

HM-251 – It's Not Just For Crude Oil Anymore

It has only been a few months since HM-251 was published and there are already multiple appeals and at least two lawsuits. Seemingly none of the stakeholders are happy with most of the provisions of the new rule to address Enhanced Tank Car Standards and High Hazard Flammable Trains. Sometimes that is a sign that the rule has spread the economic burden equally across the industry. You will have to determine based upon where you are in the regulatory scheme whether that is true or not for you, but let's take a look at the impact of some of the requirements for the industry as a whole.

The most controversial provision of the rulemaking involves equipping each tank car carrying Crude Oil with ECP Brakes. The proponents claim that one of the major benefits of ECP Brakes is that stopping distances are reduced by up to 70% and in a derailment that may help to prevent other cars from running into the derailed cars ahead. While these may certainly be beneficial effects they are yet unproven in a derailment.

The real issue though seems to be that not one of the accidents that are cited from the new rulemaking would have been prevented by ECP Brakes. After all, DOT claims in the final rulemaking that it is "designed to reduce the consequences and, in some instances, reduce the probability of accidents involving trains transporting large quantities of flammable liquids." But isn't the rulemaking supposed to help prevent the causes of the accidents?

Proponents cite the recent CSX West Virginia accident as being one that would have benefitted from ECP Brakes. Detractors assert that improved track maintenance standards would precluded ECP Brakes from being considered for a role in the derailment in the first place. There is very little agreement on this issue but everyone admits that ECP Brakes will be very expensive to implement.

The provisions for ECP brakes also have far reaching consequences, well beyond that of Crude Oil. For the system to work, the locomotives and the railroad buffer cars will each have to be equipped (though the final rule doesn't require them to be); buffer cars are often old equipment whose economic value doesn't equal the cost of the new installation.

Furthermore, these regulations are not just for Crude Oil anymore. Even mixed freight trains, known as manifest trains, may also come under this new rule because most of the requirements in this rule pertain to what DOT defined by regulation as a "High-hazard flammable train (HHFT)". This means a single train transporting 20 or more loaded tank cars of a Class 3 flammable liquid in a continuous block or a single train carrying 35 or more loaded tank cars of a Class 3 flammable.

What this means to you is that your load of Methyl Methacrylate Monomer or Acrylonitrile, both flammable liquids, will be subject to most of the requirements in this rule. Even if you only ship a few cars at a time, you don't know what else will be in the train. There is a risk that they will be set aside to wait for the next train if your cars don't comply or in order to reduce the number of flammable liquid cars in a train. Now, let me say that the railroads have always been good at figuring out train make-up but an HHFT designation means that your car will travel to you at a slower rate than expected and of

course, the slower the journey the more cars you have to have to supply the same amount of material for your facility.

The biggest provision on everyone's mind is, of course, the investment in new tank cars. We only have to look back at 2011 to see an investment of billions of dollars by the industry not provide expected results.

Of course we are talking about the CPC-1232 cars and for the most part, those cars will be our tank car dinosaur now that that design will be viable for only a few years rather than four to five decades. The new DOT 117 tank cars will have high tensile TC-128 steel, thicker than in previous years, thicker tank car heads, and a mandatory jacket. Beneath that jacket will be thermal protection and insulation and even though insulation and thermal protection are not designed for impacts everyone secretly hopes that both will help de-energize some of the derailment forces. Add enhanced bottom outlet valve handles and rollover protection and you know have what is essentially a DOT 105 tank car designed for volatile flammable liquids.

The key question is: will all this help? The answer unfortunately is a tricky one and as with most safety questions, we will never really know how many accidents we prevented or in this case, how many tank car breaches were prevented. "Time is the overseer of all things" and this dilemma is no exception.

~Wendy J. Buckley

Updated bio:

When Wendy made the decision to volunteer at a local fire department while in college she had no way of knowing that this decision would change the course of her life. She developed a passion for the hazardous materials field during her 10 years with the fire department. She started out as a fire fighter but later became a member of the hazardous materials response team.

Wendy continued to volunteer at fire departments in both Virginia and Maryland for ten years before accepting a job with the Federal Railroad Administration as a trainee hazardous materials safety inspector and for the State of New Jersey as a journeyman hazmat inspector. She went on to work for Amtrak's Inspector General as an investigator. Wendy also served as an instructor for a premier hazardous materials training firm. She eventually took a job as the sole hazmat specialist for North American Regulatory Affairs with a global laboratory supply distributor.

Drawing on the knowledge and experience that she has gained over the years Wendy founded her own hazardous materials and hazardous waste consulting firm. Specialty Transportation and Regulatory Services (STARS) ensures that various hazardous materials are safely transported around the United States and Canada. Wendy started this company with one goal in mind. She wants to help companies develop cost effective ways to comply with both state and federal regulations in a safe and efficient manner. Wendy also travels around the country speaking on

various topics related to the transportation and management of hazardous materials for numerous organizations that include National Industrial Transportation League (NITL), Bureau of Explosives (BOE/AAR), Dangerous Goods Advisory Council (DGAC), and Dangerous Goods Symposium (DGS – formerly DGIS) by LabelMaster. She holds several degrees from private and public Universities.