

# MEMORANDUM

From: Earthjustice, ForestEthics, Riverkeeper, Sierra Club  
To: OMB, DOT, and CEQ  
Date: Friday, March 13, 2015  
RE: **CPC-1232 safety – information and discussion updates**

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## *Issue*

The PHMSA High-Hazard Flammable Train regulations, as proposed, rely on erroneous assumptions about the safety of CPC-1232 tank cars. Given the spate of crude and ethanol rail disasters involving CPC-1232s in recent weeks (and over the past year), the regulations must be updated to reflect new realities of safety, security, and risk management.

## *Railroad Status Quo*

The rail industry estimates that there will be a total of **55,546** CPC-1232 tank cars in flammable liquid service by the end of 2015. This is a significant increase over the **17,300** CPC-1232 tank cars identified by PHMSA and the FRA as being in flammable liquid service during the development of the proposed regulations.

## *Relative Improvements vs. Real Improvements*

Since 2011, all new railcars built have met the industry's voluntary CPC-1232 standard; an improvement over DOT-111 cars in that half-head shields are included, as are improved valves and, to some extent, top fitting protections. The CPC-1232 improvements increasingly include jacketing and full head shields. As such, according to PHMSA, "safety performance is expected to improve significantly" as new cars hit the rails – at an agency-estimated 40% improvement rate of puncture resistance.

Unfortunately, these estimates (of the already-ongoing safety improvements occurring fleet-wide), fail to take into account key aspects of rail safety risk. First, none of the CPC-1232 improvements are rated to withstand puncture at 40 mph or 50 mph (the currently proposed speed limits in certain urban areas and system-wide, respectively) – they're rated for far slower speeds. Second, the CPC-1232 design, according to NTSB, can, along with the DOT-111, almost always be expected to breach in the case of an accident due to the high kinetic energy of a crude oil unit train.

## *The CPC-1232's Recent Track Record*

Over the past month, several derailments around the U.S. and Canada have occurred – spilling an as-yet unknown amount of crude oil into the environment and resulting in damages that are expected to be significant.

- A derailment in Ontario saw an estimated 265,000 gallons of crude oil spilled; another's impact is still unknown.
- In the U.S., a Galena, Illinois spill resulted in 21 railcars (carrying 630,000 gallons) off-track, with an as-yet-unknown number having caught fire; weeks earlier, a West Virginia derailment resulted in 19 cars on fire.

## *PHMSA Calculations and Expectations*

In analyzing the risks and costs of disaster, PHMSA concluded that, over the next two decades, there would be nine accidents with \$1 Billion in damages, and one potential accident with \$5 Billion in damages. These estimates are made, however, under the (above-noted) baseless assumption that the ongoing addition of tens of thousands of new CPC-1232s to the fleet will reduce the potential for danger by 40%.

The four most recent derailments, along with Lynchburg and New Augusta disasters in 2014, all involved CPC-1232s. There is no evidence on the record that these accidents fall outside the "standard" model disaster developed by PHMSA, nor any evidence supporting the idea that these were 40% less destructive than DOT-111s.

## *Conclusions*

In its proposed regulations, PHMSA asked whether all existing CPC-1232s should be allowed to remain in service for 40-50 years, whether they should be exempted from retrofitting requirements, or, if upgrades and retrofits are required, whether there should be a different timeframe for bringing improved cars into service.

On Feb. 23, 2015, National Transportation Safety Board Chair Christopher Hart noted in his official blog that CPC-1232s were only "marginally improved" over DOT-111s; in comments on these proposed regulations, the State of New York suggested that "the CPC-1232 cars have not solved the problem;" the City of Albany noted that the "the enhanced CPC-1232 standards still can cause catastrophe." Given the clear and concerning recent history of CPC-1232s, their marginal (at best) utility in risk reduction, CPC-1232s should be removed from service as expeditiously as the DOT-111s.