



PARTY SUBMISSION

July 31, 2021

Via E-mail [REDACTED]

Robert Accetta
Investigator-In-Charge
National Transportation Safety Board
Office of Highway Safety
490 L'Enfant Plaza
Washington, DC 20594

Re: Motor Coach Overturn and Multiple Truck-tractor Semi-trailer Combination Vehicles and Passenger Car Collision on Interstate 70 (Pennsylvania Turnpike)

Date and Time: January 5, 2020; about 3:30 a.m.

Location: Mount Pleasant, Westmoreland County, Pennsylvania

NTSB #: HWY20MH002

INTRODUCTION

United Parcel Service, Inc. ("UPS") respectfully submits the following proposed findings of fact, conclusions, probable cause, and safety recommendations for preventive action in its capacity as an NTSB Party Member in response to your Memorandum and pursuant to Section XV of the Party Member agreement.

FINDINGS OF FACT

Accident Site

1. On Sunday, January 5, 2020, about 3:30 a.m. eastern standard time, a multi-vehicle and multi-sequenced crash occurred in the westbound lanes of Interstate 70 (I-70, the Pennsylvania Turnpike) at or around mile-marker 86.1 near Mount Pleasant, Westmoreland County, Pennsylvania. The posted speed limit on I-70 in the area of the crash is 70 mph.

2. This section of the Pennsylvania Turnpike in the vicinity of the crash was originally designed in 1938 and built in 1939-1940. It was then reconstructed and widened in 2005.
3. The horizontal alignment immediately prior to the crash location consists of a 1,296-foot radius curve to the left for motorists travelling in the westbound direction of the Pennsylvania Turnpike.
4. The vertical alignment in the vicinity of the crash consisted of a downgrade slope negative 3.008% grade for motorists traveling in the westbound direction.
5. The Pennsylvania Turnpike in the vicinity of the crash consists of two westbound travel lanes. Each of the westbound travel lanes was approximately 12-feet wide. The total width of the two westbound travel lanes was approximately 24-feet wide. A paved shoulder exists adjacent to the rightmost travel lane and leftmost travel lane in the westbound direction of travel. The paved shoulder adjacent to the rightmost travel lane was approximately 12-feet wide. The paved shoulder adjacent to the leftmost travel lane was approximately 8-feet wide. There is no artificial lighting in the area.
6. A 52-inch tall concrete barrier existed in the median. This barrier separated the westbound travel lanes and the eastbound travel lanes. A 52-inch tall concrete barrier also existed adjacent to the outside paved shoulder in the westbound direction of travel along the 1,296-foot radius curve. The 52-inch tall concrete barrier adjacent to the outside paved shoulder in the westbound direction of travel terminated approximately 377 feet prior to the crash location.
7. The accident site has an elevation of approximately 1,570 feet.

Accident Narrative

8. The crash sequence began with a westbound 57-passenger 2005 Van Hool motor coach, model c2045, driven by a 58-year-old male driver, Shuang Qing Feng (“Feng”), occupied by 61 passengers, and operated by Z&D Tour, Inc. (“Z&D”) traveling westbound on Interstate 70.
9. While descending a 3-percent slope and traveling through the curve, the motor coach veered from the travel lanes toward the center median, and onto the paved left shoulder (equipped with grooved rumble strips). The driver then steered and the motor coach veered toward the right, crossed all travel lanes and the right shoulder (also equipped with grooved rumble strips), and collided with a steep earthen embankment. The motor coach then overturned and rolled onto its passenger side and slid to a stop. At rest, the motor coach stretched approximately perpendicular across the westbound lanes and shoulders, with its underside facing oncoming traffic (facing east). The front of the motor coach contacted the concrete highway divider and overturned a twelve foot wide section of the concrete barrier.

10. The crash data from the motor coach indicates that the motor coach attained a reported speed of 77 mph just before entering the curve preceding the crash location. This speed exceeded the post speed limit of 70 mph by 7 mph.
11. After the motor coach came to rest, it was struck by a 2018 Freightliner Cascadia truck-tractor hauling a 2019 Hyundai Translead (53-foot van body trailer), operated by FedEx Ground Package System, Inc., (the “FedEx truck”) that was traveling in the right lane. The FedEx truck, operated by Brandon Stowers and occupied by a 35-year-old male co-driver, came to rest blocking the left lane and median shoulder. The motor coach continued to block the westbound lanes and shoulders.
12. A 2018 Freightliner Cascadia truck-tractor hauling a 2018 Stoughton, 53-foot van body trailer, operated by United Parcel Service, Inc. (“UPS truck No. 1”), that was traveling in the inside westbound lane was unable to stop in advance of the motor coach and FedEx truck blocking all lanes. The UPS truck No. 1 was operated by Daniel Kepner (“UPS driver #1” or “Kepner”). Penske owned UPS tractor No. 1.
13. UPS truck No. 1 was also occupied by a 48-year-old male co-driver.
14. These accidents happened on a curve where the road surface elevation was significantly lower than the elevation of the terrain beyond the right shoulder of Interstate 70. This limited the visibility of the vehicles which were ahead in the travel lanes.
15. The presence of the overturned motor coach and the FedEx truck had to be detected against the background of the cut slope and the trees that were to the right of the right shoulder. Detection of the motor coach by approaching drivers required realizing that there was/were an object(s) closer to the traveling vehicle than the cut slope and the trees.
16. The accident site is obscured by the vegetation along the eastbound travel lanes of Interstate 70.
17. A 2007 Mercedes-Benz C280 four-door sedan (the “Mercedes-Benz car”), occupied by a 46-year-old male driver and two 20-year-old male passengers, was traveling west on Interstate 70. The Mercedes-Benz car stopped adjacent to the UPS truck No. 1 near the right roadside embankment.
18. A second 2018 Cascadia truck-tractor, this one hauling a 28.5-foot 2020 Stoughton van body trailer, and also operated by United Parcel Service (“UPS truck No. 2”), swerved right to avoid the other vehicles, departed the road and the right shoulder, and traveled partly up the earthen embankment. UPS truck No. 2 was driven by Peter Carle (“UPS driver #2” or “Carle”). UPS truck No. 2 then came to rest between the embankment and the Mercedes-Benz car. UPS truck

No. 2 was occupied by a 62-year-old male driver and a 45-year-old co-driver. Penske owned UPS tractor No. 2.

19. As a result of the crash, the motor coach driver, two motor coach passengers, and the driver and co-driver of UPS truck No. 1 died. About 57 motor coach passengers were reportedly injured.
20. The driver of the Mercedes-Benz car, its two passengers, and the driver and co-driver of UPS truck No. 2 were not injured.
21. Preceding the area of Interstate 70 where the impacts occurred, the vehicles would have traversed three rightward curves and two additional leftward curves.
22. The Westmoreland County Coroner's Office recovered and transported the deceased individuals to Westmoreland County Forensic Science Center in Greensburg, PA. The autopsies were performed by a forensic pathologist at the request of the Coroner of Westmoreland County. During the autopsies, the pathologist supervised the collection of toxicological specimens.
23. The UPS truck No. 1 had a Detroit Diesel DD13 engine controlled by a DDEC ECM system. The UPS truck No. 1 ECMs were downloaded. There was no crash relevant data available.

Weather Conditions

24. The official National Weather Service ("NWS") forecast reporting site closest to the accident site is the Arnold Palmer Regional Airport (KLBE) in Latrobe, Pennsylvania. It is approximately 8 miles north of the accident site. KLBE issued observations every hour during the period the air traffic control tower was open. At the approximate time of the accident, KLBE reported that skies were overcast and the temperature was 30 degrees Fahrenheit.
25. During the 24 hours preceding the accident, the weather conditions included periods of rain, mixed precipitation, turning over to all snow and restricted visibility.
26. During the overnight hours of January 4, 2020 to January 5, 2020, the highway was wet and subject to refreezing of some of the precipitation due to the colder temperatures.
27. The Lytx system video from the FedEx truck shows that there was light precipitation (snow, rain mix) and no ambient lighting on the Pennsylvania Turnpike as the FedEx truck approached the overturned motor coach and shortly before the two UPS trucks approached the scene.
28. The NWS Area Forecast Discussions ("NWS AFD") are issued by each weather forecasting office to describe the short term weather conditions within their region. The NWS AFD also give some reasoning behind the forecast and are generated roughly every 6 hours. No weather

watches, warnings, or advisories for this area were in effect at the time of issuance of the discussion.

29. The NWS Hazardous Weather Outlook current at the time of the accident indicated that no weather advisories or warnings were current for Westmoreland County -- where the accident occurred. The only Winter Weather Advisory in effect was for northern West Virginia, Tucker County.

Lighting

30. Astronomical conditions were obtained from the United States Naval Observatory data for Mount Pleasant, Pennsylvania. At the time of the accident, both the sun and the moon were more than 15° below the horizon -- and provided no illumination.
31. No highway lighting existed in the westbound and eastbound directions of the Pennsylvania Turnpike in the vicinity of the accident.

Motor Coach

32. The motor coach was not equipped with passenger restraints. Passenger restraints are currently required equipment on motor coaches manufactured after November 25, 2016. Z&D had not retrofitted the motor coach to equip it with passenger restraints.
33. The motor coach driver, Feng, was involved in two crashes in the 5 five months leading up to this accident. He was involved in a crash on July 17, 2019 in New Jersey and was involved in a crash on September 14, 2019 in New York.

UPS

34. Globally, UPS employs approximately 600 safety personnel, expends over approximately 6.5 million personnel hours, and approximately \$238,000,000US annually in safety training and safety related functions.
35. UPS follows a safety culture of proactive, constant, and continuous driver training from initial safety inculcation, through annual safety check rides, compliance training, computer-based training, and daily pre-work communications meetings. For over-the-road operators of tractor-trailer combinations ("feeder drivers"), UPS supervisory personnel communicate one on one with drivers.
36. UPS driver training addresses operations during varying road and weather conditions through UPS's *Space and Visibility* Training Program, which is completed on an annual basis. This training consists of an annual safety ride where the driver is accompanied by a management trainer. The management trainer rides along with the driver to provide observations, explain training precepts, provide commentary, and provide overall coaching.

37. The driver of UPS truck No. 1 had completed this training approximately 4 ½ months prior to this accident (on August 16, 2019).
38. UPS driver #1 had no traffic violations in the 10 years preceding this accident.
39. UPS driver #1 was off duty for 4 days leading up to the crash.
40. UPS maintains its own fleet, but in certain business models, leases equipment from Penske. The two tractors being operated by UPS drivers in this accident were owned by Penske. They were governed at 70 mph.
41. In accordance with the lease contract, UPS requires that Penske furnish tractors to UPS which are equipped with a crash mitigation system (“CMS”).
42. UPS follows a driver qualification process for hiring drivers. This includes a background check performed by a third party vendor. All applicants are required to have a valid CDL and be qualified under parts 383 and 391 of the FMCSR. Drivers must pass a road test administered by a certified driver coach. Drivers undergo entry level driver training process that is a minimum of 80 hours and includes both productive and non-productive training. This comprehensive training includes the following; classroom instruction, shop and field training, on road training, defensive driving training, and safe work method training. The trainees also receive a minimum of 5 comprehensive safety training rides under the instruction of a qualified management trainer. Drivers hold the appropriate class of CDL and proper endorsements for their driving position.
43. UPS trains all its supervisory personnel on detecting drug and alcohol use/abuse, including symptoms of abuse, signs of impairment, and steps to take to ensure the safety of the employee.
44. UPS maintains a “Circle of Honor” program to recognize drivers who have achieved 25 years of safe driving. Through December 31, 2020, 10,779 UPS members had achieved this distinction. This represented 35,300 total years of safe driving.
45. UPS utilizes an Electronic Logging Device (ELD) to account for the driver’s hours of service and to complete the Driver Vehicle Inspection Reports (“DVIRs”). The device used was IVIS Next Gen Feeder Device for UPS truck No. 1 and UPS truck No. 2. The device was contained within a cellular phone device. IVIS was an in-house application developed by UPS, self-certified and was on the approved list of ELDs maintained by FMCSA.
46. UPS required feeder drivers operating truck tractors leased from Penske, like UPS truck No. 1 and UPS truck No. 2, to complete paper DVIRs. It was common practice for the drivers to utilize DVIRs provided by Penske. UPS truck No. 1 had both DVIRs from Penske and UPS on file.

47. The driver qualification (“DQ”) file for UPS driver #1 followed 49 CFR 391.51. Within the DQ for UPS driver #1, the driver had a medical certificate on file which showed an issue date of October 25, 2019 and was good for one year with an expiration date of October 25, 2020. The DOT physical was performed by a medical professional that was on the national registry.
48. At the time of this accident, UPS driver #1 held a valid Pennsylvania Class A CDL with endorsements for towing double and triple trailers. The Pennsylvania CDL was originally issued on March of 1991 and has an expiration date of April of 2022. The driver’s license was not restricted.
49. UPS driver #1 was hired for a full-time feeder driving position in November of 2014. Prior to obtaining full-time employment as a feeder driver, UPS driver #1 was employed by UPS as a casual (part-time) feeder driver from May of 2012 to October of 2014. He also held a previous commercial driving job for Hillandale Farms as a loader/driver from September 2012 to May of 2014.
50. UPS driver #1 driver had two FMCSA regulated alcohol and controlled substance tests on file prior to the crash. The UPS driver #1’s pre-employment testing was completed with a negative test result. UPS driver #1 was selected for a random controlled substance test on September 25, 2018. The test results were negative.
51. UPS driver #1 was within federal hours of service limitations at the time of this accident.
52. Maintenance and inspection records for UPS truck No. 1 were obtained from UPS. There were no discrepancies identified with the maintenance records.
53. UPS truck No. 2 was driven by Peter Carle (“UPS driver #2” or “Carle”).
54. At the time of this accident, UPS driver #2 held a valid New Jersey Class A Commercial Driver’s License (CDL), with endorsements for double and triple trailers and tank vehicles. The New Jersey CDL had an expiration date of December 2020. His license was not restricted. He first obtained a CDL in 1979.
55. UPS driver #2 previously held CDLs in Pennsylvania, Connecticut, and Oklahoma with over 15 years of commercial driving experience. With the 15 years of prior experience and his time with UPS, the driver had roughly 30 years of commercial driving experience.
56. UPS driver #2 was hired by UPS for a full-time feeder driving position on September 25, 2005. According to the UPS driver #2’s application and the background check maintained in the driver’s qualification file, UPS driver #2 held 4 DOT regulated safety sensitive (driver) positions since obtaining a CDL in 1994.
57. UPS driver #2 had 7 FMCSA regulated alcohol and controlled substance tests during his employment with UPS and before this accident. The pre-employment test result was negative.

UPS driver #2 driver was then selected for random controlled substance and/or alcohol tests on:

- June 28, 2010
- August 12, 2011
- August 16, 2011
- September 6, 2011
- June 30, 2017
- August 26, 2019

All test results were negative.

58. UPS driver #2 underwent post-accident tests for alcohol and controlled substances. The results were negative.
59. UPS driver #2 was on vacation the week prior to the crash – the crash occurred on his first day back to work.
60. UPS driver #2 underwent a CDL Medical Examination on September 3, 2019 and was issued a medical certificate valid for 1 year.
61. UPS Vehicle #2 was a 2018 Freightliner Cascadia towing a 2020 28-ft Stoughton semitrailer. The annual inspection for the truck tractor and semitrailer were both valid. The maintenance records provided by the carrier for these vehicles were compliant with the FMCSR.
62. UPS driver #2 was within federal hours of service limitations at the time of this accident.
63. UPS has a lease agreement with Penske that applied to the UPS tractors No. 1 and No. 2. Pursuant to that agreement, UPS pays a cost per month and per mile and Penske is responsible for all maintenance, other than accident damage or damage from driver abuse. UPS would return the leased vehicles after approximately 3 years.
64. In accordance with the lease agreement, Penske performed all maintenance upon UPS tractor No. 1 on no less than six occasions during the seven months immediately preceding this accident. After each service visit, Penske released UPS tractor No. 1 to return to service over the road.
65. In accordance with the lease agreement, Penske determines whether the leased tractor is roadworthy.
66. UPS driver training includes CMS. Among other things, UPS drivers are trained on the significance of the CMS, how it works, what it is supposed to do, and to note whether a CMS

warning light is illuminated on the dashboard. UPS's driver training *Space & Visibility* ride form was updated in October of 2020 to specifically include a line item under the "pretrip" section identifying "CMS" as something to be checked. Prior to the change in the ride form line item, UPS oral driver training encompassed CMS devices. In August of 2021, UPS will be further updating the ride form to read: "Ck, All Sensors, CMS (Warning Lights, Damage), Lane Departure." UPS will also update its methods manual regarding CMS warning lights.

67. An inoperable CMS does not render a vehicle in an out of service condition pursuant to the FMCSR.
68. A series of toxicology testing was performed upon blood specimens attributed to UPS driver #1. Testing was performed by two separate laboratories, NMS Labs and the Federal Aviation Administration's Forensic Services. Test results from both labs were consistent in detecting duloxetine, a medication for which UPS driver #1 was known to have been prescribed by his treating doctor for chronic aching in his bones, beginning in February of 2019. Test results from both laboratories found a low level of ethanol. Neither test result detected any methamphetamine or amphetamine, or any other narcotics. The test results from these two labs were consistent in what was found.
69. The blood tested by NMS Labs and the Federal Aviation Administration's Forensic Services came from UPS driver #1.
70. Separately, in connection with toxicology testing aimed at testing UPS driver #1's blood, the Pennsylvania Department of Health Bureau of Laboratories tested a different tube of blood which tested positive for methamphetamine and its primary active metabolite, amphetamine. The specimens containing methamphetamine and amphetamine did not come from UPS driver #1.

CONCLUSIONS & PROBABLE CAUSE

1. The motor coach driver was inattentive, drowsy, and/or fell asleep, causing the motor coach to lose control at a high rate of speed and depart the travel lanes. This resulted in a single vehicle accident whereby the motor coach came to block all travel lanes with its unlit and dark undercarriage facing oncoming traffic traveling in the westbound lanes of the Pennsylvania Turnpike.
2. The overturned motor coach and FedEx truck across all travel lanes were not reasonably foreseeable by UPS driver #1.
3. The vehicles spread across all travel lanes and the shoulder was not reasonably foreseeable by UPS driver #2.
4. No corporate conduct on the part of UPS was any probable and/or factual cause of this accident.

SAFETY RECOMMENDATIONS

1. Require buses manufactured prior to November 25, 2016 to be equipped with passenger restraints.
2. UPS driver training already trains drivers to examine the dashboard for illuminated symbols and trains drivers regarding the CMS. Among other things, UPS drivers are trained on the significance of the CMS, how it works, what it is supposed to do, and to note whether warning lights are illuminated on the dashboard. UPS's driver training *Space & Visibility* ride form was updated in October of 2020 to specifically include a line item under the "pretrip" section identifying "CMS" as something to be checked. Prior to the change in the ride form line item, UPS oral driver training encompassed CMS devices. In August of 2021, UPS will be further updating the ride form to read: "Ck, All Sensors, CMS (Warning Lights, Damage), Lane Departure." UPS will also update its methods manual regarding CMS warning lights.