

# Safety Advisory No. 2015-05 Presentation

to the

## 54<sup>th</sup> Railroad Safety Advisory Committee Meeting

November 5, 2015  
Washington, DC



FRA – Office of Railroad Safety

11/9/2015



U.S. Department  
of Transportation  
**Federal Railroad  
Administration**

# Safety Advisory No. 2015-05

Safety Advisory No. 2015-05

Addressing Rail Head Surface Conditions Identified during the Internal Rail Inspection Process



# Safety Advisory No. 2015-05

- On February 16, 2015, a derailment occurred in West Virginia.
- Derailment was attributed to a vertical split head (VSH) failure
- Twenty-seven tank cars derailed
- Approximately 378,000 gallons of crude oil ignited
- Oil burned for 4 days resulting in evacuation of residents within a half-mile radius of the accident site.



# Safety Advisory No. 2015-05

- FRA reviewed the rail test data from the previous December 2014 and January 2015 rail inspections.
- The data indicated a significant rail head surface anomaly or longitudinal rail head defect such as the VSH defect.

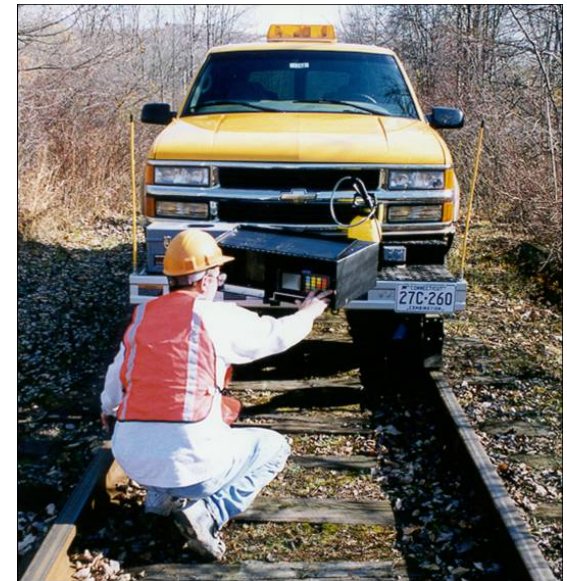




# Safety Advisory No. 2015-05

During the interview conducted by FRA the detector car operator stated:

- 1) The equipment responses were caused by a **“dirty”** rail
- 2) The test system **“couldn’t see”** into the rail due to the surface condition
- 3) He **wasn’t trained** on CSX special instructions regarding suspect SSCs
- 4) The operator felt that a **valid search** was conducted despite the presence of the surface condition.



# Safety Advisory No. 2015-05

FRA concluded:

- that the presence of the rail head surface condition was not sufficient to account for the equipment response in its entirety
- that the rail flaw detection equipment operator should have performed a visual ground examination, or hand test, or both, was warranted.



# Safety Advisory No. 2015-05

## **49 CFR Track Safety Standards Part 213: Section 213.238(b)**

A qualified operator shall be trained and have written authorization from his or her employer to:

- (1) Conduct a valid search for internal rail defects that is continuous and completely covers both rails of the track;
- (2) Determine that the rail inspection equipment is operating within manufacturer guidelines and settings and performing all its required functions as designed; and
- (3) Conduct the inspection according to established track owner and regulatory procedures and guidelines, including determining that all equipment responses are interpreted and attributed to a known condition that is not considered a rail defect.

# Safety Advisory No. 2015-05

## Safety Advisory 2015-05 Recommendations:

- Ensure rail inspection provider(s) carefully scrutinize occurrences of localized rail head surface conditions that can result in an invalid inspection;
- Ensure its rail inspection procedures contain specific instructions to report areas where a valid search could not be conducted;
- Ensure that the employees and rail inspection provider(s) identify locations that exhibit excessive rail head wear and rail head surface conditions;



# Safety Advisory No. 2015-05

- Ensure that its rail flaw detection equipment operators perform an on-ground examination of any suspect rail defect and verify the suspect locations with a hand held instrument as necessary;
- Ensure that its rail flaw detection equipment operators have been adequately trained and are fully capable of determining whether a rail inspection is valid;
- Continue the research and development of technology that will permit real-time comparison of the inspection data;

# Safety Advisory No. 2015-05

- Apply appropriate slow orders, focus on locations that exhibit rail head surface conditions and rail head wear loss approaching critical limits until the rail is replaced or repaired; and
- Aggressively monitor and evaluate its rail inspection provider's performance.



# Questions?

