

Owner/ Operator Hauling Asphalt Flux Dies After Driving into a Ravine and Striking Trees

Incident Number: 11KY072



Photograph of semi involved in this incident. Property of KY FACE.

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Kentucky Fatality Assessment and Control Evaluation (FACE) Program

Incident Number: 11KY072

Release Date: August 13, 2012

Subject: Owner/ Operator Hauling Asphalt Flux Dies After Driving into a Ravine and Striking Trees

Summary

In the early morning of a late summer's day, a 50 year old semi-truck driver was transporting a load of asphalt flux. He had been driving for approximately five hours and was getting ready to exit the interstate when for an unknown reason, the unit left the interstate, sideswiped a SUV parked on the shoulder, drove through a guardrail then proceeded into a ravine. A passing motorist called emergency services, who upon their arrival contacted the local coroner. The driver had been ejected from the cab and was pronounced dead at the scene.

To prevent future occurrences of similar incidents, the following recommendations have been made:

Recommendation No. 1: Companies should provide new and refresher commercial driver safety training for company drivers that addresses driver distraction and includes defensive driving techniques.

Recommendation No. 2: Vehicle stabilizer and sensory systems should be mandatory equipment on all commercial vehicles.

Recommendation No. 3: Semi tractor-trailer drivers should be trained to recognize signs of fatigue and drowsiness and when to seek appropriate rest areas

Background

The driver was an owner/ operator and an officer in the company to which he was leased. Classified as an interstate company, it had five power units, and five drivers that transported liquids and gasses. He had driven asphalt flux for two years for the company. For three years previous to hauling tankers, the driver had pulled doubles. He had driven commercial vehicles since 1992 for the company. His driving experience previous to 1992 is unknown.

On the day of the incident, the temperature ranged from 60 degrees Fahrenheit to 64 degrees Fahrenheit with precipitation.

Investigation

The Kentucky Fatality Assessment and Control Evaluation Program was notified of an occupational fatality involving an owner/ operator hauling asphalt flux. Interviewed for this report was the towing company, the environmental clean-up company, emergency personnel, and a company officer. A site visit was made the day of the incident, and photographs were taken.

On a late summer morning, just after midnight, a 50 year old owner/ operator driving a 1999 semi equipped with a sleeper cab began pulling a tanker trailer loaded with asphalt flux. The tanker held approximately 5,000 gallons and the contents had a temperature of approximately 375 degrees Fahrenheit. It was placarded as hazardous material.

The owner/ operator drove this route routinely several times a week. It was approximately 200 miles in each direction, and he would be loaded with the asphalt flux, make the delivery, and return the same day. Initially the route took the driver south, then west.

It was approximately 5:00 AM, and the driver was traveling west on a four lane divided interstate and the speed limit was 70 miles per hour when he approached his exit. It would take him onto a local highway where his customer was located. The exit was unlit and dark; the pavement was asphalt and wet from a previous rain.

As the driver approached the exit, he crossed the fog line and sideswiped the driver's side of an SUV parked in the emergency lane with the semi's right steer tire. After striking the SUV with the steer tire, the semi became uncontrollable and went through the guardrail on the north side of the west bound lane emergency lane. Upon going through the guardrail, the unit proceeded downward into a ravine where tanker dislocated from the semi. Both the semi and tanker struck numerous trees and received considerable damage. According to the police report, the driver had utilized the restraint system, but was still ejected from the semi.

A passing motorist saw debris on the interstate and called emergency services. A sheriff's deputy arrived and seeing the guardrail had been compromised, began looking for a vehicle. He saw the semi in the ravine, contacted dispatch for an ambulance, fire truck, and back-up. Upon finding the driver in the brush, emergency personnel contacted the local coroner who arrived and declared the driver dead at the scene.

The police report states inattention was a primary factor in this incident. Speed was not listed as a factor.

This incident created a seven mile backup on the interstate with one lane closure for approximately 10 hours.

Cause of Death

The cause of death was due to blunt force trauma.

Recommendations and Discussions

Recommendation No. 1: Companies should provide new and refresher commercial driver safety training for company drivers that addresses driver distraction and includes defensive driving techniques.

Company truck drivers should receive new and refresher commercial driver training semiannually. This training should include defensive driving techniques and highway incident management strategies. Training should also include education on the prevention of jackknife, roll-overs and the causes of such occurrences. According to two truck driver training schools, defensive driving techniques should include looking eight to ten seconds ahead of the truck and how to deal with obstacles in the roadway (05KY089). Training should also include aids to help drivers stay focused on driving and not become distracted. Companies should provide refresher training for all drivers to address driving habits including appropriate speed for driving conditions, wearing safety belts, space management, and how to avoid becoming distracted while driving and fatigued.

Recommendation No. 2: Vehicle stabilizer and sensory systems should be mandatory equipment on all commercial vehicles.

To reduce roll-overs, jackknives, fishtails, and other dangerous vehicle maneuvers, fleet owners and owner-operators should consider equipping all semi tractor-trailers with vehicle stabilizer and sensory systems. The Federal Motor Carrier Safety Administration's Code of Federal Regulations, 393.55 requires commercial vehicles manufactured after 1999 to be equipped with automatic braking systems (ABS). The semi-tractor trailer involved in this incident had been manufactured in 2003 and was equipped with an ABS, but not a stabilizer system. When ABS is applied by the driver prior to striking or making an avoidance maneuver, the electronic stability program when coupled with ABS helps prevent the semi-tractor trailer from jackknifing. If the ABS is not activated quickly enough, the electronic stability program can sense incorrect vehicle movement. Independent of driver input or action, the electronic stability program will override the driver, engage, and prevent the semi-tractor trailer from jackknifing or rolling-over. Another system available for trucks is a sensory system which uses forward and side-sensing radar to inform the driver that he/she is too close to the vehicle in front of them or to their immediate side. Two indicators, a light on the dash board and an audio signal, will alert the driver of close proximity to the vehicle in front or side and will automatically slow the truck down thus expanding the driver's reaction time.

Recommendation No. 3: Semi tractor-trailer drivers should be trained to recognize signs of fatigue and drowsiness and when to seek appropriate rest areas.

Fatigue is one of the main occupational hazards commercial drivers face. Commercial drivers should be educated to recognize signs of fatigue while driving. According to an article, "Driver Fatigue: The Dangers of Driving Sleepy", signs of driver fatigue include daydreaming, straying out of the lane, excessive yawning, feeling impatient and/or stiff, heavy eyes, and reacting slowly. Methods to avoid driver fatigue include being well rested, getting enough sleep, taking breaks every two hours where the driver may take a nap, eat a snack, avoiding consumption of alcohol, having a driving plan, and staying hydrated.

Keywords

Inattention
Tanker trailer

References

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2. <http://www.rta.nsw.gov.au/roadsafety/fatigue/index.html>
3. Accident Analysis and Prevention 38 (2006) 1127-1136, “The development of a naturalistic data collection system to perform critical incident analysis: An investigation of safety and fatigue issues in long-haul trucking”
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Photograph of tanker hauling asphalt flux involved in this incident. Property of KY FACE.