has completed its work. Because of this, CPKC has not been able to fully assess damage which might have occurred under tank jackets. The following information is the best information available at this time.

The cars detailed below released the listed amounts in gallons from the following locations:

- 1) PROX 45220, loaded Methanol, Release=0.00 - minor damage to tank car did not result in a release.
- 2) CTCX 300362, loaded Methanol, Release=13,558.25 - heat impingement affected integrity of manway gasket (121-Gasket 308-Leaked 512-Fire, Temperature, or Heat) & pressure Relief Device (PRD) activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat).
- 3) TILX 355610, loaded Methanol, Release=26,035.55 - tank shell was punctured on the right side between the housing and the B-End, and on the left side of the tank car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), liquid line valve separated from the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), PRD sheared off at the pressure plate (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment), & 4/6 manway securement bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 4) MFCX 132265, loaded Methanol, Release=26,526.48 - tank shell was punctured on the B-End & A-End (150-Tank Shell 309-Punctured 509-Derailment), the liquid valve sheared off at the flange (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), & the vapor valve & PRD sheared off at pressure plate (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment) (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment)
- 5) CTCX 300358, loaded Methanol, Release=27,849.02 - tank shell breached on bottom left between the housing and the A-End (150-Tank Shell 303 Burst or Ruptured 509-Derailment) & was punctured on the bottom right side of the car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), & the bottom outlet valve was sheared at the flange. (106 Bottom Outlet Valve 312 Torn Off or Damaged 509-Derailment)
- 6) CTCX 732476, loaded Methanol, Release=27,743.57 - tank shell was compressed to the point of failure between the manway and the B-End of the car. (150-Tank Shell 305 Crushed 509-Derailment) and breached between the manway and the B-End of the car (150-Tank Shell 303 Burst or Ruptured 509-Derailment), the tank shell was also punctured on A-End, right side, near the end tank weld (150-Tank Shell 309-Punctured 509-Derailment), the vapor and liquid valves sheared off at pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment), & 2/6 manway Bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 7) UTLX 971162, loaded Ammonia, Release=1861.12 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 8) TILX 500864, loaded Ammonia, Release=1025.34 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 9) TILX 500752, loaded Ammonia, Release=731.53 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 10) TILX 500890, loaded Ammonia, Release=692.84 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 11) SHQX 10732, loaded Ammonia, Release=6472.15 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 12) TILX 500730, loaded Ammonia, Release=30213.15 - B-End liquid line valve sheared off at the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) & 9/20 pressure plate bolts sheared off (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 13) TILX 501050, loaded Ammonia, Release=30232.30 - unknown release point under jacket (150-Tank Shell 310 Ripped or Torn 509-Derailment) & PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 14) UTLX 971273, loaded Ammonia, Release=29246.03 - tank shell was punctured during wrecking, not during initial accident (150-Tank Shell 309-Punctured 509-Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared
- 15) TILX 501231, loaded Ammonia, Release=1857.25 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 16) SHQX 10754, loaded Ammonia, Release=7783.75 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 17) SHQX 10805, loaded Ammonia, Release=30290.72 - tank shell tear on tank bulge on the top left side of the car near the A-End (150 Tank Shell 310 Ripped or Torn 509 Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared

File Note: Item 19-the quantity released was estimated based on the best information available at the time of filing. The shipments were offered as a 'bulk' shipment, aka one car load, therefore the exact amount offered in these packages is not known to the carrier. This carrier does not have access to mass balance data which can exactly quantify this value.

## PART VII - RECOMMENDATIONS/ACTIONS TAKEN TO PREVENT RECURRENCE

- Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

### Describe:

This incident is currently under investigation - no root cause has been determined.

## PART VIII – CONTACT INFORMATION

Contact's Name:	Chad Cliburn
Contact's Title:	Consultant, EHS
Business Name and Address:	SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad) 120 S 6TH ST STE 900 MINNEAPOLIS MN 55402
E-mail Address:	██████████@cpkcr.com
Telephone Number:	██████████
Fax Number:	
Hazmat Registration Number:	060608550023QB
Date:	07/25/2024
Preparer is:	Carrier



U.S Department of Transportation  
Research and Special Programs Administration

# Hazardous Materials Incident Report

Form Approval OMB No. 3137-0039

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 2137-0039. The filling out of this information is mandatory and will take 96 minutes to complete.

## INSTRUCTIONS

Submit this report to the Information Systems Manager, U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Office of Hazardous Materials Safety, DHM-63, Washington, D.C. 20590-0001. If space provided for any item is inadequate, use a separate sheet of paper, identifying the entry number being completed. Copies of this form and instructions can be obtained from the Office of Hazardous Materials Website at <http://hazmat.dot.gov>. If you have any questions, you can contact the Hazardous Materials Information Center at 1-800-HMR-4922 (1-800-467-4922) or online at <http://hazmat.dot.gov>.

## PART I - REPORT TYPE

1. **Incident Id:** E-2024070638  
2. **This is to report:** A

## PART II - GENERAL INCIDENT INFORMATION

<p>3. <b>Date of Incident:</b> 07/05/2024</p> <p>5. <b>Enter National Response Center Report Number (if applicable):</b> 1403817</p> <p>7. <b>Location of Incident:</b>                                            City: BORDULAC                                            County: FOSTER                                            State: ND                                            Zip Code: (if known): 58421          Street Address/Mile Marker/Yard Name/Airport/Body of Water/River Mile:          MP 342.86 Carrington Sub</p> <p>8. <b>Mode of Transportation:</b> Rail</p> <p>9. <b>Transportation Phase:</b> In Transit</p> <p>10. <b>Carrier/Reporter:</b>                                            Name: SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad)                                            Street: 120 S 6TH ST STE 900                                            City: MINNEAPOLIS                                            State: MN                                            Zip Code: 55402          Federal DOT Id Number: 108106</p> <p>11. <b>Shipper/Offeror:</b>                                            Name: Methanex Corp                                            Street: 3806 BOX SPRINGS RD                                            City: MEDICINE HAT                                            State: ZZ                                            Zip Code: T1A7H1          Waybill/Shipping Paper: multiple</p> <p>12. <b>Origin (if different from shipper address)</b>                                            Street:                                            City:                                            State:                                            Zip Code:</p> <p>13. <b>Destination:</b>                                            Street: 614 SHIPYARD RD                                            City: SENECA                                            State: IL                                            Zip Code: 61360</p> <p>14. <b>Proper Shipping Name of Hazardous Material:</b> METHANOL</p> <p>15. <b>Technical/Trade Name:</b></p> <p>16. <b>Hazardous Class/Division:</b> Flammable - Combustible Liquid</p> <p>17. <b>Identification Number:</b> (E.g. UN2764, NA 2020) UN1230</p> <p>18. <b>Packing Group:</b> (if applicable) II</p>	<p>4. <b>Time of Incident (use 24-hour time):</b> 03:42</p> <p>6. <b>If you submitted a report to another Federal DOT agency, enter the agency and report number:</b></p> <p>Hazmat Registration Number: 060608550023QB</p> <p>Hazmat Registration Number:</p>
---	--

19. Quantity Released: (Include Measurement Units) 121712.86 Liquid - Gallon

20. Was the material shipped as a hazardous waste? False

If yes, provide the EPA Manifest Number:

21. Is this a Toxic by Inhalation (TIH) material? False

If yes, provide the Hazard Zone:

22. Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? False

If yes, provide the Exemption, Approval, or CA number:

23. Was this an undeclared hazardous materials shipment? False

**PART III - PACKAGING INFORMATION**

24. Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:

Tank Car

25. See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident.

Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in part VI.

What Failed: - 105-Bolts or Nuts; 133-Liquid Line; 144-Pressure Relief Valve or Device - Reclosing; 150-Tank Shell

How Failed: - 309-Punctured; 312-Torn Off or Damaged; 312-Torn Off or Damaged; 312-Torn Off or Damaged

Causes of Failure: - Derailment; Derailment; Derailment; Derailment

26a. Provide the packaging identification markings, if available.

Identification Markings: 117R100W

(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:

<b>Single Package or Outer Packaging:</b>	<b>Single Package or Inner Packaging (if any):</b>
---	--

Packaging Type:  
Material of Construction:  
Head Type (Drums only):

Packaging Type:  
Material of Construction:

27. Describe the package capacity and the quantity:

<b>Single Package or Outer Packaging:</b>	<b>Single Package or Inner Packaging (if any):</b>
---	--

Package Capacity: 30370 Liquid - Gallon  
Amount in Package: 26036 Liquid - Gallon  
Number in Shipment: 1  
Number Failed: 1

Package Capacity:  
Amount in Package:  
Number in Shipment:  
Number Failed:

28. Provide packaging construction and test information, as appropriate:

Manufacturer: NA  
Serial Number: TILX 355610  
Material of Construction: NA (if Tank Car, CTMV, Portable Tank, or Cylinder)  
Design Pressure: (if Tank Car, CTMV, Portable Tank)  
Shell Thickness: 0.562 INCH (if Tank Car, CTMV, Portable Tank)  
Head Thickness: 0.562 INCH (if Tank Car, CTMV)  
Service Pressure: (if Cylinder)

Manufacture Date:  
Last Test Date:

If valve or device failed:  
Type: NA  
Model: NA  
Manufacturer: NA

29. If the packaging is for Radioactive Materials, complete the following:

Packaging Category:  
Packaging Certification:  
Certification Number:  
Nuclide(s) Present:  
Activity:  
Critical Safety Index:

Transport Index:

## PART IV – CONSEQUENCES

### 30. Result of Incident (check all that apply):

- |                           |       |  |      |
|---------------------------|-------|--|------|
| - Spillage:               | True  | - Fire:                                  | True |
| - Explosion:              | False | - Material Entered Waterway/Storm Sewer: | True |
| - Vapor (Gas) Dispersion: | True  | - Environmental Damage:                  | True |
| - No Release:             | False |  |      |

### 31. Emergency Response: The following entities responded to the incident: (Check all that apply)

- Fire/EMS Report #: True NA  
Police Report #: True NA  
In-house cleanup: True  
Other Cleanup:

### 32. Damages Was the total damage cost more than \$500? True

- If yes, enter the following information: (If no, go to question 33.)
- |                           |                  |
|---------------------------|------------------|
| Material Loss:            | \$ 1,700,000.00  |
| Carrier Damage:           | \$ 0.00          |
| Property Damage:          | \$ 421,400.00    |
| Response Cost:            | \$ 11,916,459.00 |
| Remediation/Cleanup Cost: | \$ 5,750,000.00  |
- (See damage definitions in the instructions)

### 33a. Did the hazardous material cause or contribute to a human fatality? False

- If yes, enter the number of fatalities resulting from the hazardous material:
- |                 |  |
|-----------------|--|
| Employees:      |  |
| Responders:     |  |
| General Public: |  |

### 33b. Were there human fatalities that did not result from the hazardous material? False

If yes, how many?

### 34. Did the hazardous material cause or contribute to personal injury? False

If yes, enter the number of injuries resulting from the hazardous material:

#### Hospitalized (Admitted Only):

- |                 |  |
|-----------------|--|
| Employees:      |  |
| Responders:     |  |
| General Public: |  |

#### Non-Hospitalized:

(e.g.: On site first aid or Emergency Room observation and release)

- |                 |  |
|-----------------|--|
| Employees:      |  |
| Responders:     |  |
| General Public: |  |

### 35. Did the hazardous material cause or contribute to an evacuation? False

If yes, provide the following information:

- |   |   |
|---|---|
| Total number of general public evacuated: |   |
| Total number of employees evacuated:      |   |
| Total evacuated:                          | 0 |
| Duration of the evacuation:               |   |

### 36. Was a major transportation artery or facility closed? True

If yes, how many? 79.75

### 37. Was the material involved in a crash or derailment? True

If yes, provide the following information:

- |                             |               |
|-----------------------------|---------------|
| Estimated speed (mph):      | 42            |
| Weather conditions:         | mostly cloudy |
| Vehicle overturned?         | True          |
| Vehicle left roadway/track? | True          |

## PART V - AIR INCIDENT INFORMATION (please refer to S 175.31 to report a discrepancy for air shipments)

### 38. Was the shipment on a passenger aircraft?

If yes, was it tendered as cargo, or as passenger baggage?

### 39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?

### 40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)

- |  |  |
|--|--|
| - Shipment had not been transported      | - Transported by air (first flight)              |
| - Transport by air (subsequent flights)  | - Initial transport by highway to cargo facility |
| - Transfer at sort center/cargo facility |  |

## **PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE**

- Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

**Describe:**

On 7/5/2024 at 3:42 AM Central Time, Canadian Pacific Kansas City Railroad (CPKC) train 242-03 derailed 29 rail cars at milepost 342.86 on the Carrington Sub near the town of Bordulac, North Dakota. Derailed cars included six loaded tank cars transporting UN1230, Methanol, 3, PG II, RQ (Methanol), eleven loaded tank cars transporting UN1005, Ammonia, Anhydrous, 2.3(8), Toxic Inhalation Hazard, Zone D, Marine Pollutant (Ammonia, Anhydrous), RQ (Ammonia), and twelve loaded hopper cars transporting non-hazmat Polyethylene pellets. CPKC mobilized internal and railroad qualified external resources to investigate the damage and mitigate released lading. Fire was reported immediately after the derailment, with multiple cars on fire. Many of the derailed tank cars experienced heat impingement. Because of this, pressure built within tank cars caused pressure relief devices to release product into the atmosphere. Additionally, releases occurred from holes and punctures in tank shells, and from damage incurred to manways, valves, pressure regulating devices, and other tank car appurtenances. The NTSB is investigating this incident and has requested that CPKC refrain from modifying any tank cars until it has completed its work. Because of this, CPKC has not been able to fully assess damage which might have occurred under tank jackets. The following information is the best information available at this time.

The cars detailed below released the listed amounts in gallons from the following locations:

- 1) PROX 45220, loaded Methanol, Release=0.00 - minor damage to tank car did not result in a release.
- 2) CTCX 300362, loaded Methanol, Release=13,558.25 - heat impingement affected integrity of manway gasket (121-Gasket 308-Leaked 512-Fire, Temperature, or Heat) & pressure Relief Device (PRD) activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat).
- 3) TILX 355610, loaded Methanol, Release=26,035.55 - tank shell was punctured on the right side between the housing and the B-End, and on the left side of the tank car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), liquid line valve separated from the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), PRD sheared off at the pressure plate (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment), & 4/6 manway securement bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 4) MFCX 132265, loaded Methanol, Release=26,526.48 - tank shell was punctured on the B-End & A-End (150-Tank Shell 309-Punctured 509-Derailment), the liquid valve sheared off at the flange (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), & the vapor valve & PRD sheared off at pressure plate (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment) (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment)
- 5) CTCX 300358, loaded Methanol, Release=27,849.02 - tank shell breached on bottom left between the housing and the A-End (150-Tank Shell 303 Burst or Ruptured 509-Derailment) & was punctured on the bottom right side of the car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), & the bottom outlet valve was sheared at the flange. (106 Bottom Outlet Valve 312 Torn Off or Damaged 509-Derailment)
- 6) CTCX 732476, loaded Methanol, Release=27,743.57 - tank shell was compressed to the point of failure between the manway and the B-End of the car. (150-Tank Shell 305 Crushed 509-Derailment) and breached between the manway and the B-End of the car (150-Tank Shell 303 Burst or Ruptured 509-Derailment), the tank shell was also punctured on A-End, right side, near the end tank weld (150-Tank Shell 309-Punctured 509-Derailment), the vapor and liquid valves sheared off at pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment), & 2/6 manway Bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 7) UTLX 971162, loaded Ammonia, Release=1861.12 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 8) TILX 500864, loaded Ammonia, Release=1025.34 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 9) TILX 500752, loaded Ammonia, Release=731.53 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 10) TILX 500890, loaded Ammonia, Release=692.84 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 11) SHQX 10732, loaded Ammonia, Release=6472.15 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 12) TILX 500730, loaded Ammonia, Release=30213.15 - B-End liquid line valve sheared off at the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) & 9/20 pressure plate bolts sheared off (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 13) TILX 501050, loaded Ammonia, Release=30232.30 - unknown release point under jacket (150-Tank Shell 310 Ripped or Torn 509-Derailment) & PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 14) UTLX 971273, loaded Ammonia, Release=29246.03 - tank shell was punctured during wrecking, not during initial accident (150-Tank Shell 309-Punctured 509-Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared
- 15) TILX 501231, loaded Ammonia, Release=1857.25 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 16) SHQX 10754, loaded Ammonia, Release=7783.75 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 17) SHQX 10805, loaded Ammonia, Release=30290.72 - tank shell tear on tank bulge on the top left side of the car near the A-End (150 Tank Shell 310 Ripped or Torn 509 Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared

File Note: Item 19-the quantity released was estimated based on the best information available at the time of filing. The shipments were offered as a 'bulk' shipment, aka one car load, therefore the exact amount offered in these packages is not known to the carrier. This carrier does not have access to mass balance data which can exactly quantify this value.

## PART VII - RECOMMENDATIONS/ACTIONS TAKEN TO PREVENT RECURRENCE

- Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

### Describe:

This incident is currently under investigation - no root cause has been determined.

## PART VIII – CONTACT INFORMATION

Contact's Name:	Chad Cliburn
Contact's Title:	Consultant, EHS
Business Name and Address:	SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad) 120 S 6TH ST STE 900 MINNEAPOLIS MN 55402
E-mail Address:	[REDACTED]@cpkcr.com
Telephone Number:	[REDACTED]
Fax Number:	[REDACTED]
Hazmat Registration Number:	060608550023QB
Date:	07/25/2024
Preparer is:	Carrier



U.S Department of Transportation  
Research and Special Programs Administration

# Hazardous Materials Incident Report

Form Approval OMB No. 3137-0039

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 2137-0039. The filling out of this information is mandatory and will take 96 minutes to complete.

## INSTRUCTIONS

Submit this report to the Information Systems Manager, U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Office of Hazardous Materials Safety, DHM-63, Washington, D.C. 20590-0001. If space provided for any item is inadequate, use a separate sheet of paper, identifying the entry number being completed. Copies of this form and instructions can be obtained from the Office of Hazardous Materials Website at <http://hazmat.dot.gov>. If you have any questions, you can contact the Hazardous Materials Information Center at 1-800-HMR-4922 (1-800-467-4922) or online at <http://hazmat.dot.gov>.

## PART I - REPORT TYPE

1. **Incident Id:** E-2024070638  
2. **This is to report:** A

## PART II - GENERAL INCIDENT INFORMATION

<p>3. <b>Date of Incident:</b> 07/05/2024</p> <p>5. <b>Enter National Response Center Report Number (if applicable):</b> 1403817</p> <p>7. <b>Location of Incident:</b>                                            City: BORDULAC                                            County: FOSTER                                            State: ND                                            Zip Code: (if known): 58421          Street Address/Mile Marker/Yard Name/Airport/Body of Water/River Mile:          MP 342.86 Carrington Sub</p> <p>8. <b>Mode of Transportation:</b> Rail</p> <p>9. <b>Transportation Phase:</b> In Transit</p> <p>10. <b>Carrier/Reporter:</b>                                            Name: SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad)                                            Street: 120 S 6TH ST STE 900                                            City: MINNEAPOLIS                                            State: MN                                            Zip Code: 55402                                            Federal DOT Id Number: 108106</p> <p>11. <b>Shipper/Offeror:</b>                                            Name: CANADIAN FERTILIZERS LTD                                            Street: 1250 52ND ST NW                                            City: MEDICINE HAT                                            State: ZZ                                            Zip Code: T1A7R9                                            Waybill/Shipping Paper: multiple</p> <p>12. <b>Origin (if different from shipper address)</b>                                            Street:                                            City:                                            State:                                            Zip Code:</p> <p>13. <b>Destination:</b>                                            Street: 4 PKWY N STE 400                                            City: DEERFIELD                                            State: IL                                            Zip Code: 60015</p> <p>14. <b>Proper Shipping Name of Hazardous Material:</b> AMMONIA ANHYDROUS</p> <p>15. <b>Technical/Trade Name:</b> Ammonia</p> <p>16. <b>Hazardous Class/Division:</b> Poisonous Gas</p> <p>17. <b>Identification Number:</b> (E.g. UN2764, NA 2020) UN1005</p> <p>18. <b>Packing Group:</b> (if applicable)</p>	<p>4. <b>Time of Incident (use 24-hour time):</b> 03:42</p> <p>6. <b>If you submitted a report to another Federal DOT agency, enter the agency and report number:</b></p> <p>Hazmat Registration Number: 060608550023QB</p> <p>Hazmat Registration Number:</p>
---	--

19. Quantity Released: (Include Measurement Units) 140406.19 Gas - Gallon

20. Was the material shipped as a hazardous waste? False

If yes, provide the EPA Manifest Number:

21. Is this a Toxic by Inhalation (TIH) material? True

If yes, provide the Hazard Zone: D

22. Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? False

If yes, provide the Exemption, Approval, or CA number:

23. Was this an undeclared hazardous materials shipment? False

**PART III - PACKAGING INFORMATION**

24. Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:

Tank Car

25. See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident.

Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in part VI.

What Failed: - 105-Bolts or Nuts; 134-Liquid Valve

How Failed: - 312-Torn Off or Damaged; 312-Torn Off or Damaged

Causes of Failure: - Derailment; Derailment

26a. Provide the packaging identification markings, if available.

Identification Markings: 112J500I

(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:

Single Package or Outer Packaging:	Single Package or Inner Packaging (if any):
------------------------------------	---

Packaging Type:  
Material of Construction:  
Head Type (Drums only):

Packaging Type:  
Material of Construction:

27. Describe the package capacity and the quantity:

Single Package or Outer Packaging:	Single Package or Inner Packaging (if any):
------------------------------------	---

Package Capacity: 34370 Gas - Gallon  
Amount in Package: 30213 Gas - Gallon  
Number in Shipment: 1  
Number Failed: 1

Package Capacity:  
Amount in Package:  
Number in Shipment:  
Number Failed:

28. Provide packaging construction and test information, as appropriate:

Manufacturer:  
Serial Number: TILX 500730  
Material of Construction: (if Tank Car, CTMV, Portable Tank, or Cylinder)  
Design Pressure: (if Tank Car, CTMV, Portable Tank)  
Shell Thickness: 0.89 INCH (if Tank Car, CTMV, Portable Tank)  
Head Thickness: 1.03 INCH (if Tank Car, CTMV)  
Service Pressure: (if Cylinder)

Manufacture Date:  
Last Test Date:

If valve or device failed:  
Type: NA  
Model: NA  
Manufacturer: NA

29. If the packaging is for Radioactive Materials, complete the following:

Packaging Category:  
Packaging Certification:  
Certification Number:  
Nuclide(s) Present: Transport Index:  
Activity:  
Critical Safety Index:

**PART IV – CONSEQUENCES**

**30. Result of Incident (check all that apply):**

- Spillage: True
- Explosion: False
- Vapor (Gas) Dispersion: True
- No Release: False
- Fire: True
- Material Entered Waterway/Storm Sewer: True
- Environmental Damage: True

**31. Emergency Response: The following entities responded to the incident: (Check all that apply)**

- Fire/EMS Report #: True NA
- Police Report #: True NA
- In-house cleanup: True
- Other Cleanup:

**32. Damages Was the total damage cost more than \$500? True**

- If yes, enter the following information: (If no, go to question 33.)
- Material Loss: \$ 1,700,000.00
  - Carrier Damage: \$ 0.00
  - Property Damage: \$ 421,400.00
  - Response Cost: \$ 11,916,459.00
  - Remediation/Cleanup Cost: \$ 5,750,000.00
- (See damage definitions in the instructions)*

**33a. Did the hazardous material cause or contribute to a human fatality? False**

- If yes, enter the number of fatalities resulting from the hazardous material:
- Employees:
  - Responders:
  - General Public:

**33b. Were there human fatalities that did not result from the hazardous material? False**

If yes, how many?

**34. Did the hazardous material cause or contribute to personal injury? False**

If yes, enter the number of injuries resulting from the hazardous material:

**Hospitalized (Admitted Only):**

- Employees:
- Responders:
- General Public:

**Non-Hospitalized:**

*(e.g.: On site first aid or Emergency Room observation and release)*

- Employees:
- Responders:
- General Public:

**35. Did the hazardous material cause or contribute to an evacuation? False**

If yes, provide the following information:

- Total number of general public evacuated:
- Total number of employees evacuated:
- Total evacuated: 0
- Duration of the evacuation:

**36. Was a major transportation artery or facility closed? True**

If yes, how many? 79.75

**37. Was the material involved in a crash or derailment? True**

If yes, provide the following information:

- Estimated speed (mph): 42
- Weather conditions: mostly cloudy
- Vehicle overturned? True
- Vehicle left roadway/track? True

**PART V - AIR INCIDENT INFORMATION (please refer to S 175.31 to report a discrepancy for air shipments)**

**38. Was the shipment on a passenger aircraft?**

If yes, was it tendered as cargo, or as passenger baggage?

**39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?**

**40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)**

- Shipment had not been transported
- Transported by air (first flight)
- Transport by air (subsequent flights)
- Initial transport by highway to cargo facility
- Transfer at sort center/cargo facility

## **PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE**

- Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

**Describe:**

On 7/5/2024 at 3:42 AM Central Time, Canadian Pacific Kansas City Railroad (CPKC) train 242-03 derailed 29 rail cars at milepost 342.86 on the Carrington Sub near the town of Bordulac, North Dakota. Derailed cars included six loaded tank cars transporting UN1230, Methanol, 3, PG II, RQ (Methanol), eleven loaded tank cars transporting UN1005, Ammonia, Anhydrous, 2.3(8), Toxic Inhalation Hazard, Zone D, Marine Pollutant (Ammonia, Anhydrous), RQ (Ammonia), and twelve loaded hopper cars transporting non-hazmat Polyethylene pellets. CPKC mobilized internal and railroad qualified external resources to investigate the damage and mitigate released lading. Fire was reported immediately after the derailment, with multiple cars on fire. Many of the derailed tank cars experienced heat impingement. Because of this, pressure built within tank cars caused pressure relief devices to release product into the atmosphere. Additionally, releases occurred from holes and punctures in tank shells, and from damage incurred to manways, valves, pressure regulating devices, and other tank car appurtenances. The NTSB is investigating this incident and has requested that CPKC refrain from modifying any tank cars until it has completed its work. Because of this, CPKC has not been able to fully assess damage which might have occurred under tank jackets. The following information is the best information available at this time.

The cars detailed below released the listed amounts in gallons from the following locations:

- 1) PROX 45220, loaded Methanol, Release=0.00 - minor damage to tank car did not result in a release.
- 2) CTCX 300362, loaded Methanol, Release=13,558.25 - heat impingement affected integrity of manway gasket (121-Gasket 308-Leaked 512-Fire, Temperature, or Heat) & pressure Relief Device (PRD) activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat).
- 3) TILX 355610, loaded Methanol, Release=26,035.55 - tank shell was punctured on the right side between the housing and the B-End, and on the left side of the tank car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), liquid line valve separated from the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), PRD sheared off at the pressure plate (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment), & 4/6 manway securement bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 4) MFCX 132265, loaded Methanol, Release=26,526.48 - tank shell was punctured on the B-End & A-End (150-Tank Shell 309-Punctured 509-Derailment), the liquid valve sheared off at the flange (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), & the vapor valve & PRD sheared off at pressure plate (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment) (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment)
- 5) CTCX 300358, loaded Methanol, Release=27,849.02 - tank shell breached on bottom left between the housing and the A-End (150-Tank Shell 303 Burst or Ruptured 509-Derailment) & was punctured on the bottom right side of the car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), & the bottom outlet valve was sheared at the flange. (106 Bottom Outlet Valve 312 Torn Off or Damaged 509-Derailment)
- 6) CTCX 732476, loaded Methanol, Release=27,743.57 - tank shell was compressed to the point of failure between the manway and the B-End of the car. (150-Tank Shell 305 Crushed 509-Derailment) and breached between the manway and the B-End of the car (150-Tank Shell 303 Burst or Ruptured 509-Derailment), the tank shell was also punctured on A-End, right side, near the end tank weld (150-Tank Shell 309-Punctured 509-Derailment), the vapor and liquid valves sheared off at pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment), & 2/6 manway Bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 7) UTLX 971162, loaded Ammonia, Release=1861.12 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 8) TILX 500864, loaded Ammonia, Release=1025.34 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 9) TILX 500752, loaded Ammonia, Release=731.53 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 10) TILX 500890, loaded Ammonia, Release=692.84 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 11) SHQX 10732, loaded Ammonia, Release=6472.15 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 12) TILX 500730, loaded Ammonia, Release=30213.15 - B-End liquid line valve sheared off at the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) & 9/20 pressure plate bolts sheared off (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 13) TILX 501050, loaded Ammonia, Release=30232.30 - unknown release point under jacket (150-Tank Shell 310 Ripped or Torn 509-Derailment) & PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 14) UTLX 971273, loaded Ammonia, Release=29246.03 - tank shell was punctured during wrecking, not during initial accident (150-Tank Shell 309-Punctured 509-Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared
- 15) TILX 501231, loaded Ammonia, Release=1857.25 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 16) SHQX 10754, loaded Ammonia, Release=7783.75 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 17) SHQX 10805, loaded Ammonia, Release=30290.72 - tank shell tear on tank bulge on the top left side of the car near the A-End (150 Tank Shell 310 Ripped or Torn 509 Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared

File Note: Item 19-the quantity released was estimated based on the best information available at the time of filing. The shipments were offered as a 'bulk' shipment, aka one car load, therefore the exact amount offered in these packages is not known to the carrier. This carrier does not have access to mass balance data which can exactly quantify this value.

## PART VII - RECOMMENDATIONS/ACTIONS TAKEN TO PREVENT RECURRENCE

- Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

### Describe:

This incident is currently under investigation - no root cause has been determined.

## PART VIII – CONTACT INFORMATION

Contact's Name:	Chad Cliburn
Contact's Title:	Consultant, EHS
Business Name and Address:	SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad) 120 S 6TH ST STE 900 MINNEAPOLIS MN 55402
E-mail Address:	[REDACTED]@cpkcr.com
Telephone Number:	[REDACTED]
Fax Number:	
Hazmat Registration Number:	060608550023QB
Date:	07/25/2024
Preparer is:	Carrier



U.S Department of Transportation  
Research and Special Programs Administration

# Hazardous Materials Incident Report

Form Approval OMB No. 3137-0039

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 2137-0039. The filling out of this information is mandatory and will take 96 minutes to complete.

## INSTRUCTIONS

Submit this report to the Information Systems Manager, U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Office of Hazardous Materials Safety, DHM-63, Washington, D.C. 20590-0001. If space provided for any item is inadequate, use a separate sheet of paper, identifying the entry number being completed. Copies of this form and instructions can be obtained from the Office of Hazardous Materials Website at <http://hazmat.dot.gov>. If you have any questions, you can contact the Hazardous Materials Information Center at 1-800-HMR-4922 (1-800-467-4922) or online at <http://hazmat.dot.gov>.

## PART I - REPORT TYPE

1. **Incident Id:** E-2024070638  
2. **This is to report:** A

## PART II - GENERAL INCIDENT INFORMATION

<p>3. <b>Date of Incident:</b> 07/05/2024</p> <p>5. <b>Enter National Response Center Report Number (if applicable):</b> 1403817</p> <p>7. <b>Location of Incident:</b>                                            City: BORDULAC                                            County: FOSTER                                            State: ND                                            Zip Code: (if known): 58421          Street Address/Mile Marker/Yard Name/Airport/Body of Water/River Mile:          MP 342.86 Carrington Sub</p> <p>8. <b>Mode of Transportation:</b> Rail</p> <p>9. <b>Transportation Phase:</b> In Transit</p> <p>10. <b>Carrier/Reporter:</b>                                            Name: SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad)                                            Street: 120 S 6TH ST STE 900                                            City: MINNEAPOLIS                                            State: MN                                            Zip Code: 55402                                            Federal DOT Id Number: 108106</p> <p>11. <b>Shipper/Offeror:</b>                                            Name: CANADIAN FERTILIZERS LTD                                            Street: 1250 52ND ST NW                                            City: MEDICINE HAT                                            State: ZZ                                            Zip Code: T1A7R9                                            Waybill/Shipping Paper: multiple</p> <p>12. <b>Origin (if different from shipper address)</b>                                            Street:                                            City:                                            State:                                            Zip Code:</p> <p>13. <b>Destination:</b>                                            Street: 4 PKWY N STE 400                                            City: DEERFIELD                                            State: IL                                            Zip Code: 60015</p> <p>14. <b>Proper Shipping Name of Hazardous Material:</b> AMMONIA ANHYDROUS</p> <p>15. <b>Technical/Trade Name:</b> Ammonia</p> <p>16. <b>Hazardous Class/Division:</b> Poisonous Gas</p> <p>17. <b>Identification Number:</b> (E.g. UN2764, NA 2020) UN1005</p> <p>18. <b>Packing Group:</b> (if applicable)</p>	<p>4. <b>Time of Incident (use 24-hour time):</b> 03:42</p> <p>6. <b>If you submitted a report to another Federal DOT agency, enter the agency and report number:</b></p> <p>Hazmat Registration Number: 060608550023QB</p> <p>Hazmat Registration Number:</p>
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19. Quantity Released: (Include Measurement Units) 140406.19 Gas - Gallon

20. Was the material shipped as a hazardous waste? False

If yes, provide the EPA Manifest Number:

21. Is this a Toxic by Inhalation (TIH) material? True

If yes, provide the Hazard Zone: D

22. Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? False

If yes, provide the Exemption, Approval, or CA number:

23. Was this an undeclared hazardous materials shipment? False

### PART III - PACKAGING INFORMATION

24. Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:

Tank Car

25. See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident.

Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in part VI.

What Failed: - 144-Pressure Relief Valve or Device - Reclosing

How Failed: - 313-Vented

Causes of Failure: - Fire, Temperature, or Heat

26a. Provide the packaging identification markings, if available.

Identification Markings: 112J500I

(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Packaging Type:  
Material of Construction:  
Head Type (Drums only):

Packaging Type:  
Material of Construction:

27. Describe the package capacity and the quantity:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Package Capacity: 33680 Gas - Gallon  
Amount in Package: 30445 Gas - Gallon  
Number in Shipment: 1  
Number Failed: 1

Package Capacity:  
Amount in Package:  
Number in Shipment:  
Number Failed:

28. Provide packaging construction and test information, as appropriate:

Manufacturer:  
Serial Number: SHQX 10732  
Material of Construction: (if Tank Car, CTMV, Portable Tank, or Cylinder)  
Design Pressure: (if Tank Car, CTMV, Portable Tank)  
Shell Thickness: 0.922 INCH (if Tank Car, CTMV, Portable Tank)  
Head Thickness: 0.912 INCH (if Tank Car, CTMV)  
Service Pressure: (if Cylinder)  
If valve or device failed:  
Type: NA  
Model: NA  
Manufacturer: NA

Manufacture Date:  
Last Test Date:

29. If the packaging is for Radioactive Materials, complete the following:

Packaging Category:  
Packaging Certification:  
Certification Number:  
Nuclide(s) Present: Transport Index:  
Activity:  
Critical Safety Index:

**PART IV – CONSEQUENCES**

**30. Result of Incident (check all that apply):**

- |                           |       |  |      |
|---------------------------|-------|--|------|
| - Spillage:               | True  | - Fire:                                  | True |
| - Explosion:              | False | - Material Entered Waterway/Storm Sewer: | True |
| - Vapor (Gas) Dispersion: | True  | - Environmental Damage:                  | True |
| - No Release:             | False |  |      |

**31. Emergency Response: The following entities responded to the incident: (Check all that apply)**

- Fire/EMS Report #: True NA  
Police Report #: True NA  
In-house cleanup: True  
Other Cleanup:

**32. Damages Was the total damage cost more than \$500? True**

- If yes, enter the following information: (If no, go to question 33.)
- |                           |                  |
|---------------------------|------------------|
| Material Loss:            | \$ 1,700,000.00  |
| Carrier Damage:           | \$ 0.00          |
| Property Damage:          | \$ 421,400.00    |
| Response Cost:            | \$ 11,916,459.00 |
| Remediation/Cleanup Cost: | \$ 5,750,000.00  |
- (See damage definitions in the instructions)*

**33a. Did the hazardous material cause or contribute to a human fatality? False**

- If yes, enter the number of fatalities resulting from the hazardous material:
- Employees:  
Responders:  
General Public:

**33b. Were there human fatalities that did not result from the hazardous material? False**

If yes, how many?

**34. Did the hazardous material cause or contribute to personal injury? False**

If yes, enter the number of injuries resulting from the hazardous material:

**Hospitalized (Admitted Only):**

- Employees:  
Responders:  
General Public:

**Non-Hospitalized:**

*(e.g.: On site first aid or Emergency Room observation and release)*

- Employees:  
Responders:  
General Public:

**35. Did the hazardous material cause or contribute to an evacuation? False**

If yes, provide the following information:

- Total number of general public evacuated:  
Total number of employees evacuated:  
Total evacuated: 0  
Duration of the evacuation:

**36. Was a major transportation artery or facility closed? True**

If yes, how many? 79.75

**37. Was the material involved in a crash or derailment? True**

If yes, provide the following information:

- Estimated speed (mph): 42  
Weather conditions: mostly cloudy  
Vehicle overturned? True  
Vehicle left roadway/track? True

**PART V - AIR INCIDENT INFORMATION (please refer to S 175.31 to report a discrepancy for air shipments)**

**38. Was the shipment on a passenger aircraft?**

If yes, was it tendered as cargo, or as passenger baggage?

**39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?**

**40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)**

- |  |  |
|--|--|
| - Shipment had not been transported      | - Transported by air (first flight)              |
| - Transport by air (subsequent flights)  | - Initial transport by highway to cargo facility |
| - Transfer at sort center/cargo facility |  |

## **PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE**

- Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

**Describe:**

On 7/5/2024 at 3:42 AM Central Time, Canadian Pacific Kansas City Railroad (CPKC) train 242-03 derailed 29 rail cars at milepost 342.86 on the Carrington Sub near the town of Bordulac, North Dakota. Derailed cars included six loaded tank cars transporting UN1230, Methanol, 3, PG II, RQ (Methanol), eleven loaded tank cars transporting UN1005, Ammonia, Anhydrous, 2.3(8), Toxic Inhalation Hazard, Zone D, Marine Pollutant (Ammonia, Anhydrous), RQ (Ammonia), and twelve loaded hopper cars transporting non-hazmat Polyethylene pellets. CPKC mobilized internal and railroad qualified external resources to investigate the damage and mitigate released lading. Fire was reported immediately after the derailment, with multiple cars on fire. Many of the derailed tank cars experienced heat impingement. Because of this, pressure built within tank cars caused pressure relief devices to release product into the atmosphere. Additionally, releases occurred from holes and punctures in tank shells, and from damage incurred to manways, valves, pressure regulating devices, and other tank car appurtenances. The NTSB is investigating this incident and has requested that CPKC refrain from modifying any tank cars until it has completed its work. Because of this, CPKC has not been able to fully assess damage which might have occurred under tank jackets. The following information is the best information available at this time.

The cars detailed below released the listed amounts in gallons from the following locations:

- 1) PROX 45220, loaded Methanol, Release=0.00 - minor damage to tank car did not result in a release.
- 2) CTCX 300362, loaded Methanol, Release=13,558.25 - heat impingement affected integrity of manway gasket (121-Gasket 308-Leaked 512-Fire, Temperature, or Heat) & pressure Relief Device (PRD) activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat).
- 3) TILX 355610, loaded Methanol, Release=26,035.55 - tank shell was punctured on the right side between the housing and the B-End, and on the left side of the tank car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), liquid line valve separated from the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), PRD sheared off at the pressure plate (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment), & 4/6 manway securement bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 4) MFCX 132265, loaded Methanol, Release=26,526.48 - tank shell was punctured on the B-End & A-End (150-Tank Shell 309-Punctured 509-Derailment), the liquid valve sheared off at the flange (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), & the vapor valve & PRD sheared off at pressure plate (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment) (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment)
- 5) CTCX 300358, loaded Methanol, Release=27,849.02 - tank shell breached on bottom left between the housing and the A-End (150-Tank Shell 303 Burst or Ruptured 509-Derailment) & was punctured on the bottom right side of the car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), & the bottom outlet valve was sheared at the flange. (106 Bottom Outlet Valve 312 Torn Off or Damaged 509-Derailment)
- 6) CTCX 732476, loaded Methanol, Release=27,743.57 - tank shell was compressed to the point of failure between the manway and the B-End of the car. (150-Tank Shell 305 Crushed 509-Derailment) and breached between the manway and the B-End of the car (150-Tank Shell 303 Burst or Ruptured 509-Derailment), the tank shell was also punctured on A-End, right side, near the end tank weld (150-Tank Shell 309-Punctured 509-Derailment), the vapor and liquid valves sheared off at pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment), & 2/6 manway Bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 7) UTLX 971162, loaded Ammonia, Release=1861.12 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heat remaining after lading transfer was flared
- 8) TILX 500864, loaded Ammonia, Release=1025.34 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heat remaining after lading transfer was flared
- 9) TILX 500752, loaded Ammonia, Release=731.53 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heat remaining after lading transfer was flared
- 10) TILX 500890, loaded Ammonia, Release=692.84 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heat remaining after lading transfer was flared
- 11) SHQX 10732, loaded Ammonia, Release=6472.15 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heat remaining after lading transfer was flared
- 12) TILX 500730, loaded Ammonia, Release=30213.15 - B-End liquid line valve sheared off at the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) & 9/20 pressure plate bolts sheared off (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment). Note: Additional controlled release occurred as heat remaining in tank car was flared
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- 16) SHQX 10754, loaded Ammonia, Release=7783.75 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heat remaining after lading transfer was flared
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File Note: Item 19-the quantity released was estimated based on the best information available at the time of filing. The shipments were offered as a 'bulk' shipment, aka one car load, therefore the exact amount offered in these packages is not known to the carrier. This carrier does not have access to mass balance data which can exactly quantify this value.

## PART VII - RECOMMENDATIONS/ACTIONS TAKEN TO PREVENT RECURRENCE

- Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

### Describe:

This incident is currently under investigation - no root cause has been determined.

## PART VIII – CONTACT INFORMATION

Contact's Name:	Chad Cliburn
Contact's Title:	Consultant, EHS
Business Name and Address:	SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad) 120 S 6TH ST STE 900 MINNEAPOLIS MN 55402
E-mail Address:	[REDACTED]@cpkcr.com
Telephone Number:	[REDACTED]
Fax Number:	
Hazmat Registration Number:	060608550023QB
Date:	07/25/2024
Preparer is:	Carrier



19. Quantity Released: (Include Measurement Units) 140406.19 Gas - Gallon

20. Was the material shipped as a hazardous waste? False

If yes, provide the EPA Manifest Number:

21. Is this a Toxic by Inhalation (TIH) material? True

If yes, provide the Hazard Zone: D

22. Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? False

If yes, provide the Exemption, Approval, or CA number:

23. Was this an undeclared hazardous materials shipment? False

### PART III - PACKAGING INFORMATION

24. Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:

Tank Car

25. See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident.

Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in part VI.

What Failed: - 144-Pressure Relief Valve or Device - Reclosing

How Failed: - 313-Vented

Causes of Failure: - Fire, Temperature, or Heat

26a. Provide the packaging identification markings, if available.

Identification Markings: 112J500I

(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Packaging Type:  
Material of Construction:  
Head Type (Drums only):

Packaging Type:  
Material of Construction:

27. Describe the package capacity and the quantity:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Package Capacity: 34230 Gas - Gallon  
Amount in Package: 30058 Gas - Gallon  
Number in Shipment: 1  
Number Failed: 1

Package Capacity:  
Amount in Package:  
Number in Shipment:  
Number Failed:

28. Provide packaging construction and test information, as appropriate:

Manufacturer:  
Serial Number: TILX 501231  
Material of Construction: (if Tank Car, CTMV, Portable Tank, or Cylinder)  
Design Pressure: (if Tank Car, CTMV, Portable Tank)  
Shell Thickness: 0.89 INCH (if Tank Car, CTMV, Portable Tank)  
Head Thickness: 1.03 INCH (if Tank Car, CTMV)  
Service Pressure: (if Cylinder)

Manufacture Date:  
Last Test Date:

If valve or device failed:  
Type: NA  
Model: NA  
Manufacturer: NA

29. If the packaging is for Radioactive Materials, complete the following:

Packaging Category:  
Packaging Certification:  
Certification Number:  
Nuclide(s) Present: Transport Index:  
Activity:  
Critical Safety Index:

**PART IV – CONSEQUENCES**

**30. Result of Incident (check all that apply):**

- Spillage: True
- Explosion: False
- Vapor (Gas) Dispersion: True
- No Release: False
- Fire: True
- Material Entered Waterway/Storm Sewer: True
- Environmental Damage: True

**31. Emergency Response: The following entities responded to the incident: (Check all that apply)**

- Fire/EMS Report #: True NA
- Police Report #: True NA
- In-house cleanup: True
- Other Cleanup:

**32. Damages Was the total damage cost more than \$500? True**

- If yes, enter the following information: (If no, go to question 33.)
- Material Loss: \$ 1,700,000.00
  - Carrier Damage: \$ 0.00
  - Property Damage: \$ 421,400.00
  - Response Cost: \$ 11,916,459.00
  - Remediation/Cleanup Cost: \$ 5,750,000.00
- (See damage definitions in the instructions)*

**33a. Did the hazardous material cause or contribute to a human fatality? False**

- If yes, enter the number of fatalities resulting from the hazardous material:
- Employees:
  - Responders:
  - General Public:

**33b. Were there human fatalities that did not result from the hazardous material? False**

If yes, how many?

**34. Did the hazardous material cause or contribute to personal injury? False**

If yes, enter the number of injuries resulting from the hazardous material:

**Hospitalized (Admitted Only):**

- Employees:
- Responders:
- General Public:

**Non-Hospitalized:**

*(e.g.: On site first aid or Emergency Room observation and release)*

- Employees:
- Responders:
- General Public:

**35. Did the hazardous material cause or contribute to an evacuation? False**

If yes, provide the following information:

- Total number of general public evacuated:
- Total number of employees evacuated:
- Total evacuated: 0
- Duration of the evacuation:

**36. Was a major transportation artery or facility closed? True**

If yes, how many? 79.75

**37. Was the material involved in a crash or derailment? True**

If yes, provide the following information:

- Estimated speed (mph): 42
- Weather conditions: mostly cloudy
- Vehicle overturned? True
- Vehicle left roadway/track? True

**PART V - AIR INCIDENT INFORMATION (please refer to S 175.31 to report a discrepancy for air shipments)**

**38. Was the shipment on a passenger aircraft?**

If yes, was it tendered as cargo, or as passenger baggage?

**39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?**

**40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)**

- Shipment had not been transported
- Transported by air (first flight)
- Transport by air (subsequent flights)
- Initial transport by highway to cargo facility
- Transfer at sort center/cargo facility

## **PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE**

- Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

**Describe:**

On 7/5/2024 at 3:42 AM Central Time, Canadian Pacific Kansas City Railroad (CPKC) train 242-03 derailed 29 rail cars at milepost 342.86 on the Carrington Sub near the town of Bordulac, North Dakota. Derailed cars included six loaded tank cars transporting UN1230, Methanol, 3, PG II, RQ (Methanol), eleven loaded tank cars transporting UN1005, Ammonia, Anhydrous, 2.3(8), Toxic Inhalation Hazard, Zone D, Marine Pollutant (Ammonia, Anhydrous), RQ (Ammonia), and twelve loaded hopper cars transporting non-hazmat Polyethylene pellets. CPKC mobilized internal and railroad qualified external resources to investigate the damage and mitigate released lading. Fire was reported immediately after the derailment, with multiple cars on fire. Many of the derailed tank cars experienced heat impingement. Because of this, pressure built within tank cars caused pressure relief devices to release product into the atmosphere. Additionally, releases occurred from holes and punctures in tank shells, and from damage incurred to manways, valves, pressure regulating devices, and other tank car appurtenances. The NTSB is investigating this incident and has requested that CPKC refrain from modifying any tank cars until it has completed its work. Because of this, CPKC has not been able to fully assess damage which might have occurred under tank jackets. The following information is the best information available at this time.

The cars detailed below released the listed amounts in gallons from the following locations:

- 1) PROX 45220, loaded Methanol, Release=0.00 - minor damage to tank car did not result in a release.
- 2) CTCX 300362, loaded Methanol, Release=13,558.25 - heat impingement affected integrity of manway gasket (121-Gasket 308-Leaked 512-Fire, Temperature, or Heat) & pressure Relief Device (PRD) activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat).
- 3) TILX 355610, loaded Methanol, Release=26,035.55 - tank shell was punctured on the right side between the housing and the B-End, and on the left side of the tank car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), liquid line valve separated from the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), PRD sheared off at the pressure plate (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment), & 4/6 manway securement bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 4) MFCX 132265, loaded Methanol, Release=26,526.48 - tank shell was punctured on the B-End & A-End (150-Tank Shell 309-Punctured 509-Derailment), the liquid valve sheared off at the flange (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), & the vapor valve & PRD sheared off at pressure plate (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment) (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment)
- 5) CTCX 300358, loaded Methanol, Release=27,849.02 - tank shell breached on bottom left between the housing and the A-End (150-Tank Shell 303 Burst or Ruptured 509-Derailment) & was punctured on the bottom right side of the car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), & the bottom outlet valve was sheared at the flange. (106 Bottom Outlet Valve 312 Torn Off or Damaged 509-Derailment)
- 6) CTCX 732476, loaded Methanol, Release=27,743.57 - tank shell was compressed to the point of failure between the manway and the B-End of the car. (150-Tank Shell 305 Crushed 509-Derailment) and breached between the manway and the B-End of the car (150-Tank Shell 303 Burst or Ruptured 509-Derailment), the tank shell was also punctured on A-End, right side, near the end tank weld (150-Tank Shell 309-Punctured 509-Derailment), the vapor and liquid valves sheared off at pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment), & 2/6 manway Bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 7) UTLX 971162, loaded Ammonia, Release=1861.12 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 8) TILX 500864, loaded Ammonia, Release=1025.34 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 9) TILX 500752, loaded Ammonia, Release=731.53 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 10) TILX 500890, loaded Ammonia, Release=692.84 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 11) SHQX 10732, loaded Ammonia, Release=6472.15 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 12) TILX 500730, loaded Ammonia, Release=30213.15 - B-End liquid line valve sheared off at the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) & 9/20 pressure plate bolts sheared off (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 13) TILX 501050, loaded Ammonia, Release=30232.30 - unknown release point under jacket (150-Tank Shell 310 Ripped or Torn 509-Derailment) & PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 14) UTLX 971273, loaded Ammonia, Release=29246.03 - tank shell was punctured during wrecking, not during initial accident (150-Tank Shell 309-Punctured 509-Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared
- 15) TILX 501231, loaded Ammonia, Release=1857.25 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 16) SHQX 10754, loaded Ammonia, Release=7783.75 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 17) SHQX 10805, loaded Ammonia, Release=30290.72 - tank shell tear on tank bulge on the top left side of the car near the A-End (150 Tank Shell 310 Ripped or Torn 509 Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared

File Note: Item 19-the quantity released was estimated based on the best information available at the time of filing. The shipments were offered as a 'bulk' shipment, aka one car load, therefore the exact amount offered in these packages is not known to the carrier. This carrier does not have access to mass balance data which can exactly quantify this value.

## PART VII - RECOMMENDATIONS/ACTIONS TAKEN TO PREVENT RECURRENCE

- Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

### Describe:

This incident is currently under investigation - no root cause has been determined.

## PART VIII – CONTACT INFORMATION

Contact's Name:	Chad Cliburn
Contact's Title:	Consultant, EHS
Business Name and Address:	SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad) 120 S 6TH ST STE 900 MINNEAPOLIS MN 55402
E-mail Address:	[REDACTED]cpkcr.com
Telephone Number:	[REDACTED]
Fax Number:	
Hazmat Registration Number:	060608550023QB
Date:	07/25/2024
Preparer is:	Carrier



U.S Department of Transportation  
Research and Special Programs Administration

# Hazardous Materials Incident Report

Form Approval OMB No. 3137-0039

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 2137-0039. The filling out of this information is mandatory and will take 96 minutes to complete.

## INSTRUCTIONS

Submit this report to the Information Systems Manager, U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Office of Hazardous Materials Safety, DHM-63, Washington, D.C. 20590-0001. If space provided for any item is inadequate, use a separate sheet of paper, identifying the entry number being completed. Copies of this form and instructions can be obtained from the Office of Hazardous Materials Website at <http://hazmat.dot.gov>. If you have any questions, you can contact the Hazardous Materials Information Center at 1-800-HMR-4922 (1-800-467-4922) or online at <http://hazmat.dot.gov>.

## PART I - REPORT TYPE

1. **Incident Id:** E-2024070638  
2. **This is to report:** A

## PART II - GENERAL INCIDENT INFORMATION

3. **Date of Incident:** 07/05/2024  
4. **Time of Incident (use 24-hour time):** 03:42

5. **Enter National Response Center Report Number (if applicable):** 1403817  
6. **If you submitted a report to another Federal DOT agency, enter the agency and report number:**

7. **Location of Incident:**  
City: BORDULAC  
County: FOSTER  
State: ND  
Zip Code: (if known): 58421  
Street Address/Mile Marker/Yard Name/Airport/Body of Water/River Mile:  
MP 342.86 Carrington Sub

8. **Mode of Transportation:** Rail  
9. **Transportation Phase:** In Transit

10. **Carrier/Reporter:**  
Name: SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad)  
Street: 120 S 6TH ST STE 900  
City: MINNEAPOLIS  
State: MN  
Zip Code: 55402  
Federal DOT Id Number: 108106  
Hazmat Registration Number: 060608550023QB

11. **Shipper/Offeror:**  
Name: CANADIAN FERTILIZERS LTD  
Street: 1250 52ND ST NW  
City: MEDICINE HAT  
State: ZZ  
Zip Code: T1A7R9  
Waybill/Shipping Paper: multiple  
Hazmat Registration Number:

12. **Origin (if different from shipper address)**  
Street:  
City:  
State:  
Zip Code:

13. **Destination:**  
Street: 4 PKWY N STE 400  
City: DEERFIELD  
State: IL  
Zip Code: 60015

14. **Proper Shipping Name of Hazardous Material:** AMMONIA ANHYDROUS  
15. **Technical/Trade Name:** Ammonia  
16. **Hazardous Class/Division:** Poisonous Gas  
17. **Identification Number:** (E.g. UN2764, NA 2020) UN1005  
18. **Packing Group:** (if applicable)

19. Quantity Released: (Include Measurement Units) 140406.19 Gas - Gallon

20. Was the material shipped as a hazardous waste? False

If yes, provide the EPA Manifest Number:

21. Is this a Toxic by Inhalation (TIH) material? True

If yes, provide the Hazard Zone: D

22. Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? False

If yes, provide the Exemption, Approval, or CA number:

23. Was this an undeclared hazardous materials shipment? False

### PART III - PACKAGING INFORMATION

24. Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:

Tank Car

25. See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident.

Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in part VI.

What Failed: - 144-Pressure Relief Valve or Device - Reclosing

How Failed: - 313-Vented

Causes of Failure: - Fire, Temperature, or Heat

26a. Provide the packaging identification markings, if available.

Identification Markings: 112J500I

(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Packaging Type:  
Material of Construction:  
Head Type (Drums only):

Packaging Type:  
Material of Construction:

27. Describe the package capacity and the quantity:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Package Capacity: 34180 Gas - Gallon  
Amount in Package: 30174 Gas - Gallon  
Number in Shipment: 1  
Number Failed: 1

Package Capacity:  
Amount in Package:  
Number in Shipment:  
Number Failed:

28. Provide packaging construction and test information, as appropriate:

Manufacturer:  
Serial Number: TILX 500864  
Material of Construction: (if Tank Car, CTMV, Portable Tank, or Cylinder)  
Design Pressure: (if Tank Car, CTMV, Portable Tank)  
Shell Thickness: 0.89 INCH (if Tank Car, CTMV, Portable Tank)  
Head Thickness: 1.03 INCH (if Tank Car, CTMV)  
Service Pressure: (if Cylinder)

Manufacture Date:  
Last Test Date:

If valve or device failed:  
Type: NA  
Model: NA  
Manufacturer: NA

29. If the packaging is for Radioactive Materials, complete the following:

Packaging Category:  
Packaging Certification:  
Certification Number:  
Nuclide(s) Present: Transport Index:  
Activity:  
Critical Safety Index:

**PART IV – CONSEQUENCES**

**30. Result of Incident (check all that apply):**

- |                           |       |  |      |
|---------------------------|-------|--|------|
| - Spillage:               | True  | - Fire:                                  | True |
| - Explosion:              | False | - Material Entered Waterway/Storm Sewer: | True |
| - Vapor (Gas) Dispersion: | True  | - Environmental Damage:                  | True |
| - No Release:             | False |  |      |

**31. Emergency Response: The following entities responded to the incident: (Check all that apply)**

- Fire/EMS Report #: True NA  
Police Report #: True NA  
In-house cleanup: True  
Other Cleanup:

**32. Damages Was the total damage cost more than \$500? True**

- If yes, enter the following information: (If no, go to question 33.)
- |                           |                  |
|---------------------------|------------------|
| Material Loss:            | \$ 1,700,000.00  |
| Carrier Damage:           | \$ 0.00          |
| Property Damage:          | \$ 421,400.00    |
| Response Cost:            | \$ 11,916,459.00 |
| Remediation/Cleanup Cost: | \$ 5,750,000.00  |
- (See damage definitions in the instructions)*

**33a. Did the hazardous material cause or contribute to a human fatality? False**

- If yes, enter the number of fatalities resulting from the hazardous material:
- Employees:  
Responders:  
General Public:

**33b. Were there human fatalities that did not result from the hazardous material? False**

If yes, how many?

**34. Did the hazardous material cause or contribute to personal injury? False**

If yes, enter the number of injuries resulting from the hazardous material:

**Hospitalized (Admitted Only):**

- Employees:  
Responders:  
General Public:

**Non-Hospitalized:**

*(e.g.: On site first aid or Emergency Room observation and release)*

- Employees:  
Responders:  
General Public:

**35. Did the hazardous material cause or contribute to an evacuation? False**

If yes, provide the following information:

- Total number of general public evacuated:  
Total number of employees evacuated:  
Total evacuated: 0  
Duration of the evacuation:

**36. Was a major transportation artery or facility closed? True**

If yes, how many? 79.75

**37. Was the material involved in a crash or derailment? True**

If yes, provide the following information:

- Estimated speed (mph): 42  
Weather conditions: mostly cloudy  
Vehicle overturned? True  
Vehicle left roadway/track? True

**PART V - AIR INCIDENT INFORMATION (please refer to S 175.31 to report a discrepancy for air shipments)**

**38. Was the shipment on a passenger aircraft?**

If yes, was it tendered as cargo, or as passenger baggage?

**39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?**

**40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)**

- |  |  |
|--|--|
| - Shipment had not been transported      | - Transported by air (first flight)              |
| - Transport by air (subsequent flights)  | - Initial transport by highway to cargo facility |
| - Transfer at sort center/cargo facility |  |

## **PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE**

- Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

**Describe:**

On 7/5/2024 at 3:42 AM Central Time, Canadian Pacific Kansas City Railroad (CPKC) train 242-03 derailed 29 rail cars at milepost 342.86 on the Carrington Sub near the town of Bordulac, North Dakota. Derailed cars included six loaded tank cars transporting UN1230, Methanol, 3, PG II, RQ (Methanol), eleven loaded tank cars transporting UN1005, Ammonia, Anhydrous, 2.3(8), Toxic Inhalation Hazard, Zone D, Marine Pollutant (Ammonia, Anhydrous), RQ (Ammonia), and twelve loaded hopper cars transporting non-hazmat Polyethylene pellets. CPKC mobilized internal and railroad qualified external resources to investigate the damage and mitigate released lading. Fire was reported immediately after the derailment, with multiple cars on fire. Many of the derailed tank cars experienced heat impingement. Because of this, pressure built within tank cars caused pressure relief devices to release product into the atmosphere. Additionally, releases occurred from holes and punctures in tank shells, and from damage incurred to manways, valves, pressure regulating devices, and other tank car appurtenances. The NTSB is investigating this incident and has requested that CPKC refrain from modifying any tank cars until it has completed its work. Because of this, CPKC has not been able to fully assess damage which might have occurred under tank jackets. The following information is the best information available at this time.

The cars detailed below released the listed amounts in gallons from the following locations:

- 1) PROX 45220, loaded Methanol, Release=0.00 - minor damage to tank car did not result in a release.
- 2) CTCX 300362, loaded Methanol, Release=13,558.25 - heat impingement affected integrity of manway gasket (121-Gasket 308-Leaked 512-Fire, Temperature, or Heat) & pressure Relief Device (PRD) activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat).
- 3) TILX 355610, loaded Methanol, Release=26,035.55 - tank shell was punctured on the right side between the housing and the B-End, and on the left side of the tank car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), liquid line valve separated from the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), PRD sheared off at the pressure plate (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment), & 4/6 manway securement bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 4) MFCX 132265, loaded Methanol, Release=26,526.48 - tank shell was punctured on the B-End & A-End (150-Tank Shell 309-Punctured 509-Derailment), the liquid valve sheared off at the flange (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), & the vapor valve & PRD sheared off at pressure plate (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment) (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment)
- 5) CTCX 300358, loaded Methanol, Release=27,849.02 - tank shell breached on bottom left between the housing and the A-End (150-Tank Shell 303 Burst or Ruptured 509-Derailment) & was punctured on the bottom right side of the car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), & the bottom outlet valve was sheared at the flange. (106 Bottom Outlet Valve 312 Torn Off or Damaged 509-Derailment)
- 6) CTCX 732476, loaded Methanol, Release=27,743.57 - tank shell was compressed to the point of failure between the manway and the B-End of the car. (150-Tank Shell 305 Crushed 509-Derailment) and breached between the manway and the B-End of the car (150-Tank Shell 303 Burst or Ruptured 509-Derailment), the tank shell was also punctured on A-End, right side, near the end tank weld (150-Tank Shell 309-Punctured 509-Derailment), the vapor and liquid valves sheared off at pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment), & 2/6 manway Bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 7) UTLX 971162, loaded Ammonia, Release=1861.12 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 8) TILX 500864, loaded Ammonia, Release=1025.34 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 9) TILX 500752, loaded Ammonia, Release=731.53 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 10) TILX 500890, loaded Ammonia, Release=692.84 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 11) SHQX 10732, loaded Ammonia, Release=6472.15 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 12) TILX 500730, loaded Ammonia, Release=30213.15 - B-End liquid line valve sheared off at the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) & 9/20 pressure plate bolts sheared off (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 13) TILX 501050, loaded Ammonia, Release=30232.30 - unknown release point under jacket (150-Tank Shell 310 Ripped or Torn 509-Derailment) & PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 14) UTLX 971273, loaded Ammonia, Release=29246.03 - tank shell was punctured during wrecking, not during initial accident (150-Tank Shell 309-Punctured 509-Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared
- 15) TILX 501231, loaded Ammonia, Release=1857.25 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 16) SHQX 10754, loaded Ammonia, Release=7783.75 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 17) SHQX 10805, loaded Ammonia, Release=30290.72 - tank shell tear on tank bulge on the top left side of the car near the A-End (150 Tank Shell 310 Ripped or Torn 509 Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared

File Note: Item 19-the quantity released was estimated based on the best information available at the time of filing. The shipments were offered as a 'bulk' shipment, aka one car load, therefore the exact amount offered in these packages is not known to the carrier. This carrier does not have access to mass balance data which can exactly quantify this value.

## PART VII - RECOMMENDATIONS/ACTIONS TAKEN TO PREVENT RECURRENCE

- Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

### Describe:

This incident is currently under investigation - no root cause has been determined.

## PART VIII – CONTACT INFORMATION

Contact's Name:	Chad Cliburn
Contact's Title:	Consultant, EHS
Business Name and Address:	SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad) 120 S 6TH ST STE 900 MINNEAPOLIS MN 55402
E-mail Address:	[REDACTED]@cpkcr.com
Telephone Number:	[REDACTED]
Fax Number:	
Hazmat Registration Number:	060608550023QB
Date:	07/25/2024
Preparer is:	Carrier



U.S Department of Transportation  
Research and Special Programs Administration

# Hazardous Materials Incident Report

Form Approval OMB No. 3137-0039

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 2137-0039. The filling out of this information is mandatory and will take 96 minutes to complete.

## INSTRUCTIONS

Submit this report to the Information Systems Manager, U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Office of Hazardous Materials Safety, DHM-63, Washington, D.C. 20590-0001. If space provided for any item is inadequate, use a separate sheet of paper, identifying the entry number being completed. Copies of this form and instructions can be obtained from the Office of Hazardous Materials Website at <http://hazmat.dot.gov>. If you have any questions, you can contact the Hazardous Materials Information Center at 1-800-HMR-4922 (1-800-467-4922) or online at <http://hazmat.dot.gov>.

## PART I - REPORT TYPE

1. **Incident Id:** E-2024070638  
2. **This is to report:** A

## PART II - GENERAL INCIDENT INFORMATION

<p>3. <b>Date of Incident:</b> 07/05/2024</p> <p>5. <b>Enter National Response Center Report Number (if applicable):</b> 1403817</p> <p>7. <b>Location of Incident:</b>                                            City: BORDULAC                                            County: FOSTER                                            State: ND                                            Zip Code: (if known): 58421          Street Address/Mile Marker/Yard Name/Airport/Body of Water/River Mile:          MP 342.86 Carrington Sub</p> <p>8. <b>Mode of Transportation:</b> Rail</p> <p>9. <b>Transportation Phase:</b> In Transit</p> <p>10. <b>Carrier/Reporter:</b>                                            Name: SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad)                                            Street: 120 S 6TH ST STE 900                                            City: MINNEAPOLIS                                            State: MN                                            Zip Code: 55402          Federal DOT Id Number: 108106</p> <p>11. <b>Shipper/Offeror:</b>                                            Name: CANADIAN FERTILIZERS LTD                                            Street: 1250 52ND ST NW                                            City: MEDICINE HAT                                            State: ZZ                                            Zip Code: T1A7R9          Waybill/Shipping Paper: multiple</p> <p>12. <b>Origin (if different from shipper address)</b>                                            Street:                                            City:                                            State:                                            Zip Code:</p> <p>13. <b>Destination:</b>                                            Street: 4 PKWY N STE 400                                            City: DEERFIELD                                            State: IL                                            Zip Code: 60015</p> <p>14. <b>Proper Shipping Name of Hazardous Material:</b> AMMONIA ANHYDROUS</p> <p>15. <b>Technical/Trade Name:</b> Ammonia</p> <p>16. <b>Hazardous Class/Division:</b> Poisonous Gas</p> <p>17. <b>Identification Number:</b> (E.g. UN2764, NA 2020) UN1005</p> <p>18. <b>Packing Group:</b> (if applicable)</p>	<p>4. <b>Time of Incident (use 24-hour time):</b> 03:42</p> <p>6. <b>If you submitted a report to another Federal DOT agency, enter the agency and report number:</b></p> <p>Hazmat Registration Number: 060608550023QB</p> <p>Hazmat Registration Number:</p>
---	--

19. Quantity Released: (Include Measurement Units) 140406.19 Gas - Gallon

20. Was the material shipped as a hazardous waste? False

If yes, provide the EPA Manifest Number:

21. Is this a Toxic by Inhalation (TIH) material? True

If yes, provide the Hazard Zone: D

22. Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? False

If yes, provide the Exemption, Approval, or CA number:

23. Was this an undeclared hazardous materials shipment? False

**PART III - PACKAGING INFORMATION**

24. Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:

Tank Car

25. See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident.

Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in part VI.

What Failed: - 144-Pressure Relief Valve or Device - Reclosing

How Failed: - 313-Vented

Causes of Failure: - Fire, Temperature, or Heat

26a. Provide the packaging identification markings, if available.

Identification Markings: 112J500I

(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Packaging Type:  
Material of Construction:  
Head Type (Drums only):

Packaging Type:  
Material of Construction:

27. Describe the package capacity and the quantity:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Package Capacity: 34230 Gas - Gallon  
Amount in Package: 30039 Gas - Gallon  
Number in Shipment: 1  
Number Failed: 1

Package Capacity:  
Amount in Package:  
Number in Shipment:  
Number Failed:

28. Provide packaging construction and test information, as appropriate:

Manufacturer:  
Serial Number: TILX 500752  
Material of Construction: (if Tank Car, CTMV, Portable Tank, or Cylinder)  
Design Pressure: (if Tank Car, CTMV, Portable Tank)  
Shell Thickness: 0.89 INCH (if Tank Car, CTMV, Portable Tank)  
Head Thickness: 1.03 INCH (if Tank Car, CTMV)  
Service Pressure: (if Cylinder)

Manufacture Date:  
Last Test Date:

If valve or device failed:  
Type: NA  
Model: NA  
Manufacturer: NA

29. If the packaging is for Radioactive Materials, complete the following:

Packaging Category:  
Packaging Certification:  
Certification Number:  
Nuclide(s) Present: Transport Index:  
Activity:  
Critical Safety Index:

**PART IV – CONSEQUENCES**

**30. Result of Incident (check all that apply):**

- |                           |       |  |      |
|---------------------------|-------|--|------|
| - Spillage:               | True  | - Fire:                                  | True |
| - Explosion:              | False | - Material Entered Waterway/Storm Sewer: | True |
| - Vapor (Gas) Dispersion: | True  | - Environmental Damage:                  | True |
| - No Release:             | False |  |      |

**31. Emergency Response: The following entities responded to the incident: (Check all that apply)**

- Fire/EMS Report #: True NA  
Police Report #: True NA  
In-house cleanup: True  
Other Cleanup:

**32. Damages Was the total damage cost more than \$500? True**

- If yes, enter the following information: (If no, go to question 33.)
- |                           |                  |
|---------------------------|------------------|
| Material Loss:            | \$ 1,700,000.00  |
| Carrier Damage:           | \$ 0.00          |
| Property Damage:          | \$ 421,400.00    |
| Response Cost:            | \$ 11,916,459.00 |
| Remediation/Cleanup Cost: | \$ 5,750,000.00  |
- (See damage definitions in the instructions)

**33a. Did the hazardous material cause or contribute to a human fatality? False**

- If yes, enter the number of fatalities resulting from the hazardous material:
- Employees:  
Responders:  
General Public:

**33b. Were there human fatalities that did not result from the hazardous material? False**

If yes, how many?

**34. Did the hazardous material cause or contribute to personal injury? False**

If yes, enter the number of injuries resulting from the hazardous material:

**Hospitalized (Admitted Only):**

- Employees:  
Responders:  
General Public:

**Non-Hospitalized:**

(e.g.: On site first aid or Emergency Room observation and release)

- Employees:  
Responders:  
General Public:

**35. Did the hazardous material cause or contribute to an evacuation? False**

If yes, provide the following information:

- Total number of general public evacuated:  
Total number of employees evacuated:  
Total evacuated: 0  
Duration of the evacuation:

**36. Was a major transportation artery or facility closed? True**

If yes, how many? 79.75

**37. Was the material involved in a crash or derailment? True**

If yes, provide the following information:

- Estimated speed (mph): 42  
Weather conditions: mostly cloudy  
Vehicle overturned? True  
Vehicle left roadway/track? True

**PART V - AIR INCIDENT INFORMATION (please refer to S 175.31 to report a discrepancy for air shipments)**

**38. Was the shipment on a passenger aircraft?**

If yes, was it tendered as cargo, or as passenger baggage?

**39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?**

**40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)**

- |  |  |
|--|--|
| - Shipment had not been transported      | - Transported by air (first flight)              |
| - Transport by air (subsequent flights)  | - Initial transport by highway to cargo facility |
| - Transfer at sort center/cargo facility |  |

## **PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE**

- Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

**Describe:**

On 7/5/2024 at 3:42 AM Central Time, Canadian Pacific Kansas City Railroad (CPKC) train 242-03 derailed 29 rail cars at milepost 342.86 on the Carrington Sub near the town of Bordulac, North Dakota. Derailed cars included six loaded tank cars transporting UN1230, Methanol, 3, PG II, RQ (Methanol), eleven loaded tank cars transporting UN1005, Ammonia, Anhydrous, 2.3(8), Toxic Inhalation Hazard, Zone D, Marine Pollutant (Ammonia, Anhydrous), RQ (Ammonia), and twelve loaded hopper cars transporting non-hazmat Polyethylene pellets. CPKC mobilized internal and railroad qualified external resources to investigate the damage and mitigate released lading. Fire was reported immediately after the derailment, with multiple cars on fire. Many of the derailed tank cars experienced heat impingement. Because of this, pressure built within tank cars caused pressure relief devices to release product into the atmosphere. Additionally, releases occurred from holes and punctures in tank shells, and from damage incurred to manways, valves, pressure regulating devices, and other tank car appurtenances. The NTSB is investigating this incident and has requested that CPKC refrain from modifying any tank cars until it has completed its work. Because of this, CPKC has not been able to fully assess damage which might have occurred under tank jackets. The following information is the best information available at this time.

The cars detailed below released the listed amounts in gallons from the following locations:

- 1) PROX 45220, loaded Methanol, Release=0.00 - minor damage to tank car did not result in a release.
- 2) CTCX 300362, loaded Methanol, Release=13,558.25 - heat impingement affected integrity of manway gasket (121-Gasket 308-Leaked 512-Fire, Temperature, or Heat) & pressure Relief Device (PRD) activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat).
- 3) TILX 355610, loaded Methanol, Release=26,035.55 - tank shell was punctured on the right side between the housing and the B-End, and on the left side of the tank car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), liquid line valve separated from the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), PRD sheared off at the pressure plate (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment), & 4/6 manway securement bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 4) MFCX 132265, loaded Methanol, Release=26,526.48 - tank shell was punctured on the B-End & A-End (150-Tank Shell 309-Punctured 509-Derailment), the liquid valve sheared off at the flange (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), & the vapor valve & PRD sheared off at pressure plate (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment) (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment)
- 5) CTCX 300358, loaded Methanol, Release=27,849.02 - tank shell breached on bottom left between the housing and the A-End (150-Tank Shell 303 Burst or Ruptured 509-Derailment) & was punctured on the bottom right side of the car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), & the bottom outlet valve was sheared at the flange. (106 Bottom Outlet Valve 312 Torn Off or Damaged 509-Derailment)
- 6) CTCX 732476, loaded Methanol, Release=27,743.57 - tank shell was compressed to the point of failure between the manway and the B-End of the car. (150-Tank Shell 305 Crushed 509-Derailment) and breached between the manway and the B-End of the car (150-Tank Shell 303 Burst or Ruptured 509-Derailment), the tank shell was also punctured on A-End, right side, near the end tank weld (150-Tank Shell 309-Punctured 509-Derailment), the vapor and liquid valves sheared off at pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment), & 2/6 manway Bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 7) UTLX 971162, loaded Ammonia, Release=1861.12 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 8) TILX 500864, loaded Ammonia, Release=1025.34 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 9) TILX 500752, loaded Ammonia, Release=731.53 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 10) TILX 500890, loaded Ammonia, Release=692.84 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 11) SHQX 10732, loaded Ammonia, Release=6472.15 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 12) TILX 500730, loaded Ammonia, Release=30213.15 - B-End liquid line valve sheared off at the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) & 9/20 pressure plate bolts sheared off (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 13) TILX 501050, loaded Ammonia, Release=30232.30 - unknown release point under jacket (150-Tank Shell 310 Ripped or Torn 509-Derailment) & PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 14) UTLX 971273, loaded Ammonia, Release=29246.03 - tank shell was punctured during wrecking, not during initial accident (150-Tank Shell 309-Punctured 509-Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared
- 15) TILX 501231, loaded Ammonia, Release=1857.25 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 16) SHQX 10754, loaded Ammonia, Release=7783.75 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 17) SHQX 10805, loaded Ammonia, Release=30290.72 - tank shell tear on tank bulge on the top left side of the car near the A-End (150 Tank Shell 310 Ripped or Torn 509 Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared

File Note: Item 19-the quantity released was estimated based on the best information available at the time of filing. The shipments were offered as a 'bulk' shipment, aka one car load, therefore the exact amount offered in these packages is not known to the carrier. This carrier does not have access to mass balance data which can exactly quantify this value.

## PART VII - RECOMMENDATIONS/ACTIONS TAKEN TO PREVENT RECURRENCE

- Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

### Describe:

This incident is currently under investigation - no root cause has been determined.

## PART VIII – CONTACT INFORMATION

Contact's Name:	Chad Cliburn
Contact's Title:	Consultant, EHS
Business Name and Address:	SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad) 120 S 6TH ST STE 900 MINNEAPOLIS MN 55402
E-mail Address:	[REDACTED]@cpkcr.com
Telephone Number:	[REDACTED]
Fax Number:	
Hazmat Registration Number:	060608550023QB
Date:	07/25/2024
Preparer is:	Carrier



U.S Department of Transportation  
Research and Special Programs Administration

# Hazardous Materials Incident Report

Form Approval OMB No. 3137-0039

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 2137-0039. The filling out of this information is mandatory and will take 96 minutes to complete.

## INSTRUCTIONS

Submit this report to the Information Systems Manager, U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Office of Hazardous Materials Safety, DHM-63, Washington, D.C. 20590-0001. If space provided for any item is inadequate, use a separate sheet of paper, identifying the entry number being completed. Copies of this form and instructions can be obtained from the Office of Hazardous Materials Website at <http://hazmat.dot.gov>. If you have any questions, you can contact the Hazardous Materials Information Center at 1-800-HMR-4922 (1-800-467-4922) or online at <http://hazmat.dot.gov>.

## PART I - REPORT TYPE

1. Incident Id: E-2024070638  
2. This is to report: A

## PART II - GENERAL INCIDENT INFORMATION

3. Date of Incident: 07/05/2024  
4. Time of Incident (use 24-hour time): 03:42

5. Enter National Response Center Report Number (if applicable): 1403817  
6. If you submitted a report to another Federal DOT agency, enter the agency and report number:

7. Location of Incident:  
City: BORDULAC  
County: FOSTER  
State: ND  
Zip Code: (if known): 58421  
Street Address/Mile Marker/Yard Name/Airport/Body of Water/River Mile:  
MP 342.86 Carrington Sub

8. Mode of Transportation: Rail  
9. Transportation Phase: In Transit

10. Carrier/Reporter:  
Name: SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad)  
Street: 120 S 6TH ST STE 900  
City: MINNEAPOLIS  
State: MN  
Zip Code: 55402  
Federal DOT Id Number: 108106  
Hazmat Registration Number: 060608550023QB

11. Shipper/Offeror:  
Name: CANADIAN FERTILIZERS LTD  
Street: 1250 52ND ST NW  
City: MEDICINE HAT  
State: ZZ  
Zip Code: T1A7R9  
Waybill/Shipping Paper: multiple  
Hazmat Registration Number:

12. Origin (if different from shipper address)  
Street:  
City:  
State:  
Zip Code:

13. Destination:  
Street: 4 PKWY N STE 400  
City: DEERFIELD  
State: IL  
Zip Code: 60015

14. Proper Shipping Name of Hazardous Material: AMMONIA ANHYDROUS  
15. Technical/Trade Name: Ammonia  
16. Hazardous Class/Division: Poisonous Gas  
17. Identification Number: (E.g. UN2764, NA 2020) UN1005  
18. Packing Group: (if applicable)

19. Quantity Released: (Include Measurement Units) 140406.19 Gas - Gallon

20. Was the material shipped as a hazardous waste? False

If yes, provide the EPA Manifest Number:

21. Is this a Toxic by Inhalation (TIH) material? True

If yes, provide the Hazard Zone: D

22. Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? False

If yes, provide the Exemption, Approval, or CA number:

23. Was this an undeclared hazardous materials shipment? False

**PART III - PACKAGING INFORMATION**

24. Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:

Tank Car

25. See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident.

Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in part VI.

What Failed: - 144-Pressure Relief Valve or Device - Reclosing

How Failed: - 313-Vented

Causes of Failure: - Fire, Temperature, or Heat

26a. Provide the packaging identification markings, if available.

Identification Markings: 112J500I

(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Packaging Type:  
Material of Construction:  
Head Type (Drums only):

Packaging Type:  
Material of Construction:

27. Describe the package capacity and the quantity:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Package Capacity: 34250 Gas - Gallon  
Amount in Package: 30329 Gas - Gallon  
Number in Shipment: 1  
Number Failed: 1

Package Capacity:  
Amount in Package:  
Number in Shipment:  
Number Failed:

28. Provide packaging construction and test information, as appropriate:

Manufacturer:  
Serial Number: TILX 500890  
Material of Construction: (if Tank Car, CTMV, Portable Tank, or Cylinder)  
Design Pressure: (if Tank Car, CTMV, Portable Tank)  
Shell Thickness: 0.89 INCH (if Tank Car, CTMV, Portable Tank)  
Head Thickness: 1.03 INCH (if Tank Car, CTMV)  
Service Pressure: (if Cylinder)

Manufacture Date:  
Last Test Date:

If valve or device failed:  
Type: NA  
Model: NA  
Manufacturer: NA

29. If the packaging is for Radioactive Materials, complete the following:

Packaging Category:  
Packaging Certification:  
Certification Number:  
Nuclide(s) Present: Transport Index:  
Activity:  
Critical Safety Index:

**PART IV – CONSEQUENCES**

**30. Result of Incident (check all that apply):**

- Spillage: True
- Explosion: False
- Vapor (Gas) Dispersion: True
- No Release: False
- Fire: True
- Material Entered Waterway/Storm Sewer: True
- Environmental Damage: True

**31. Emergency Response: The following entities responded to the incident: (Check all that apply)**

- Fire/EMS Report #: True NA
- Police Report #: True NA
- In-house cleanup: True
- Other Cleanup:

**32. Damages Was the total damage cost more than \$500? True**

- If yes, enter the following information: (If no, go to question 33.)
- Material Loss: \$ 1,700,000.00
  - Carrier Damage: \$ 0.00
  - Property Damage: \$ 421,400.00
  - Response Cost: \$ 11,916,459.00
  - Remediation/Cleanup Cost: \$ 5,750,000.00
- (See damage definitions in the instructions)*

**33a. Did the hazardous material cause or contribute to a human fatality? False**

- If yes, enter the number of fatalities resulting from the hazardous material:
- Employees:
  - Responders:
  - General Public:

**33b. Were there human fatalities that did not result from the hazardous material? False**

If yes, how many?

**34. Did the hazardous material cause or contribute to personal injury? False**

If yes, enter the number of injuries resulting from the hazardous material:

**Hospitalized (Admitted Only):**

- Employees:
- Responders:
- General Public:

**Non-Hospitalized:**

*(e.g.: On site first aid or Emergency Room observation and release)*

- Employees:
- Responders:
- General Public:

**35. Did the hazardous material cause or contribute to an evacuation? False**

If yes, provide the following information:

- Total number of general public evacuated:
- Total number of employees evacuated:
- Total evacuated: 0
- Duration of the evacuation:

**36. Was a major transportation artery or facility closed? True**

If yes, how many? 79.75

**37. Was the material involved in a crash or derailment? True**

If yes, provide the following information:

- Estimated speed (mph): 42
- Weather conditions: mostly cloudy
- Vehicle overturned? True
- Vehicle left roadway/track? True

**PART V - AIR INCIDENT INFORMATION (please refer to S 175.31 to report a discrepancy for air shipments)**

**38. Was the shipment on a passenger aircraft?**

If yes, was it tendered as cargo, or as passenger baggage?

**39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?**

**40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)**

- Shipment had not been transported
- Transported by air (first flight)
- Transport by air (subsequent flights)
- Initial transport by highway to cargo facility
- Transfer at sort center/cargo facility

## **PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE**

- Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

**Describe:**

On 7/5/2024 at 3:42 AM Central Time, Canadian Pacific Kansas City Railroad (CPKC) train 242-03 derailed 29 rail cars at milepost 342.86 on the Carrington Sub near the town of Bordulac, North Dakota. Derailed cars included six loaded tank cars transporting UN1230, Methanol, 3, PG II, RQ (Methanol), eleven loaded tank cars transporting UN1005, Ammonia, Anhydrous, 2.3(8), Toxic Inhalation Hazard, Zone D, Marine Pollutant (Ammonia, Anhydrous), RQ (Ammonia), and twelve loaded hopper cars transporting non-hazmat Polyethylene pellets. CPKC mobilized internal and railroad qualified external resources to investigate the damage and mitigate released lading. Fire was reported immediately after the derailment, with multiple cars on fire. Many of the derailed tank cars experienced heat impingement. Because of this, pressure built within tank cars caused pressure relief devices to release product into the atmosphere. Additionally, releases occurred from holes and punctures in tank shells, and from damage incurred to manways, valves, pressure regulating devices, and other tank car appurtenances. The NTSB is investigating this incident and has requested that CPKC refrain from modifying any tank cars until it has completed its work. Because of this, CPKC has not been able to fully assess damage which might have occurred under tank jackets. The following information is the best information available at this time.

The cars detailed below released the listed amounts in gallons from the following locations:

- 1) PROX 45220, loaded Methanol, Release=0.00 - minor damage to tank car did not result in a release.
- 2) CTCX 300362, loaded Methanol, Release=13,558.25 - heat impingement affected integrity of manway gasket (121-Gasket 308-Leaked 512-Fire, Temperature, or Heat) & pressure Relief Device (PRD) activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat).
- 3) TILX 355610, loaded Methanol, Release=26,035.55 - tank shell was punctured on the right side between the housing and the B-End, and on the left side of the tank car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), liquid line valve separated from the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), PRD sheared off at the pressure plate (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment), & 4/6 manway securement bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 4) MFCX 132265, loaded Methanol, Release=26,526.48 - tank shell was punctured on the B-End & A-End (150-Tank Shell 309-Punctured 509-Derailment), the liquid valve sheared off at the flange (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), & the vapor valve & PRD sheared off at pressure plate (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment) (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment)
- 5) CTCX 300358, loaded Methanol, Release=27,849.02 - tank shell breached on bottom left between the housing and the A-End (150-Tank Shell 303 Burst or Ruptured 509-Derailment) & was punctured on the bottom right side of the car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), & the bottom outlet valve was sheared at the flange. (106 Bottom Outlet Valve 312 Torn Off or Damaged 509-Derailment)
- 6) CTCX 732476, loaded Methanol, Release=27,743.57 - tank shell was compressed to the point of failure between the manway and the B-End of the car. (150-Tank Shell 305 Crushed 509-Derailment) and breached between the manway and the B-End of the car (150-Tank Shell 303 Burst or Ruptured 509-Derailment), the tank shell was also punctured on A-End, right side, near the end tank weld (150-Tank Shell 309-Punctured 509-Derailment), the vapor and liquid valves sheared off at pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment), & 2/6 manway Bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 7) UTLX 971162, loaded Ammonia, Release=1861.12 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 8) TILX 500864, loaded Ammonia, Release=1025.34 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 9) TILX 500752, loaded Ammonia, Release=731.53 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 10) TILX 500890, loaded Ammonia, Release=692.84 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 11) SHQX 10732, loaded Ammonia, Release=6472.15 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 12) TILX 500730, loaded Ammonia, Release=30213.15 - B-End liquid line valve sheared off at the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) & 9/20 pressure plate bolts sheared off (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 13) TILX 501050, loaded Ammonia, Release=30232.30 - unknown release point under jacket (150-Tank Shell 310 Ripped or Torn 509-Derailment) & PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 14) UTLX 971273, loaded Ammonia, Release=29246.03 - tank shell was punctured during wrecking, not during initial accident (150-Tank Shell 309-Punctured 509-Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared
- 15) TILX 501231, loaded Ammonia, Release=1857.25 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 16) SHQX 10754, loaded Ammonia, Release=7783.75 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 17) SHQX 10805, loaded Ammonia, Release=30290.72 - tank shell tear on tank bulge on the top left side of the car near the A-End (150 Tank Shell 310 Ripped or Torn 509 Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared

File Note: Item 19-the quantity released was estimated based on the best information available at the time of filing. The shipments were offered as a 'bulk' shipment, aka one car load, therefore the exact amount offered in these packages is not known to the carrier. This carrier does not have access to mass balance data which can exactly quantify this value.

## PART VII - RECOMMENDATIONS/ACTIONS TAKEN TO PREVENT RECURRENCE

- Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

### Describe:

This incident is currently under investigation - no root cause has been determined.

## PART VIII – CONTACT INFORMATION

Contact's Name:	Chad Cliburn
Contact's Title:	Consultant, EHS
Business Name and Address:	SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad) 120 S 6TH ST STE 900 MINNEAPOLIS MN 55402
E-mail Address:	[REDACTED]@cpkcr.com
Telephone Number:	[REDACTED]
Fax Number:	
Hazmat Registration Number:	060608550023QB
Date:	07/25/2024
Preparer is:	Carrier



U.S Department of Transportation  
Research and Special Programs Administration

# Hazardous Materials Incident Report

Form Approval OMB No. 3137-0039

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 2137-0039. The filling out of this information is mandatory and will take 96 minutes to complete.

## INSTRUCTIONS

Submit this report to the Information Systems Manager, U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Office of Hazardous Materials Safety, DHM-63, Washington, D.C. 20590-0001. If space provided for any item is inadequate, use a separate sheet of paper, identifying the entry number being completed. Copies of this form and instructions can be obtained from the Office of Hazardous Materials Website at <http://hazmat.dot.gov>. If you have any questions, you can contact the Hazardous Materials Information Center at 1-800-HMR-4922 (1-800-467-4922) or online at <http://hazmat.dot.gov>.

## PART I - REPORT TYPE

1. **Incident Id:** E-2024070638  
2. **This is to report:** A

## PART II - GENERAL INCIDENT INFORMATION

<p>3. <b>Date of Incident:</b> 07/05/2024</p> <p>5. <b>Enter National Response Center Report Number (if applicable):</b> 1403817</p> <p>7. <b>Location of Incident:</b>                                            City: BORDULAC                                            County: FOSTER                                            State: ND                                            Zip Code: (if known): 58421          Street Address/Mile Marker/Yard Name/Airport/Body of Water/River Mile:          MP 342.86 Carrington Sub</p> <p>8. <b>Mode of Transportation:</b> Rail</p> <p>9. <b>Transportation Phase:</b> In Transit</p> <p>10. <b>Carrier/Reporter:</b>                                            Name: SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad)                                            Street: 120 S 6TH ST STE 900                                            City: MINNEAPOLIS                                            State: MN                                            Zip Code: 55402          Federal DOT Id Number: 108106</p> <p>11. <b>Shipper/Offeror:</b>                                            Name: CANADIAN FERTILIZERS LTD                                            Street: 1250 52ND ST NW                                            City: MEDICINE HAT                                            State: ZZ                                            Zip Code: T1A7R9          Waybill/Shipping Paper: multiple</p> <p>12. <b>Origin (if different from shipper address)</b>                                            Street:                                            City:                                            State:                                            Zip Code:</p> <p>13. <b>Destination:</b>                                            Street: 4 PKWY N STE 400                                            City: DEERFIELD                                            State: IL                                            Zip Code: 60015</p> <p>14. <b>Proper Shipping Name of Hazardous Material:</b> AMMONIA ANHYDROUS</p> <p>15. <b>Technical/Trade Name:</b> Ammonia</p> <p>16. <b>Hazardous Class/Division:</b> Poisonous Gas</p> <p>17. <b>Identification Number:</b> (E.g. UN2764, NA 2020) UN1005</p> <p>18. <b>Packing Group:</b> (if applicable)</p>	<p>4. <b>Time of Incident (use 24-hour time):</b> 03:42</p> <p>6. <b>If you submitted a report to another Federal DOT agency, enter the agency and report number:</b></p> <p>Hazmat Registration Number: 060608550023QB</p> <p>Hazmat Registration Number:</p>
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19. Quantity Released: (Include Measurement Units) 140406.19 Gas - Gallon

20. Was the material shipped as a hazardous waste? False

If yes, provide the EPA Manifest Number:

21. Is this a Toxic by Inhalation (TIH) material? True

If yes, provide the Hazard Zone: D

22. Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? False

If yes, provide the Exemption, Approval, or CA number:

23. Was this an undeclared hazardous materials shipment? False

**PART III - PACKAGING INFORMATION**

24. Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:

Tank Car

25. See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident.

Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in part VI.

What Failed: - 144-Pressure Relief Valve or Device - Reclosing; 150-Tank Shell

How Failed: - 310-Ripped or Torn; 313-Vented

Causes of Failure: - Derailment; Fire, Temperature, or Heat

26a. Provide the packaging identification markings, if available.

Identification Markings: 112J500I

(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Packaging Type:  
Material of Construction:  
Head Type (Drums only):

Packaging Type:  
Material of Construction:

27. Describe the package capacity and the quantity:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Package Capacity: 34260 Gas - Gallon  
Amount in Package: 30232 Gas - Gallon  
Number in Shipment: 1  
Number Failed: 1

Package Capacity:  
Amount in Package:  
Number in Shipment:  
Number Failed:

28. Provide packaging construction and test information, as appropriate:

Manufacturer:  
Serial Number: TILX 501050  
Material of Construction: (if Tank Car, CTMV, Portable Tank, or Cylinder)  
Design Pressure: (if Tank Car, CTMV, Portable Tank)  
Shell Thickness: 0.89 INCH (if Tank Car, CTMV, Portable Tank)  
Head Thickness: 1.03 INCH (if Tank Car, CTMV)  
Service Pressure: (if Cylinder)

Manufacture Date:  
Last Test Date:

If valve or device failed:  
Type: NA  
Model: NA  
Manufacturer: NA

29. If the packaging is for Radioactive Materials, complete the following:

Packaging Category:  
Packaging Certification:  
Certification Number:  
Nuclide(s) Present:  
Activity:  
Critical Safety Index:

Transport Index:

**PART IV – CONSEQUENCES**

**30. Result of Incident (check all that apply):**

- |                           |       |  |      |
|---------------------------|-------|--|------|
| - Spillage:               | True  | - Fire:                                  | True |
| - Explosion:              | False | - Material Entered Waterway/Storm Sewer: | True |
| - Vapor (Gas) Dispersion: | True  | - Environmental Damage:                  | True |
| - No Release:             | False |  |      |

**31. Emergency Response: The following entities responded to the incident: (Check all that apply)**

- Fire/EMS Report #: True NA  
Police Report #: True NA  
In-house cleanup: True  
Other Cleanup:

**32. Damages Was the total damage cost more than \$500? True**

- If yes, enter the following information: (If no, go to question 33.)  
Material Loss: \$ 1,700,000.00  
Carrier Damage: \$ 0.00  
Property Damage: \$ 421,400.00  
Response Cost: \$ 11,916,459.00  
Remediation/Cleanup Cost: \$ 5,750,000.00  
*(See damage definitions in the instructions)*

**33a. Did the hazardous material cause or contribute to a human fatality? False**

- If yes, enter the number of fatalities resulting from the hazardous material:  
Employees:  
Responders:  
General Public:

**33b. Were there human fatalities that did not result from the hazardous material? False**

If yes, how many?

**34. Did the hazardous material cause or contribute to personal injury? False**

If yes, enter the number of injuries resulting from the hazardous material:

**Hospitalized (Admitted Only):**

- Employees:  
Responders:  
General Public:

**Non-Hospitalized:**

(e.g.: On site first aid or Emergency Room observation and release)

- Employees:  
Responders:  
General Public:

**35. Did the hazardous material cause or contribute to an evacuation? False**

If yes, provide the following information:

- Total number of general public evacuated:  
Total number of employees evacuated:  
Total evacuated: 0  
Duration of the evacuation:

**36. Was a major transportation artery or facility closed? True**

If yes, how many? 79.75

**37. Was the material involved in a crash or derailment? True**

If yes, provide the following information:

- Estimated speed (mph): 42  
Weather conditions: mostly cloudy  
Vehicle overturned? True  
Vehicle left roadway/track? True

**PART V - AIR INCIDENT INFORMATION (please refer to S 175.31 to report a discrepancy for air shipments)**

**38. Was the shipment on a passenger aircraft?**

If yes, was it tendered as cargo, or as passenger baggage?

**39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?**

**40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)**

- |  |  |
|--|--|
| - Shipment had not been transported      | - Transported by air (first flight)              |
| - Transport by air (subsequent flights)  | - Initial transport by highway to cargo facility |
| - Transfer at sort center/cargo facility |  |

## **PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE**

- Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

**Describe:**

On 7/5/2024 at 3:42 AM Central Time, Canadian Pacific Kansas City Railroad (CPKC) train 242-03 derailed 29 rail cars at milepost 342.86 on the Carrington Sub near the town of Bordulac, North Dakota. Derailed cars included six loaded tank cars transporting UN1230, Methanol, 3, PG II, RQ (Methanol), eleven loaded tank cars transporting UN1005, Ammonia, Anhydrous, 2.3(8), Toxic Inhalation Hazard, Zone D, Marine Pollutant (Ammonia, Anhydrous), RQ (Ammonia), and twelve loaded hopper cars transporting non-hazmat Polyethylene pellets. CPKC mobilized internal and railroad qualified external resources to investigate the damage and mitigate released lading. Fire was reported immediately after the derailment, with multiple cars on fire. Many of the derailed tank cars experienced heat impingement. Because of this, pressure built within tank cars caused pressure relief devices to release product into the atmosphere. Additionally, releases occurred from holes and punctures in tank shells, and from damage incurred to manways, valves, pressure regulating devices, and other tank car appurtenances. The NTSB is investigating this incident and has requested that CPKC refrain from modifying any tank cars until it has completed its work. Because of this, CPKC has not been able to fully assess damage which might have occurred under tank jackets. The following information is the best information available at this time.

The cars detailed below released the listed amounts in gallons from the following locations:

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- 3) TILX 355610, loaded Methanol, Release=26,035.55 - tank shell was punctured on the right side between the housing and the B-End, and on the left side of the tank car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), liquid line valve separated from the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), PRD sheared off at the pressure plate (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment), & 4/6 manway securement bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 4) MFCX 132265, loaded Methanol, Release=26,526.48 - tank shell was punctured on the B-End & A-End (150-Tank Shell 309-Punctured 509-Derailment), the liquid valve sheared off at the flange (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), & the vapor valve & PRD sheared off at pressure plate (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment) (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment)
- 5) CTCX 300358, loaded Methanol, Release=27,849.02 - tank shell breached on bottom left between the housing and the A-End (150-Tank Shell 303 Burst or Ruptured 509-Derailment) & was punctured on the bottom right side of the car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), & the bottom outlet valve was sheared at the flange. (106 Bottom Outlet Valve 312 Torn Off or Damaged 509-Derailment)
- 6) CTCX 732476, loaded Methanol, Release=27,743.57 - tank shell was compressed to the point of failure between the manway and the B-End of the car. (150-Tank Shell 305 Crushed 509-Derailment) and breached between the manway and the B-End of the car (150-Tank Shell 303 Burst or Ruptured 509-Derailment), the tank shell was also punctured on A-End, right side, near the end tank weld (150-Tank Shell 309-Punctured 509-Derailment), the vapor and liquid valves sheared off at pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment), & 2/6 manway Bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 7) UTLX 971162, loaded Ammonia, Release=1861.12 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heat remaining after lading transfer was flared
- 8) TILX 500864, loaded Ammonia, Release=1025.34 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heat remaining after lading transfer was flared
- 9) TILX 500752, loaded Ammonia, Release=731.53 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heat remaining after lading transfer was flared
- 10) TILX 500890, loaded Ammonia, Release=692.84 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heat remaining after lading transfer was flared
- 11) SHQX 10732, loaded Ammonia, Release=6472.15 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heat remaining after lading transfer was flared
- 12) TILX 500730, loaded Ammonia, Release=30213.15 - B-End liquid line valve sheared off at the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) & 9/20 pressure plate bolts sheared off (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment). Note: Additional controlled release occurred as heat remaining in tank car was flared
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- 15) TILX 501231, loaded Ammonia, Release=1857.25 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heat remaining after lading transfer was flared
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- Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

### Describe:

This incident is currently under investigation - no root cause has been determined.

## PART VIII – CONTACT INFORMATION

Contact's Name:	Chad Cliburn
Contact's Title:	Consultant, EHS
Business Name and Address:	SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad) 120 S 6TH ST STE 900 MINNEAPOLIS MN 55402
E-mail Address:	██████████@cpkcr.com
Telephone Number:	██████████
Fax Number:	
Hazmat Registration Number:	060608550023QB
Date:	07/25/2024
Preparer is:	Carrier



U.S Department of Transportation  
Research and Special Programs Administration

# Hazardous Materials Incident Report

Form Approval OMB No. 3137-0039

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## PART I - REPORT TYPE

1. **Incident Id:** E-2024070638  
2. **This is to report:** A

## PART II - GENERAL INCIDENT INFORMATION

3. **Date of Incident:** 07/05/2024  
4. **Time of Incident (use 24-hour time):** 03:42

5. **Enter National Response Center Report Number (if applicable):** 1403817  
6. **If you submitted a report to another Federal DOT agency, enter the agency and report number:**

7. **Location of Incident:**  
City: BORDULAC  
County: FOSTER  
State: ND  
Zip Code: (if known): 58421  
Street Address/Mile Marker/Yard Name/Airport/Body of Water/River Mile:  
MP 342.86 Carrington Sub

8. **Mode of Transportation:** Rail  
9. **Transportation Phase:** In Transit

10. **Carrier/Reporter:**  
Name: SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad)  
Street: 120 S 6TH ST STE 900  
City: MINNEAPOLIS  
State: MN  
Zip Code: 55402  
Federal DOT Id Number: 108106  
Hazmat Registration Number: 060608550023QB

11. **Shipper/Offeror:**  
Name: CANADIAN FERTILIZERS LTD  
Street: 1250 52ND ST NW  
City: MEDICINE HAT  
State: ZZ  
Zip Code: T1A7R9  
Waybill/Shipping Paper: multiple  
Hazmat Registration Number:

12. **Origin (if different from shipper address)**  
Street:  
City:  
State:  
Zip Code:

13. **Destination:**  
Street: 4 PKWY N STE 400  
City: DEERFIELD  
State: IL  
Zip Code: 60015

14. **Proper Shipping Name of Hazardous Material:** AMMONIA ANHYDROUS  
15. **Technical/Trade Name:** Ammonia  
16. **Hazardous Class/Division:** Poisonous Gas  
17. **Identification Number:** (E.g. UN2764, NA 2020) UN1005  
18. **Packing Group:** (if applicable)

19. Quantity Released: (Include Measurement Units) 140406.19 Gas - Gallon

20. Was the material shipped as a hazardous waste? False

If yes, provide the EPA Manifest Number:

21. Is this a Toxic by Inhalation (TIH) material? True

If yes, provide the Hazard Zone: D

22. Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? False

If yes, provide the Exemption, Approval, or CA number:

23. Was this an undeclared hazardous materials shipment? False

### PART III - PACKAGING INFORMATION

24. Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:

Tank Car

25. See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident.

Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in part VI.

What Failed: - 150-Tank Shell

How Failed: - 310-Ripped or Torn

Causes of Failure: - Derailment

26a. Provide the packaging identification markings, if available.

Identification Markings: 112J500I

(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Packaging Type:  
Material of Construction:  
Head Type (Drums only):

Packaging Type:  
Material of Construction:

27. Describe the package capacity and the quantity:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Package Capacity: 33670 Gas - Gallon  
Amount in Package: 30291 Gas - Gallon  
Number in Shipment: 1  
Number Failed: 1

Package Capacity:  
Amount in Package:  
Number in Shipment:  
Number Failed:

28. Provide packaging construction and test information, as appropriate:

Manufacturer:  
Serial Number: SHQX 10805  
Material of Construction: (if Tank Car, CTMV, Portable Tank, or Cylinder)  
Design Pressure: (if Tank Car, CTMV, Portable Tank)  
Shell Thickness: 0.922 INCH (if Tank Car, CTMV, Portable Tank)  
Head Thickness: 0.912 INCH (if Tank Car, CTMV)  
Service Pressure: (if Cylinder)  
If valve or device failed:  
Type: NA  
Model: NA  
Manufacturer: NA

Manufacture Date:  
Last Test Date:

29. If the packaging is for Radioactive Materials, complete the following:

Packaging Category:  
Packaging Certification:  
Certification Number:  
Nuclide(s) Present: Transport Index:  
Activity:  
Critical Safety Index:

**PART IV – CONSEQUENCES**

**30. Result of Incident (check all that apply):**

- |                           |       |  |      |
|---------------------------|-------|--|------|
| - Spillage:               | True  | - Fire:                                  | True |
| - Explosion:              | False | - Material Entered Waterway/Storm Sewer: | True |
| - Vapor (Gas) Dispersion: | True  | - Environmental Damage:                  | True |
| - No Release:             | False |  |      |

**31. Emergency Response: The following entities responded to the incident: (Check all that apply)**

- Fire/EMS Report #: True NA  
Police Report #: True NA  
In-house cleanup: True  
Other Cleanup:

**32. Damages Was the total damage cost more than \$500? True**

- If yes, enter the following information: (If no, go to question 33.)
- |                           |                  |
|---------------------------|------------------|
| Material Loss:            | \$ 1,700,000.00  |
| Carrier Damage:           | \$ 0.00          |
| Property Damage:          | \$ 421,400.00    |
| Response Cost:            | \$ 11,916,459.00 |
| Remediation/Cleanup Cost: | \$ 5,750,000.00  |
- (See damage definitions in the instructions)*

**33a. Did the hazardous material cause or contribute to a human fatality? False**

- If yes, enter the number of fatalities resulting from the hazardous material:
- Employees:  
Responders:  
General Public:

**33b. Were there human fatalities that did not result from the hazardous material? False**

If yes, how many?

**34. Did the hazardous material cause or contribute to personal injury? False**

If yes, enter the number of injuries resulting from the hazardous material:

**Hospitalized (Admitted Only):**

- Employees:  
Responders:  
General Public:

**Non-Hospitalized:**

*(e.g.: On site first aid or Emergency Room observation and release)*

- Employees:  
Responders:  
General Public:

**35. Did the hazardous material cause or contribute to an evacuation? False**

If yes, provide the following information:

- Total number of general public evacuated:  
Total number of employees evacuated:  
Total evacuated: 0  
Duration of the evacuation:

**36. Was a major transportation artery or facility closed? True**

If yes, how many? 79.75

**37. Was the material involved in a crash or derailment? True**

If yes, provide the following information:

- Estimated speed (mph): 42  
Weather conditions: mostly cloudy  
Vehicle overturned? True  
Vehicle left roadway/track? True

**PART V - AIR INCIDENT INFORMATION (please refer to S 175.31 to report a discrepancy for air shipments)**

**38. Was the shipment on a passenger aircraft?**

If yes, was it tendered as cargo, or as passenger baggage?

**39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?**

**40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)**

- |  |  |
|--|--|
| - Shipment had not been transported      | - Transported by air (first flight)              |
| - Transport by air (subsequent flights)  | - Initial transport by highway to cargo facility |
| - Transfer at sort center/cargo facility |  |

## **PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE**

- Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

**Describe:**

On 7/5/2024 at 3:42 AM Central Time, Canadian Pacific Kansas City Railroad (CPKC) train 242-03 derailed 29 rail cars at milepost 342.86 on the Carrington Sub near the town of Bordulac, North Dakota. Derailed cars included six loaded tank cars transporting UN1230, Methanol, 3, PG II, RQ (Methanol), eleven loaded tank cars transporting UN1005, Ammonia, Anhydrous, 2.3(8), Toxic Inhalation Hazard, Zone D, Marine Pollutant (Ammonia, Anhydrous), RQ (Ammonia), and twelve loaded hopper cars transporting non-hazmat Polyethylene pellets. CPKC mobilized internal and railroad qualified external resources to investigate the damage and mitigate released lading. Fire was reported immediately after the derailment, with multiple cars on fire. Many of the derailed tank cars experienced heat impingement. Because of this, pressure built within tank cars caused pressure relief devices to release product into the atmosphere. Additionally, releases occurred from holes and punctures in tank shells, and from damage incurred to manways, valves, pressure regulating devices, and other tank car appurtenances. The NTSB is investigating this incident and has requested that CPKC refrain from modifying any tank cars until it has completed its work. Because of this, CPKC has not been able to fully assess damage which might have occurred under tank jackets. The following information is the best information available at this time.

The cars detailed below released the listed amounts in gallons from the following locations:

- 1) PROX 45220, loaded Methanol, Release=0.00 - minor damage to tank car did not result in a release.
- 2) CTCX 300362, loaded Methanol, Release=13,558.25 - heat impingement affected integrity of manway gasket (121-Gasket 308-Leaked 512-Fire, Temperature, or Heat) & pressure Relief Device (PRD) activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat).
- 3) TILX 355610, loaded Methanol, Release=26,035.55 - tank shell was punctured on the right side between the housing and the B-End, and on the left side of the tank car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), liquid line valve separated from the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), PRD sheared off at the pressure plate (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment), & 4/6 manway securement bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 4) MFCX 132265, loaded Methanol, Release=26,526.48 - tank shell was punctured on the B-End & A-End (150-Tank Shell 309-Punctured 509-Derailment), the liquid valve sheared off at the flange (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), & the vapor valve & PRD sheared off at pressure plate (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment) (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment)
- 5) CTCX 300358, loaded Methanol, Release=27,849.02 - tank shell breached on bottom left between the housing and the A-End (150-Tank Shell 303 Burst or Ruptured 509-Derailment) & was punctured on the bottom right side of the car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), & the bottom outlet valve was sheared at the flange. (106 Bottom Outlet Valve 312 Torn Off or Damaged 509-Derailment)
- 6) CTCX 732476, loaded Methanol, Release=27,743.57 - tank shell was compressed to the point of failure between the manway and the B-End of the car. (150-Tank Shell 305 Crushed 509-Derailment) and breached between the manway and the B-End of the car (150-Tank Shell 303 Burst or Ruptured 509-Derailment), the tank shell was also punctured on A-End, right side, near the end tank weld (150-Tank Shell 309-Punctured 509-Derailment), the vapor and liquid valves sheared off at pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment), & 2/6 manway Bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 7) UTLX 971162, loaded Ammonia, Release=1861.12 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 8) TILX 500864, loaded Ammonia, Release=1025.34 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 9) TILX 500752, loaded Ammonia, Release=731.53 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 10) TILX 500890, loaded Ammonia, Release=692.84 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 11) SHQX 10732, loaded Ammonia, Release=6472.15 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 12) TILX 500730, loaded Ammonia, Release=30213.15 - B-End liquid line valve sheared off at the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) & 9/20 pressure plate bolts sheared off (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 13) TILX 501050, loaded Ammonia, Release=30232.30 - unknown release point under jacket (150-Tank Shell 310 Ripped or Torn 509-Derailment) & PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 14) UTLX 971273, loaded Ammonia, Release=29246.03 - tank shell was punctured during wrecking, not during initial accident (150-Tank Shell 309-Punctured 509-Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared
- 15) TILX 501231, loaded Ammonia, Release=1857.25 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 16) SHQX 10754, loaded Ammonia, Release=7783.75 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 17) SHQX 10805, loaded Ammonia, Release=30290.72 - tank shell tear on tank bulge on the top left side of the car near the A-End (150 Tank Shell 310 Ripped or Torn 509 Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared

File Note: Item 19-the quantity released was estimated based on the best information available at the time of filing. The shipments were offered as a 'bulk' shipment, aka one car load, therefore the exact amount offered in these packages is not known to the carrier. This carrier does not have access to mass balance data which can exactly quantify this value.

## PART VII - RECOMMENDATIONS/ACTIONS TAKEN TO PREVENT RECURRENCE

- Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

### Describe:

This incident is currently under investigation - no root cause has been determined.

## PART VIII – CONTACT INFORMATION

Contact's Name:	Chad Cliburn
Contact's Title:	Consultant, EHS
Business Name and Address:	SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad) 120 S 6TH ST STE 900 MINNEAPOLIS MN 55402
E-mail Address:	██████████@cpkcr.com
Telephone Number:	██████████
Fax Number:	
Hazmat Registration Number:	060608550023QB
Date:	07/25/2024
Preparer is:	Carrier



U.S Department of Transportation  
Research and Special Programs Administration

# Hazardous Materials Incident Report

Form Approval OMB No. 3137-0039

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 2137-0039. The filling out of this information is mandatory and will take 96 minutes to complete.

## INSTRUCTIONS

Submit this report to the Information Systems Manager, U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Office of Hazardous Materials Safety, DHM-63, Washington, D.C. 20590-0001. If space provided for any item is inadequate, use a separate sheet of paper, identifying the entry number being completed. Copies of this form and instructions can be obtained from the Office of Hazardous Materials Website at <http://hazmat.dot.gov>. If you have any questions, you can contact the Hazardous Materials Information Center at 1-800-HMR-4922 (1-800-467-4922) or online at <http://hazmat.dot.gov>.

## PART I - REPORT TYPE

1. Incident Id: E-2024070638  
2. This is to report: A

## PART II - GENERAL INCIDENT INFORMATION

3. Date of Incident: 07/05/2024  
4. Time of Incident (use 24-hour time): 03:42

5. Enter National Response Center Report Number (if applicable): 1403817  
6. If you submitted a report to another Federal DOT agency, enter the agency and report number:

7. Location of Incident:  
City: BORDULAC  
County: FOSTER  
State: ND  
Zip Code: (if known): 58421  
Street Address/Mile Marker/Yard Name/Airport/Body of Water/River Mile:  
MP 342.86 Carrington Sub

8. Mode of Transportation: Rail  
9. Transportation Phase: In Transit

10. Carrier/Reporter:  
Name: SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad)  
Street: 120 S 6TH ST STE 900  
City: MINNEAPOLIS  
State: MN  
Zip Code: 55402  
Federal DOT Id Number: 108106  
Hazmat Registration Number: 060608550023QB

11. Shipper/Offeror:  
Name: CANADIAN FERTILIZERS LTD  
Street: 1250 52ND ST NW  
City: MEDICINE HAT  
State: ZZ  
Zip Code: T1A7R9  
Waybill/Shipping Paper: multiple  
Hazmat Registration Number:

12. Origin (if different from shipper address)  
Street:  
City:  
State:  
Zip Code:

13. Destination:  
Street: 4 PKWY N STE 400  
City: DEERFIELD  
State: IL  
Zip Code: 60015

14. Proper Shipping Name of Hazardous Material: AMMONIA ANHYDROUS  
15. Technical/Trade Name: Ammonia  
16. Hazardous Class/Division: Poisonous Gas  
17. Identification Number: (E.g. UN2764, NA 2020) UN1005  
18. Packing Group: (if applicable)

19. Quantity Released: (Include Measurement Units) 140406.19 Gas - Gallon

20. Was the material shipped as a hazardous waste? False

If yes, provide the EPA Manifest Number:

21. Is this a Toxic by Inhalation (TIH) material? True

If yes, provide the Hazard Zone: D

22. Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? False

If yes, provide the Exemption, Approval, or CA number:

23. Was this an undeclared hazardous materials shipment? False

### PART III - PACKAGING INFORMATION

24. Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:

Tank Car

25. See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident.

Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in part VI.

What Failed: - 150-Tank Shell

How Failed: - 309-Punctured

Causes of Failure: - Derailment

26a. Provide the packaging identification markings, if available.

Identification Markings: 112J500I

(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Packaging Type:  
Material of Construction:  
Head Type (Drums only):

Packaging Type:  
Material of Construction:

27. Describe the package capacity and the quantity:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Package Capacity: 33780 Gas - Gallon  
Amount in Package: 29246 Gas - Gallon  
Number in Shipment: 1  
Number Failed: 1

Package Capacity:  
Amount in Package:  
Number in Shipment:  
Number Failed:

28. Provide packaging construction and test information, as appropriate:

Manufacturer:

Serial Number: UTLX 971273

Manufacture Date:

Last Test Date:

Material of Construction: (if Tank Car, CTMV, Portable Tank, or Cylinder)

Design Pressure: (if Tank Car, CTMV, Portable Tank)

Shell Thickness: 0.909 INCH (if Tank Car, CTMV, Portable Tank)

Head Thickness: 0.941 INCH (if Tank Car, CTMV)

Service Pressure: (if Cylinder)

If valve or device failed:

Type: NA

Model: NA

Manufacturer: NA

29. If the packaging is for Radioactive Materials, complete the following:

Packaging Category:

Packaging Certification:

Certification Number:

Nuclide(s) Present:

Transport Index:

Activity:

Critical Safety Index:

**PART IV – CONSEQUENCES**

**30. Result of Incident (check all that apply):**

- Spillage: True
- Explosion: False
- Vapor (Gas) Dispersion: True
- No Release: False
- Fire: True
- Material Entered Waterway/Storm Sewer: True
- Environmental Damage: True

**31. Emergency Response: The following entities responded to the incident: (Check all that apply)**

- Fire/EMS Report #: True NA
- Police Report #: True NA
- In-house cleanup: True
- Other Cleanup:

**32. Damages Was the total damage cost more than \$500? True**

- If yes, enter the following information: (If no, go to question 33.)
- Material Loss: \$ 1,700,000.00
  - Carrier Damage: \$ 0.00
  - Property Damage: \$ 421,400.00
  - Response Cost: \$ 11,916,459.00
  - Remediation/Cleanup Cost: \$ 5,750,000.00
- (See damage definitions in the instructions)*

**33a. Did the hazardous material cause or contribute to a human fatality? False**

- If yes, enter the number of fatalities resulting from the hazardous material:
- Employees:
  - Responders:
  - General Public:

**33b. Were there human fatalities that did not result from the hazardous material? False**

If yes, how many?

**34. Did the hazardous material cause or contribute to personal injury? False**

If yes, enter the number of injuries resulting from the hazardous material:

**Hospitalized (Admitted Only):**

- Employees:
- Responders:
- General Public:

**Non-Hospitalized:**

*(e.g.: On site first aid or Emergency Room observation and release)*

- Employees:
- Responders:
- General Public:

**35. Did the hazardous material cause or contribute to an evacuation? False**

If yes, provide the following information:

- Total number of general public evacuated:
- Total number of employees evacuated:
- Total evacuated: 0
- Duration of the evacuation:

**36. Was a major transportation artery or facility closed? True**

If yes, how many? 79.75

**37. Was the material involved in a crash or derailment? True**

If yes, provide the following information:

- Estimated speed (mph): 42
- Weather conditions: mostly cloudy
- Vehicle overturned? True
- Vehicle left roadway/track? True

**PART V - AIR INCIDENT INFORMATION (please refer to S 175.31 to report a discrepancy for air shipments)**

**38. Was the shipment on a passenger aircraft?**

If yes, was it tendered as cargo, or as passenger baggage?

**39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?**

**40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)**

- Shipment had not been transported
- Transported by air (first flight)
- Transport by air (subsequent flights)
- Initial transport by highway to cargo facility
- Transfer at sort center/cargo facility

## **PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE**

- Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

**Describe:**

On 7/5/2024 at 3:42 AM Central Time, Canadian Pacific Kansas City Railroad (CPKC) train 242-03 derailed 29 rail cars at milepost 342.86 on the Carrington Sub near the town of Bordulac, North Dakota. Derailed cars included six loaded tank cars transporting UN1230, Methanol, 3, PG II, RQ (Methanol), eleven loaded tank cars transporting UN1005, Ammonia, Anhydrous, 2.3(8), Toxic Inhalation Hazard, Zone D, Marine Pollutant (Ammonia, Anhydrous), RQ (Ammonia), and twelve loaded hopper cars transporting non-hazmat Polyethylene pellets. CPKC mobilized internal and railroad qualified external resources to investigate the damage and mitigate released lading. Fire was reported immediately after the derailment, with multiple cars on fire. Many of the derailed tank cars experienced heat impingement. Because of this, pressure built within tank cars caused pressure relief devices to release product into the atmosphere. Additionally, releases occurred from holes and punctures in tank shells, and from damage incurred to manways, valves, pressure regulating devices, and other tank car appurtenances. The NTSB is investigating this incident and has requested that CPKC refrain from modifying any tank cars until it has completed its work. Because of this, CPKC has not been able to fully assess damage which might have occurred under tank jackets. The following information is the best information available at this time.

The cars detailed below released the listed amounts in gallons from the following locations:

- 1) PROX 45220, loaded Methanol, Release=0.00 - minor damage to tank car did not result in a release.
- 2) CTCX 300362, loaded Methanol, Release=13,558.25 - heat impingement affected integrity of manway gasket (121-Gasket 308-Leaked 512-Fire, Temperature, or Heat) & pressure Relief Device (PRD) activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat).
- 3) TILX 355610, loaded Methanol, Release=26,035.55 - tank shell was punctured on the right side between the housing and the B-End, and on the left side of the tank car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), liquid line valve separated from the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), PRD sheared off at the pressure plate (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment), & 4/6 manway securement bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 4) MFCX 132265, loaded Methanol, Release=26,526.48 - tank shell was punctured on the B-End & A-End (150-Tank Shell 309-Punctured 509-Derailment), the liquid valve sheared off at the flange (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), & the vapor valve & PRD sheared off at pressure plate (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment) (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment)
- 5) CTCX 300358, loaded Methanol, Release=27,849.02 - tank shell breached on bottom left between the housing and the A-End (150-Tank Shell 303 Burst or Ruptured 509-Derailment) & was punctured on the bottom right side of the car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), & the bottom outlet valve was sheared at the flange. (106 Bottom Outlet Valve 312 Torn Off or Damaged 509-Derailment)
- 6) CTCX 732476, loaded Methanol, Release=27,743.57 - tank shell was compressed to the point of failure between the manway and the B-End of the car. (150-Tank Shell 305 Crushed 509-Derailment) and breached between the manway and the B-End of the car (150-Tank Shell 303 Burst or Ruptured 509-Derailment), the tank shell was also punctured on A-End, right side, near the end tank weld (150-Tank Shell 309-Punctured 509-Derailment), the vapor and liquid valves sheared off at pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment), & 2/6 manway Bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 7) UTLX 971162, loaded Ammonia, Release=1861.12 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 8) TILX 500864, loaded Ammonia, Release=1025.34 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 9) TILX 500752, loaded Ammonia, Release=731.53 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 10) TILX 500890, loaded Ammonia, Release=692.84 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 11) SHQX 10732, loaded Ammonia, Release=6472.15 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 12) TILX 500730, loaded Ammonia, Release=30213.15 - B-End liquid line valve sheared off at the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) & 9/20 pressure plate bolts sheared off (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 13) TILX 501050, loaded Ammonia, Release=30232.30 - unknown release point under jacket (150-Tank Shell 310 Ripped or Torn 509-Derailment) & PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 14) UTLX 971273, loaded Ammonia, Release=29246.03 - tank shell was punctured during wrecking, not during initial accident (150-Tank Shell 309-Punctured 509-Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared
- 15) TILX 501231, loaded Ammonia, Release=1857.25 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 16) SHQX 10754, loaded Ammonia, Release=7783.75 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 17) SHQX 10805, loaded Ammonia, Release=30290.72 - tank shell tear on tank bulge on the top left side of the car near the A-End (150 Tank Shell 310 Ripped or Torn 509 Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared

File Note: Item 19-the quantity released was estimated based on the best information available at the time of filing. The shipments were offered as a 'bulk' shipment, aka one car load, therefore the exact amount offered in these packages is not known to the carrier. This carrier does not have access to mass balance data which can exactly quantify this value.

## PART VII - RECOMMENDATIONS/ACTIONS TAKEN TO PREVENT RECURRENCE

- Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

### Describe:

This incident is currently under investigation - no root cause has been determined.

## PART VIII – CONTACT INFORMATION

Contact's Name:	Chad Cliburn
Contact's Title:	Consultant, EHS
Business Name and Address:	SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad) 120 S 6TH ST STE 900 MINNEAPOLIS MN 55402
E-mail Address:	[REDACTED]@cpkcr.com
Telephone Number:	[REDACTED]
Fax Number:	
Hazmat Registration Number:	060608550023QB
Date:	07/25/2024
Preparer is:	Carrier



U.S Department of Transportation  
Research and Special Programs Administration

# Hazardous Materials Incident Report

Form Approval OMB No. 3137-0039

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 2137-0039. The filling out of this information is mandatory and will take 96 minutes to complete.

## INSTRUCTIONS

Submit this report to the Information Systems Manager, U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Office of Hazardous Materials Safety, DHM-63, Washington, D.C. 20590-0001. If space provided for any item is inadequate, use a separate sheet of paper, identifying the entry number being completed. Copies of this form and instructions can be obtained from the Office of Hazardous Materials Website at <http://hazmat.dot.gov>. If you have any questions, you can contact the Hazardous Materials Information Center at 1-800-HMR-4922 (1-800-467-4922) or online at <http://hazmat.dot.gov>.

## PART I - REPORT TYPE

1. **Incident Id:** E-2024070638  
2. **This is to report:** A

## PART II - GENERAL INCIDENT INFORMATION

<p>3. <b>Date of Incident:</b> 07/05/2024</p> <p>5. <b>Enter National Response Center Report Number (if applicable):</b> 1403817</p> <p>7. <b>Location of Incident:</b>                                            City: BORDULAC                                            County: FOSTER                                            State: ND                                            Zip Code: (if known): 58421          Street Address/Mile Marker/Yard Name/Airport/Body of Water/River Mile:          MP 342.86 Carrington Sub</p> <p>8. <b>Mode of Transportation:</b> Rail</p> <p>9. <b>Transportation Phase:</b> In Transit</p> <p>10. <b>Carrier/Reporter:</b>                                            Name: SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad)                                            Street: 120 S 6TH ST STE 900                                            City: MINNEAPOLIS                                            State: MN                                            Zip Code: 55402          Federal DOT Id Number: 108106</p> <p>11. <b>Shipper/Offeror:</b>                                            Name: CANADIAN FERTILIZERS LTD                                            Street: 1250 52ND ST NW                                            City: MEDICINE HAT                                            State: ZZ                                            Zip Code: T1A7R9          Waybill/Shipping Paper: multiple</p> <p>12. <b>Origin (if different from shipper address)</b>                                            Street:                                            City:                                            State:                                            Zip Code:</p> <p>13. <b>Destination:</b>                                            Street: 4 PKWY N STE 400                                            City: DEERFIELD                                            State: IL                                            Zip Code: 60015</p> <p>14. <b>Proper Shipping Name of Hazardous Material:</b> AMMONIA ANHYDROUS</p> <p>15. <b>Technical/Trade Name:</b> Ammonia</p> <p>16. <b>Hazardous Class/Division:</b> Poisonous Gas</p> <p>17. <b>Identification Number:</b> (E.g. UN2764, NA 2020) UN1005</p> <p>18. <b>Packing Group:</b> (if applicable)</p>	<p>4. <b>Time of Incident (use 24-hour time):</b> 03:42</p> <p>6. <b>If you submitted a report to another Federal DOT agency, enter the agency and report number:</b></p> <p>Hazmat Registration Number: 060608550023QB</p> <p>Hazmat Registration Number:</p>
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19. Quantity Released: (Include Measurement Units) 140406.19 Gas - Gallon

20. Was the material shipped as a hazardous waste? False

If yes, provide the EPA Manifest Number:

21. Is this a Toxic by Inhalation (TIH) material? True

If yes, provide the Hazard Zone: D

22. Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? False

If yes, provide the Exemption, Approval, or CA number:

23. Was this an undeclared hazardous materials shipment? False

**PART III - PACKAGING INFORMATION**

24. Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:

Tank Car

25. See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident.

Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in part VI.

What Failed: - 144-Pressure Relief Valve or Device - Reclosing

How Failed: - 313-Vented

Causes of Failure: - Fire, Temperature, or Heat

26a. Provide the packaging identification markings, if available.

Identification Markings: 112J500I

(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Packaging Type:  
Material of Construction:  
Head Type (Drums only):

Packaging Type:  
Material of Construction:

27. Describe the package capacity and the quantity:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Package Capacity: 33670 Gas - Gallon  
Amount in Package: 30271 Gas - Gallon  
Number in Shipment: 1  
Number Failed: 1

Package Capacity:  
Amount in Package:  
Number in Shipment:  
Number Failed:

28. Provide packaging construction and test information, as appropriate:

Manufacturer:  
Serial Number: SHQX 10754  
Material of Construction: (if Tank Car, CTMV, Portable Tank, or Cylinder)  
Design Pressure: (if Tank Car, CTMV, Portable Tank)  
Shell Thickness: 0.922 INCH (if Tank Car, CTMV, Portable Tank)  
Head Thickness: 0.912 INCH (if Tank Car, CTMV)  
Service Pressure: (if Cylinder)  
If valve or device failed:  
Type: NA  
Model: NA  
Manufacturer: NA

Manufacture Date:  
Last Test Date:

29. If the packaging is for Radioactive Materials, complete the following:

Packaging Category:  
Packaging Certification:  
Certification Number:  
Nuclide(s) Present: Transport Index:  
Activity:  
Critical Safety Index:

**PART IV – CONSEQUENCES**

**30. Result of Incident (check all that apply):**

- Spillage: True
- Explosion: False
- Vapor (Gas) Dispersion: True
- No Release: False
- Fire: True
- Material Entered Waterway/Storm Sewer: True
- Environmental Damage: True

**31. Emergency Response: The following entities responded to the incident: (Check all that apply)**

- Fire/EMS Report #: True NA
- Police Report #: True NA
- In-house cleanup: True
- Other Cleanup:

**32. Damages Was the total damage cost more than \$500? True**

- If yes, enter the following information: (If no, go to question 33.)
- Material Loss: \$ 1,700,000.00
  - Carrier Damage: \$ 0.00
  - Property Damage: \$ 421,400.00
  - Response Cost: \$ 11,916,459.00
  - Remediation/Cleanup Cost: \$ 5,750,000.00
- (See damage definitions in the instructions)*

**33a. Did the hazardous material cause or contribute to a human fatality? False**

- If yes, enter the number of fatalities resulting from the hazardous material:
- Employees:
  - Responders:
  - General Public:

**33b. Were there human fatalities that did not result from the hazardous material? False**

If yes, how many?

**34. Did the hazardous material cause or contribute to personal injury? False**

If yes, enter the number of injuries resulting from the hazardous material:

**Hospitalized (Admitted Only):**

- Employees:
- Responders:
- General Public:

**Non-Hospitalized:**

*(e.g.: On site first aid or Emergency Room observation and release)*

- Employees:
- Responders:
- General Public:

**35. Did the hazardous material cause or contribute to an evacuation? False**

If yes, provide the following information:

- Total number of general public evacuated:
- Total number of employees evacuated:
- Total evacuated: 0
- Duration of the evacuation:

**36. Was a major transportation artery or facility closed? True**

If yes, how many? 79.75

**37. Was the material involved in a crash or derailment? True**

If yes, provide the following information:

- Estimated speed (mph): 42
- Weather conditions: mostly cloudy
- Vehicle overturned? True
- Vehicle left roadway/track? True

**PART V - AIR INCIDENT INFORMATION (please refer to S 175.31 to report a discrepancy for air shipments)**

**38. Was the shipment on a passenger aircraft?**

If yes, was it tendered as cargo, or as passenger baggage?

**39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?**

**40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)**

- Shipment had not been transported
- Transported by air (first flight)
- Transport by air (subsequent flights)
- Initial transport by highway to cargo facility
- Transfer at sort center/cargo facility

## **PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE**

- Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

**Describe:**

On 7/5/2024 at 3:42 AM Central Time, Canadian Pacific Kansas City Railroad (CPKC) train 242-03 derailed 29 rail cars at milepost 342.86 on the Carrington Sub near the town of Bordulac, North Dakota. Derailed cars included six loaded tank cars transporting UN1230, Methanol, 3, PG II, RQ (Methanol), eleven loaded tank cars transporting UN1005, Ammonia, Anhydrous, 2.3(8), Toxic Inhalation Hazard, Zone D, Marine Pollutant (Ammonia, Anhydrous), RQ (Ammonia), and twelve loaded hopper cars transporting non-hazmat Polyethylene pellets. CPKC mobilized internal and railroad qualified external resources to investigate the damage and mitigate released lading. Fire was reported immediately after the derailment, with multiple cars on fire. Many of the derailed tank cars experienced heat impingement. Because of this, pressure built within tank cars caused pressure relief devices to release product into the atmosphere. Additionally, releases occurred from holes and punctures in tank shells, and from damage incurred to manways, valves, pressure regulating devices, and other tank car appurtenances. The NTSB is investigating this incident and has requested that CPKC refrain from modifying any tank cars until it has completed its work. Because of this, CPKC has not been able to fully assess damage which might have occurred under tank jackets. The following information is the best information available at this time.

The cars detailed below released the listed amounts in gallons from the following locations:

- 1) PROX 45220, loaded Methanol, Release=0.00 - minor damage to tank car did not result in a release.
- 2) CTCX 300362, loaded Methanol, Release=13,558.25 - heat impingement affected integrity of manway gasket (121-Gasket 308-Leaked 512-Fire, Temperature, or Heat) & pressure Relief Device (PRD) activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat).
- 3) TILX 355610, loaded Methanol, Release=26,035.55 - tank shell was punctured on the right side between the housing and the B-End, and on the left side of the tank car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), liquid line valve separated from the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), PRD sheared off at the pressure plate (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment), & 4/6 manway securement bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 4) MFCX 132265, loaded Methanol, Release=26,526.48 - tank shell was punctured on the B-End & A-End (150-Tank Shell 309-Punctured 509-Derailment), the liquid valve sheared off at the flange (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), & the vapor valve & PRD sheared off at pressure plate (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment) (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment)
- 5) CTCX 300358, loaded Methanol, Release=27,849.02 - tank shell breached on bottom left between the housing and the A-End (150-Tank Shell 303 Burst or Ruptured 509-Derailment) & was punctured on the bottom right side of the car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), & the bottom outlet valve was sheared at the flange. (106 Bottom Outlet Valve 312 Torn Off or Damaged 509-Derailment)
- 6) CTCX 732476, loaded Methanol, Release=27,743.57 - tank shell was compressed to the point of failure between the manway and the B-End of the car. (150-Tank Shell 305 Crushed 509-Derailment) and breached between the manway and the B-End of the car (150-Tank Shell 303 Burst or Ruptured 509-Derailment), the tank shell was also punctured on A-End, right side, near the end tank weld (150-Tank Shell 309-Punctured 509-Derailment), the vapor and liquid valves sheared off at pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment), & 2/6 manway Bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 7) UTLX 971162, loaded Ammonia, Release=1861.12 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 8) TILX 500864, loaded Ammonia, Release=1025.34 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 9) TILX 500752, loaded Ammonia, Release=731.53 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 10) TILX 500890, loaded Ammonia, Release=692.84 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 11) SHQX 10732, loaded Ammonia, Release=6472.15 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 12) TILX 500730, loaded Ammonia, Release=30213.15 - B-End liquid line valve sheared off at the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) & 9/20 pressure plate bolts sheared off (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 13) TILX 501050, loaded Ammonia, Release=30232.30 - unknown release point under jacket (150-Tank Shell 310 Ripped or Torn 509-Derailment) & PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 14) UTLX 971273, loaded Ammonia, Release=29246.03 - tank shell was punctured during wrecking, not during initial accident (150-Tank Shell 309-Punctured 509-Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared
- 15) TILX 501231, loaded Ammonia, Release=1857.25 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 16) SHQX 10754, loaded Ammonia, Release=7783.75 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 17) SHQX 10805, loaded Ammonia, Release=30290.72 - tank shell tear on tank bulge on the top left side of the car near the A-End (150 Tank Shell 310 Ripped or Torn 509 Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared

File Note: Item 19-the quantity released was estimated based on the best information available at the time of filing. The shipments were offered as a 'bulk' shipment, aka one car load, therefore the exact amount offered in these packages is not known to the carrier. This carrier does not have access to mass balance data which can exactly quantify this value.

## PART VII - RECOMMENDATIONS/ACTIONS TAKEN TO PREVENT RECURRENCE

- Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

### Describe:

This incident is currently under investigation - no root cause has been determined.

## PART VIII – CONTACT INFORMATION

Contact's Name:	Chad Cliburn
Contact's Title:	Consultant, EHS
Business Name and Address:	SOO LINE RAILROAD COMPANY (DBA Canadian Pacific Kansas City Railroad) 120 S 6TH ST STE 900 MINNEAPOLIS MN 55402
E-mail Address:	[REDACTED]@cpkcr.com
Telephone Number:	[REDACTED]
Fax Number:	
Hazmat Registration Number:	060608550023QB
Date:	07/25/2024
Preparer is:	Carrier



19. Quantity Released: (Include Measurement Units) 140406.19 Gas - Gallon

20. Was the material shipped as a hazardous waste? False

If yes, provide the EPA Manifest Number:

21. Is this a Toxic by Inhalation (TIH) material? True

If yes, provide the Hazard Zone: D

22. Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? False

If yes, provide the Exemption, Approval, or CA number:

23. Was this an undeclared hazardous materials shipment? False

### PART III - PACKAGING INFORMATION

24. Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:

Tank Car

25. See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident.

Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in part VI.

What Failed: - 144-Pressure Relief Valve or Device - Reclosing

How Failed: - 313-Vented

Causes of Failure: - Fire, Temperature, or Heat

26a. Provide the packaging identification markings, if available.

Identification Markings: 112H500W

(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Packaging Type:  
Material of Construction:  
Head Type (Drums only):

Packaging Type:  
Material of Construction:

27. Describe the package capacity and the quantity:

Single Package or Outer Packaging:

Single Package or Inner Packaging (if any):

Package Capacity: 33780 Gas - Gallon  
Amount in Package: 29246 Gas - Gallon  
Number in Shipment: 1  
Number Failed: 1

Package Capacity:  
Amount in Package:  
Number in Shipment:  
Number Failed:

28. Provide packaging construction and test information, as appropriate:

Manufacturer:

Serial Number: UTLX 971162

Manufacture Date:

Last Test Date:

Material of Construction: (if Tank Car, CTMV, Portable Tank, or Cylinder)

Design Pressure: (if Tank Car, CTMV, Portable Tank)

Shell Thickness: 0.909 INCH (if Tank Car, CTMV, Portable Tank)

Head Thickness: 0.941 INCH (if Tank Car, CTMV)

Service Pressure: (if Cylinder)

If valve or device failed:

Type: NA

Model: NA

Manufacturer: NA

29. If the packaging is for Radioactive Materials, complete the following:

Packaging Category:

Packaging Certification:

Certification Number:

Nuclide(s) Present:

Transport Index:

Activity:

Critical Safety Index:

**PART IV – CONSEQUENCES**

**30. Result of Incident (check all that apply):**

- Spillage: True
- Explosion: False
- Vapor (Gas) Dispersion: True
- No Release: False
- Fire: True
- Material Entered Waterway/Storm Sewer: True
- Environmental Damage: True

**31. Emergency Response: The following entities responded to the incident: (Check all that apply)**

- Fire/EMS Report #: True NA
- Police Report #: True NA
- In-house cleanup: True
- Other Cleanup:

**32. Damages Was the total damage cost more than \$500? True**

- If yes, enter the following information: (If no, go to question 33.)
- Material Loss: \$ 1,700,000.00
  - Carrier Damage: \$ 0.00
  - Property Damage: \$ 421,400.00
  - Response Cost: \$ 11,916,459.00
  - Remediation/Cleanup Cost: \$ 5,750,000.00
- (See damage definitions in the instructions)*

**33a. Did the hazardous material cause or contribute to a human fatality? False**

- If yes, enter the number of fatalities resulting from the hazardous material:
- Employees:
  - Responders:
  - General Public:

**33b. Were there human fatalities that did not result from the hazardous material? False**

If yes, how many?

**34. Did the hazardous material cause or contribute to personal injury? False**

If yes, enter the number of injuries resulting from the hazardous material:

**Hospitalized (Admitted Only):**

- Employees:
- Responders:
- General Public:

**Non-Hospitalized:**

*(e.g.: On site first aid or Emergency Room observation and release)*

- Employees:
- Responders:
- General Public:

**35. Did the hazardous material cause or contribute to an evacuation? False**

If yes, provide the following information:

- Total number of general public evacuated:
- Total number of employees evacuated:
- Total evacuated: 0
- Duration of the evacuation:

**36. Was a major transportation artery or facility closed? True**

If yes, how many? 79.75

**37. Was the material involved in a crash or derailment? True**

If yes, provide the following information:

- Estimated speed (mph): 42
- Weather conditions: mostly cloudy
- Vehicle overturned? True
- Vehicle left roadway/track? True

**PART V - AIR INCIDENT INFORMATION (please refer to S 175.31 to report a discrepancy for air shipments)**

**38. Was the shipment on a passenger aircraft?**

If yes, was it tendered as cargo, or as passenger baggage?

**39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?**

**40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)**

- Shipment had not been transported
- Transported by air (first flight)
- Transport by air (subsequent flights)
- Initial transport by highway to cargo facility
- Transfer at sort center/cargo facility

## **PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE**

- Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

**Describe:**

On 7/5/2024 at 3:42 AM Central Time, Canadian Pacific Kansas City Railroad (CPKC) train 242-03 derailed 29 rail cars at milepost 342.86 on the Carrington Sub near the town of Bordulac, North Dakota. Derailed cars included six loaded tank cars transporting UN1230, Methanol, 3, PG II, RQ (Methanol), eleven loaded tank cars transporting UN1005, Ammonia, Anhydrous, 2.3(8), Toxic Inhalation Hazard, Zone D, Marine Pollutant (Ammonia, Anhydrous), RQ (Ammonia), and twelve loaded hopper cars transporting non-hazmat Polyethylene pellets. CPKC mobilized internal and railroad qualified external resources to investigate the damage and mitigate released lading. Fire was reported immediately after the derailment, with multiple cars on fire. Many of the derailed tank cars experienced heat impingement. Because of this, pressure built within tank cars caused pressure relief devices to release product into the atmosphere. Additionally, releases occurred from holes and punctures in tank shells, and from damage incurred to manways, valves, pressure regulating devices, and other tank car appurtenances. The NTSB is investigating this incident and has requested that CPKC refrain from modifying any tank cars until it has completed its work. Because of this, CPKC has not been able to fully assess damage which might have occurred under tank jackets. The following information is the best information available at this time.

The cars detailed below released the listed amounts in gallons from the following locations:

- 1) PROX 45220, loaded Methanol, Release=0.00 - minor damage to tank car did not result in a release.
- 2) CTCX 300362, loaded Methanol, Release=13,558.25 - heat impingement affected integrity of manway gasket (121-Gasket 308-Leaked 512-Fire, Temperature, or Heat) & pressure Relief Device (PRD) activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat).
- 3) TILX 355610, loaded Methanol, Release=26,035.55 - tank shell was punctured on the right side between the housing and the B-End, and on the left side of the tank car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), liquid line valve separated from the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), PRD sheared off at the pressure plate (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment), & 4/6 manway securement bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 4) MFCX 132265, loaded Methanol, Release=26,526.48 - tank shell was punctured on the B-End & A-End (150-Tank Shell 309-Punctured 509-Derailment), the liquid valve sheared off at the flange (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment), & the vapor valve & PRD sheared off at pressure plate (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment) (144-Pressure Relief Valve or Device – Reclosing 312-Torn Off or Damaged 509-Derailment)
- 5) CTCX 300358, loaded Methanol, Release=27,849.02 - tank shell breached on bottom left between the housing and the A-End (150-Tank Shell 303 Burst or Ruptured 509-Derailment) & was punctured on the bottom right side of the car directly below the housing (150-Tank Shell 309-Punctured 509-Derailment), & the bottom outlet valve was sheared at the flange. (106 Bottom Outlet Valve 312 Torn Off or Damaged 509-Derailment)
- 6) CTCX 732476, loaded Methanol, Release=27,743.57 - tank shell was compressed to the point of failure between the manway and the B-End of the car. (150-Tank Shell 305 Crushed 509-Derailment) and breached between the manway and the B-End of the car (150-Tank Shell 303 Burst or Ruptured 509-Derailment), the tank shell was also punctured on A-End, right side, near the end tank weld (150-Tank Shell 309-Punctured 509-Derailment), the vapor and liquid valves sheared off at pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) (158 Vapor Valve 312-Torn Off or Damaged 509-Derailment), & 2/6 manway Bolts were damaged. (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment)
- 7) UTLX 971162, loaded Ammonia, Release=1861.12 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 8) TILX 500864, loaded Ammonia, Release=1025.34 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 9) TILX 500752, loaded Ammonia, Release=731.53 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 10) TILX 500890, loaded Ammonia, Release=692.84 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 11) SHQX 10732, loaded Ammonia, Release=6472.15 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 12) TILX 500730, loaded Ammonia, Release=30213.15 - B-End liquid line valve sheared off at the pressure plate (134-Liquid Valve 312-Torn Off or Damaged 509-Derailment) & 9/20 pressure plate bolts sheared off (105 Bolts or Nuts 312 Torn Off or Damaged 509 Derailment). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 13) TILX 501050, loaded Ammonia, Release=30232.30 - unknown release point under jacket (150-Tank Shell 310 Ripped or Torn 509-Derailment) & PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining in tank car was flared
- 14) UTLX 971273, loaded Ammonia, Release=29246.03 - tank shell was punctured during wrecking, not during initial accident (150-Tank Shell 309-Punctured 509-Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared
- 15) TILX 501231, loaded Ammonia, Release=1857.25 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 16) SHQX 10754, loaded Ammonia, Release=7783.75 - PRD activated (144-Pressure Relief Valve or Device – Reclosing 313-Vented 512-Fire, Temperature, or Heat). Note: Additional controlled release occurred as heal remaining after lading transfer was flared
- 17) SHQX 10805, loaded Ammonia, Release=30290.72 - tank shell tear on tank bulge on the top left side of the car near the A-End (150 Tank Shell 310 Ripped or Torn 509 Derailment) Note: Additional controlled release occurred as heal remaining in tank car was flared

File Note: Item 19-the quantity released was estimated based on the best information available at the time of filing. The shipments were offered as a 'bulk' shipment, aka one car load, therefore the exact amount offered in these packages is not known to the carrier. This carrier does not have access to mass balance data which can exactly quantify this value.

## PART VII - RECOMMENDATIONS/ACTIONS TAKEN TO PREVENT RECURRENCE

- Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

### Describe:

This incident is currently under investigation - no root cause has been determined.

## PART VIII – CONTACT INFORMATION

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