NTSB National Transportation Safety Board

*Office of Railroad, Pipeline and Hazardous Materials Safety*

# Derailment of CN Train U70691-18 Cherry Valley, Illinois June 19, 2009

# DCA 09 MR 006


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Signal Bungalow
Approx. 17 Feet
Washout area
2009.06.19 20:16:51 DST

# NTSB Launch

| | |
|---|---|
| Dick Hipskind | Assigned IIC /Track |
| Paul Stancil | Pipeline & Hazardous Materials |
| Dan Walsh | Highway |
| Dr. Matt Fox | Senior Metallurgist |
| Dr. Stephen Jenner | Human Performance |
| Rick Downs | Survival Factors |
| Russ Gober | Operations |

# NTSB Launch

| | |
|---|---|
| Dave Watson | Mechanical |
| Ruben Payan | Signals |
| Debbie Hall | TDA |
| Max Green | TDA |
| Keith Holloway | Public Affairs |
| Robert Sumwalt | Member On Scene |
| Sean Dalton | Member's Assistant |

# Investigative Support Personnel

| | |
|---|---|
| Cassandra Johnson | Event Recorder--RE |
| Doug Brazy | Video Evidence--RE |
| Don Eick | Meteorologist--Aviation |

# Parties

- Federal Railroad Administration
- Illinois Commerce Commission
- Canadian National Railway Company
- Brotherhood of Locomotive Engineers and Trainmen
- Brotherhood of Maintenance of Way Employes Division
- United Transportation Union

# Parties

- City of Rockford, Illinois
- Cherry Valley Fire Protection District
- Winnebago County Highway Dept.
- Nicor Gas
- Trinity Tank Car
- Valero Energy Corporation

# Safety Issues

**Effectiveness of the CN's internal emergency communication system**

**Effectiveness of the CN's weather alert policies and rules**

**Vulnerability of the DOT-111 tank car to damage and release of product during derailments**

# Safety Issues

Inspection and maintenance of storm water detention ponds

Accuracy of train consist information

Construction standards for underground pipelines at railroad crossings

Adequacy of storm water drainage system assessment

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# CN Weather Alert Procedures

R. A. Hipskind, IIC

# CN Weather Alert Procedures

- CN's Rule (letter) X states rail traffic controllers (RTC) will notify all trains in the warning areas
- Quick and precise communication is absolutely necessary
- If weather conditions warrant and crews are concerned, they will operate prepared to stop short of obstructions

# CN Weather Alert Procedures

- When the train was arriving at Freeport, the RTC received two weather alerts
- First “Severe Thunderstorm Watch” weather alert received at 5:34 p.m.
- The alert was effective until 10:00 p.m. from MP 74 to MP 108, including Cherry Valley
- The first alert warned of “localized flash flooding” and wind gusts to 70 mph

# CN Weather Alert Procedures

- At 6:36 p.m. a 2nd alert--a Flash Flood Warning--until 10:40 p.m. from MP 50 to 115
- Warning: Watch out for water on the tracks and possible washouts
- CN procedures require trains to proceed prepared to stop within 1/2 the range of vision—not referenced in Rule X

# CN Weather Alert Procedures

- At 7:16 p.m. the crew radioed the RTC requesting authorization to move eastward
- RTC did not discuss weather alert with the crew
- At 7:21 p.m. RTC provided a track authority and signal to depart Freeport
- The RTC made no mention of the weather alerts

# CN Weather Alert Procedures

- At 8:17 p.m. in Rockford, IL, the crew contacted the RTC to request a signal
- At 8:18 p.m. crew received a signal
- The RTC did not convey the weather alert information with the crew at any time

# CN Weather Alert Procedures

- The RTC did not call a track inspector after the first two alerts
- The crew observed high water at the Rockford rail crossing and again at MP 80.5
- At 8:35 p.m. the conductor radioed the RTC to report high water conditions
- One minute later, at 8:36 p.m., the train derailed  when the RTC was requesting the engineering maintenance desk to call out a track inspector to check the track

# CN Weather Alert Procedures

- Track washouts are difficult to detect even when train is at a reduced speed, difficulties determining stopping distances
- CN procedures do not specify that the RTC relate the type of hazard
- Train crew's discretion to determine speed, but may not be able to prevent accident with high water or washout

# Summary

- Had the RTC followed CN procedures
- Alerted crew of the accident train of potential heavy rain and flash flooding
- Crew may have operated at a lower speed
- Reduced the severity of the accident

# Summary

Weather alert policies governing employee compliance with safety rules or procedures existed in several rules and procedural documents.

The guidance for the departments was not the same.


# NTSB