



**MOTOR CARRIER FACTORS GROUP CHAIRMAN'S
FACTUAL REPORT**

MULTIPLE VEHICLE ACCIDENT

Cranbury, NJ

HWY14MH012

(35 pages)

**NATIONAL TRANSPORTATION SAFETY BOARD
OFFICE OF HIGHWAY SAFETY
WASHINGTON, D.C.**

**MOTOR CARRIER FACTORS GROUP CHAIRMAN'S
FACTUAL REPORT**

A. CRASH INFORMATION

Location: New Jersey Turnpike (I-95) northbound near milepost 71.4; Cranbury, Middlesex County, New Jersey

Vehicle #1: 2011 Peterbilt truck-tractor in combination with a 2003 Great Dane semitrailer

Operator #1: Walmart Transportation, LLC

Vehicle #2: 2012 Mercedes-Benz Sprinter limo van

Operator #2: Atlantic Transportation Services, LLC

Vehicle #3: 2011 Buick Enclave

Vehicle #4: 2011 Ford F-150

Vehicle #5: 2005 Nissan Altima

Vehicle #6: 2006 Freightliner truck-tractor in combination with a 2001 Utility semitrailer

Operator #6: 4 Way Transport, LLC

Date: June 7, 2014

Time: Approximately 1:00 a.m. eastern daylight time

NTSB #: HWY14MH012

B. MOTOR CARRIER FACTORS GROUP

Michael Fox, Motor Carrier Factors Investigator, Group Chairman
NTSB Office of Highway Safety
490 L'Enfant Plaza East, S.W., Washington, DC 20594

Trooper Robert Kopec, Group Member
Truck Enforcement Unit
New Jersey State Police
Cranbury, New Jersey 08512

Detective Mark Smith, Group Member
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New Jersey State Police
West Trenton, New Jersey 08628

George “Bill” Sleeth, Group Member
General Transportation Manager
Walmart Corporate Office
Bentonville, Arkansas 72716

C. CRASH SUMMARY

For a summary of the crash, refer to the *Crash Summary Report* in the docket for this investigation.

D. DETAILS OF THE MOTOR CARRIER FACTORS INVESTIGATION

This investigative report addresses the motor carrier history and operations of Vehicle 1 involved in this accident, a 2011 Peterbilt truck-tractor in combination with a 2003 Great Dane semitrailer (hereafter the 2011 Peterbilt), owned and operated by Walmart Transportation LLC. of Bentonville, Arkansas. This report also details the employment history of the driver of vehicle 1, (referred to as the “accident driver”). This report also addresses the two additional motor carriers involved in the accident; Vehicle 2 owned and operated by Atlantic Transportation Services LLC and Vehicle 6 owned and operated by 4 Way Transport LLC. This report includes the factual findings related to the hours-of-service (HOS), roadside inspection history, vehicle history, and government oversight of all three motor carrier operations.

1. Walmart Transportation LLC History and Operations

1.1. Carrier History

The motor carrier of Vehicle 1 in this accident was Walmart Transportation LLC. According to the Federal Motor Carrier Safety Administration (FMCSA) Motor Carrier Management Information System (MCMIS), the carrier was issued US Department of Transportation (USDOT) number 63585 in 1974.¹ The carrier is registered as both a “Private Property Carrier” and a “For-Hire” motor carrier.² The carrier has active operating authority and was issued motor carrier (MC) number 311233 on December 6, 1996. The carrier registration predates the New Entrant Program. The carrier transports general freight, beverages and refrigerated foods for Walmart and Sam’s Club stores nationally. The carrier is also registered to transport Hazardous Materials (HM). Per its

¹ MCMIS Report for USDOT number, see Attachment 1.

² Title 49 *Code of Regulations* (CFR) 390.5 defines a Private Motor Carrier as a person who provides transportation of property or passengers, by commercial motor vehicle, and is not for hire. The regulation also defines a “For-Hire” motor carrier as a person engaged in the transportation of goods or passengers for compensation.

last form MCS-150, the carrier had 7,222 drivers, 6,239 truck-tractors, and 6,239 straight trucks companywide.³ The Walmart Transportation LLC corporate office is located in Bentonville, Arkansas. According to safety officials, the carrier currently has a driver turnover rate of 5 percent.

1.2 Motor Carrier Operations

The carrier operates a national transportation system under a distribution center (DC) network throughout the United States. The accident driver and accident vehicle involved in this crash originated from the Walmart DC located in Smyrna, Delaware. The local DC houses 92 truck-tractors consisting of 74 Freightliners and 18 Peterbilts. The DC also houses approximately 450 semitrailers. The Smyrna DC has 117 commercial motor vehicle (CMV) drivers assigned. Drivers are paid bi-weekly and are paid for both mileage and activity. The Smyrna DC services only Walmart stores and has a delivery area covering: Delaware, New Jersey, Northern Virginia, the Eastern Shore area of both Maryland and Virginia, and the City of Philadelphia, PA.

1.3 Company Hiring Practices

According to Walmart safety staff, the hiring process consisted of the following:

1. The applicant fills out an electronic application on the Walmart website.
2. The application is scanned to the corporate office.
3. If the driver meets the minimum qualifications, then the driver application process will continue.⁴
4. Walmart HQ staff (Safety Specialist) will screen the application and verify that the candidate meets the minimum qualifications.
5. Walmart recruiter/specialist will conduct a scheduled phone interview.
6. If the candidate passes the phone interview, then the recruiter will schedule a road test at the local office.
7. Next the driver will go through an informal interview, conduct a pre-trip inspection and conduct a road test at the local DC. Upon successful completion of the pre-trip inspection and road test, the driver candidate will receive a *conditional* job offer. The driver candidate will then submit to a pre-employment drug test, DOT physical and criminal background check. The driver candidate's employment background is then investigated pursuant to § 391.23.
8. Only after the driver has successfully completed the pre-employment drug test, and USDOT physical, criminal background check and been qualified under Part 391 does the driver will receive a final job offer.

1.3.1 Minimum Driver Qualifications

In order to qualify for an over-the-road (OTR) position with Walmart, the applicant must meet the following minimum qualifications:

³ MCS-150 Report dated January 17, 2014, see Attachment 2.

⁴ Walmart Minimum Driver Qualifications, see 1.3.1.

- Interstate Class A Commercial Driver’s License with Hazmat Endorsement (or willingness to obtain Hazmat Endorsement – including cleared background check – within 60 days of a conditional offer).
- 3 years of current over-the-road tractor/trailer experience.
- Minimum of 50,000 miles over-the-road tractor/trailer experience in each of the last three years.
- Minimum of 250,000 miles over-the-road tractor/trailer experience.
- No preventable accidents while operating a CMV in the last 3 years.
- No preventable accidents while operating a CMV resulting in a fatality (lifetime).
- No preventable USDOT-recordable accidents while operating a CMV in the last 10 years.
- No more than two moving violations while operating a personal or commercial motor vehicle in the last 3 years.
- No serious traffic violations while operating a CMV in the last 3 years.
- No convictions for DUI, DWI, OUI, or reckless driving with alcohol/drugs involved within the last 10 years.⁵

1.4 Company and Safety Culture

The company/safety culture includes: relationships with customers, vendors, fellow associates, and the motoring public. The corporate and safety culture are framed by company policies and procedures. Carrier policies and procedures are reviewed with newly hired drivers and are described in detail in the driver’s handbook. The company states that its culture is founded on three core beliefs:⁶

1. Respect for the individual.
2. Service to customer.
3. Strive for excellence.

One of the carrier’s primary philosophies, which it emphasizes to its drivers, is that as a Walmart driver “you are considered an “Ambassador of the Road.” This philosophy stresses the belief that Walmart drivers are “courteous and safe,” that their trucks are essentially “a rolling Walmart billboard,” and that every decision a driver makes on the road, at a store, or in a customer location can be a direct reflection of the company image.

The carrier utilizes a multitude of programs to foster its safety culture. Some of these programs include safety awareness programs, driver safety incentive pay, individual safe mileage awards, lights on for safety, management road observations, million mile safety awards and cookouts, driving safety awards, driving competitions, safety newsletters, distracted driver training, and recurrent annual training. The carrier also utilizes a variety of safety slogans and safety posters strategically located in the driver

⁵ Walmart Driver Positions website, retrieved from: <http://jobs.walmart.com/careers/otr-driver-jobs>

⁶ Driver handbook excerpts, see Attachment 3.

lounge, driver break room, fuel station, and driver entrances.⁷ Several of these programs are highlighted below.

1.4.1 Driver Safety Awards

According to company policy, the driver safety incentive program is designed to “increase safety awareness and performance by focusing on safe defensive driving practice that protects our associates and the motoring public while enhancing Walmart’s positive relationship with the community.”⁸ Drivers can receive safety incentive pay quarterly when the driver does not incur any preventable accidents or incidents during a quarter. Single driver mileage awards are based on miles driven during the quarter. To qualify for the safety incentive pay, the driver must satisfy the following qualifications:

- Must drive a minimum of 10,000 miles in the quarter
- No preventable vehicular accident resulting in damage of \$1000.00 and greater
- No preventable vehicular incidents resulting in damage of \$100.00 - \$999.99
- No violation of the Distracted Driving Policy

1.4.2 Driving Championships

The carrier conducts regional and national driving championships. The purpose of the driving championships is to “promote safety awareness, teamwork and professionalism among driver associates.”⁹ The accident driver had not participated in any driver championships.

1.4.3 Management Road Observations

Management road observations are conducted by the safety manager and are designed to directly observe driver behavior while the driver is dispatched. Negative performance by a driver requires immediate corrective action by the safety manager. Such corrective action would include driver coaching and potential disciplinary action up to and including termination. All positive and negative observations are recorded on the Observation Report and are kept on file. The accident driver did not have any Road Observation Reports on file.

1.4.4 Motorist Reports

Motorist reports are generated from the motoring public. All reports generated from a motorist are documented in the driver’s personnel file. A motorist report can reflect either a compliment for the driver’s safe driving habits or a report of an incident the motorist felt was unsafe. The accident driver did not have any Motorists Reports on file.

⁷ Photos of safety slogans, see Motor Carrier Photos #1-4.

⁸ Walmart Driver Safety Incentive Program, Attachment 4.

⁹ Walmart Driver Handbook excerpts, page 91, see Attachment 5.

1.5 Company Training Program

Once a new driver is hired, they must attend a 2-week training program. The first day of the training program includes meetings with the General Transportation Manager, who is the senior manager in the transportation office, and the human resources department. In addition to company benefits and driver pay, the training program teaches the drivers about Walmart Culture, the driver reference manual and the company's general rules, polices, and procedures. In addition to the 8 hour defensive driving course, on the second and third days of the program drivers receive additional safety training, including topics such as DOT compliance, driver injury prevention, safety incentive programs and company policies and procedures related to safety. The four and fifth days of training focus on operational procedures and the on-board computers on trucks, including Walmart's dispatch philosophy, dispatch procedures, and communications while on the road.

During the second week of training, the new driver conducts on-the-road training with a designated driver-trainer. During this period, the newly hired driver has shared responsibilities with the driver-trainer. On the first day of the second week of training, the driver-trainer familiarizes the new driver with the functions of the equipment, docking procedures, company procedures, and hands-on training with the Qualcomm system. During the remainder of the week, the responsibilities are given to the new driver to evaluate his/her competency. If the new driver successfully passes the week of on-the-road training, then the new driver is released for dispatch. If the new driver needs more time, then it is granted. After the new driver has reached 90 days of employment, he or she attends a mandatory training day to review company policies.

The local DC conducts annual training sessions several times a year. During January and February, the carrier conducts defensive driver training, which consists of 8-10 hours of classroom training. The carrier also conducts refresher training in the fall, in addition to quarterly safety meetings. All company training and safety meetings are documented.

1.6 Company Policies

All drivers are provided an employee handbook, which provides a guide to company policies, procedures and philosophies. The company policies address such areas as: maintenance, operations, uniforms, weekends off,¹⁰ no idling, fitness to work,¹¹ authorized passenger program, open door, no smoking in Walmart trucks, distracted driving, random drug and alcohol testing, log verification, driver expenses, and company benefits. Several of the carrier policies are highlighted in the following sections.

¹⁰ Walmart Weekend Off Policy, see Attachment 6

¹¹ Walmart Fitness to Work Policy, see Attachment 7.

1.6.1 Distracted Driver Policy

Walmart restricts use of a wireless communication device while driving a CMV as indicated below. Such devices may not be used:

- For more than ten (10) minutes of communication at any one time.
- For more than sixty (60) minutes total in any day.
- In heavy traffic, construction zones, school zones, adverse weather conditions, etc.
- For texting (in any form) while driving. Does not place time constraints for calls with emergency services, like 911.

In addition, Walmart requires drivers to provide wireless communication device usage records to the Safety Manager or General Transportation Manager under the following conditions:

- Within 48 hours of an initial accident preventability determination.
- Within 48 hours of an observed behavior audit notification.

Time beyond 48 hours to obtain device records can be granted. However, this non-driving, unpaid period will not extend beyond device carrier record availability. The total time to obtain records will not exceed 45 days. According to carrier documents, the accident driver received distracted driver policy training on February 12, 2014.¹²

1.6.2 HOS Policy

All Walmart drivers are trained to maintain their HOS in compliance with the *Federal Motor Carrier Safety Regulations* (FMCSRs). Each driver is required to travel at speeds that are equal to or less than posted speed limits (as dictated by weather and/or road conditions) and to log each trip the way it was driven.

- Each driver is required to adhere to all USDOT HOS rules and regulations and take a mandatory break after meeting the maximum number of hours of driving and on duty time. If a break is interrupted, the driver may begin the layover again.
- A driver's daily log must be current and updated at each change of duty status.
- Driver's daily log status/activity must be logged to the nearest ¼ hour (15 minutes) of the event.
- Drivers are scheduled for 1 hour of coffee/meal stop time for each 5 hours of consecutive driving time (not specifically required by USDOT rules and regulations; this is designed to ensure drivers get proper rest).
- Drivers will be allowed 2 hours at the DC between loads and ½ hour at a store when making a drop and hook delivery. During periods of peak volume, drivers may be asked to reduce the 2 hours at the DC.¹³

¹² Walmart Distracted Driving Policy, see Attachment 8.

¹³ Walmart Transportation Philosophy, see Attachment 9.

1.6.3 Maximum Driving and On-Duty Hours Rules Policy

The Walmart maximum driving and on duty hour policy corresponds to the regulatory guidance provided under §395.3. The maximum on-duty hours for property carriers are as follows:

- 11-Hour Rule: A driver is permitted to drive for 11 hours after a 10-hour break (unless they have previously exceeded the 14- or 70-hour rule) and is not permitted to drive again until they have taken another 10-hour break.
- 14-Hour Rule: A driver cannot drive after 14 hours from the start of their day. This does not limit the time a driver can work; it only limits the drive time after 14 hours.
- 70-Hour Rule: A driver cannot drive after being on duty for 70 hours in any consecutive eight (8) day period. Any period of 34 consecutive hours of off-duty time restarts the 70-hour clock.

According to carrier documents, the accident driver was trained on the HOS rules on February 12, 2014.

1.7 Electronic Log “E-log”

Under the requirements of §395.8 all motor carriers are required to ensure that each of their drivers maintains a record of duty status for each 24 hour period. Typically, drivers maintain their HOS using a paper log recording each change of duty status. With the advancement of technology, global positioning system (GPS), and computerization, the FMCSA has made allowances for motor carriers to utilize equipment that records driver’s HOS electronically. The trucking/bus industry has various nomenclatures for these devices, which have been referred as automatic on-board recording devices, electronic on-board recording devices (EOBRs), electronic log device (ELDs) and E-logs. Title 49 CFR 395.15 states an “automatic on-board recording device means an “electric, electronic, electromechanical, or mechanical device capable of recording driver's duty status information accurately and automatically.” The regulations further state that these devices must meet minimum specifications. “The device must be integrally synchronized with specific operations of the CMV in which it is installed. At a minimum, the device must record engine use, road speed, miles driven, the date, and time of day.”¹⁴ The E-log system used by Walmart meets the specifications as described under §395.15. According to the carrier, its entire fleet utilizes an E-log system. Carrier documents indicated the accident driver was trained on the use of the E-log system on February 24, 2014.¹⁵

The E-log and other communications transmitted by the carrier and driver are managed through the Qualcomm device.¹⁶ The E-log system has a variety of capabilities. The system could allow the driver to receive and transmit to the carrier. Additionally, E-

¹⁴ 49 CFR 395.2 – Definitions.

¹⁵ EOBR Training Document, see Attachment 10.

¹⁶ Exemplar Vehicle QUALCOMM Device used for E-log and Dispatch communication with the driver. See photo 5.

log program has a feature to prevent HOS violations. For example, if a driver was reaching the limit of an 11-, 14-, or 70-hour rule; the E-log system would produce a verbal warning to the driver announcing the following message: “You have 1 hour until you are in violation to the xx hour rule.” The program makes a similar announcement 30 minutes and 15 minutes prior to the driver’s committing the violation. Once the driver commits the violation, the system announces: “You are now in violation of the xx rule.” At the time of the crash, the driver had been on duty 13:32 hours of a legal 14-hour duty day. The accident driver would have received audible alerts from the Qualcomm system at 12:22 a.m. and at 12:52 a.m. notifying him of a potential violation of the HOS 14-hour rule. Although the Qualcomm system makes the announcements to the driver of potential HOS violations, the system does not make a record of the notification. The system only has the ability to make a record when the driver has an HOS violation. The E-log system also communicates with the truck-tractor’s engine electronic control module (ECM) that monitors and records the speed of the vehicle.

Lastly, the E-log system has GPS tracking capability that monitors the driver’s trip movement. All of these features are designed to assist the carrier’s effort to monitor driver’s HOS compliance and reconcile the driver’s trip activity.

1.8 USDOT Compliance

The carrier has several policies to prevent HOS violations. In addition to the initial driver HOS training for new hires, the carrier also has a USDOT compliance policy. Driver’s E-logs are periodically audited for accuracy. Log clerks check for violations of the 11-, 14-, 70-hour rule, as well as falsification. E-logs are also checked for anomalies such as “off duty driving” which reveals drivers that are using the off-duty feature for personal conveyance. Audits also search for equipment that is moving without a driver’s being logged into the E-log system.¹⁷

The USDOT policy also addresses any potential HOS violations that may be initiated by the dispatch department. The policy states “The general transportation manager will ensure that the dispatcher and drivers comply with all applicable USDOT and company rules and regulations.”¹⁸ The policy further states that it is the responsibility of the driver to ensure that he/she does not accept a dispatch that would cause the driver to violate the HOS regulations. The policy also states that dispatchers who request their drivers to “violate the FMCSRs or who are construed as encouraging a driver to falsify their log would be terminated.”¹⁹

The carrier has a “fitness for work” policy. This policy does not address the issues of an ill or fatigued driver as required under §392.3.²⁰ The fitness to work policy applies

¹⁷ Walmart Log Verification Procedures, see Attachment 11.

¹⁸ Walmart USDOT Compliance Policy, see Attachment 12.

¹⁹ Walmart USDOT Compliance Policy, see Attachment 12.

²⁰ Title 49 CFR 392.3 states: “no driver shall operate a commercial motor vehicle, and every motor carrier shall not require or permit a driver to operate a commercial motor vehicle, while the driver’s ability or alertness is so impaired, or so likely to become impaired, through fatigue, illness, or any other cause, as to make it unsafe for him/her to begin or continue to operate the commercial motor vehicle.”

to circumstances when an “associate’s behavior or actions are inappropriate, or appears to present a danger to themselves or others.”²¹

Walmart utilizes local staff to review and inspect driver’s E-logs for compliance with the FMCSRs. The local log clerk at each DC office conducts periodic inspections of drivers’ E-logs and also inspects them when there is a “trigger event” with a driver. A trigger event may include a road side inspection or an accident.

1.9 Centralized Dispatch

Walmart utilizes a centralized dispatch system to manage inbound vendor freight operations as well as to dispatch its own fleet. The company has five regional centralized dispatch operations throughout the US. These dispatch operations, or Regional Operations Centers (ROC), are located in Arkansas, South Carolina, Utah, California, and Ohio. The Ohio ROC dispatches for the northeastern states and was responsible for dispatching the accident driver. An NTSB investigator visited the Ohio ROC and observed its operation. The Ohio ROC consisted of 74 dispatchers that provide dispatch services for all of the DC’s Walmart and Sam Club stores in their service area.

According to the dispatch operations observed by the NTSB investigator, most or all of the dispatch movements were deliveries scheduled for the next business day or shipments called “pull-a-heads,” which were trailers being staged at a store for loading at a 12-hour lead time. None of the dispatch orders observed by the NTSB investigator were orders that would be considered by industry standards as “hot loads” and “just in time deliveries” requiring immediate delivery.

Operations Group officials at the Ohio ROC were questioned about the last dispatch received by the accident driver on June 6, 2014, at 10:21 p.m. That dispatch required the driver to travel from Levittown, Pennsylvania, to Perth Amboy, New Jersey, a distance of 48.7 miles/55 minutes.²² According to the carrier safety officials, the back-haul at Perth Amboy did not have to be picked up until 7:30 a.m. on June 9, 2014. According to the Qualcomm message received by the accident driver, the message stated: “**Trip Move to Perth Amboy, ETA 11.0 hours, Distance 43.17 miles, and Transit Time 1 hour 1 minute**”²³ [emphasis added]. The accident driver had approximately 57 hours to complete this dispatch. This dispatch would have allowed the driver sufficient time to complete his required 10-hour USDOT break. At the time the delivery was accepted by the accident driver, he had 1 hour left before being in violation of the 14-hour rule.

Corporate safety officials further stated that all Walmart drivers are “the captains of their ships” and always have the option to take a rest break or log off duty for any reason. Such reasons might include traffic delays, weather conditions, mechanical issues, or any other issue, including driver fatigue.²⁴ Furthermore, the safety officials stated that

²¹ Associates are all employees, including drivers. See Walmart Fit to Work Policy, Attachment 7.

²² Retrieved from Google Maps: <https://www.google.com/maps/@40.3401314,-74.8419887,10z>.

²³ Qualcomm Screen Shot for Accident Driver, see Attachment 13.

²⁴ Stated by: George Sleeth, Walmart General Transportation Manager.

if a dispatch remained open because a driver logged off duty, dispatch would reassign the load to another driver. Further details of the accident driver's HOS are highlighted in section 3.6.

1.10 Collision Avoidance System – Bendix Wingman System

Vehicle 1 was equipped with a Bendix “Wingman Active Cruise with Braking” (or ACB) system. The Wingman ACB reacts to vehicles moving in the same direction as the vehicle. The Wingman ACB system provides audible and visual alerts for the driver when approaching another vehicle or object and provides up to a 3.0-second warning. Further description of the Wingman ACB system is detailed in the *Vehicle Group Chairman's Factual Report*.

During the inspection of the maintenance facility at the Smyrna DC, a simulation of the Wingman ACB system for a stationary object scenario was demonstrated for NTSB investigators. Walmart safety officials used an exemplar tractor that was identical to the accident tractor.²⁵ The exemplar tractor was the same year, make, model, and configuration as the accident 2011 Peterbilt tractor. With the cruise control device not activated, the Walmart safety official drove close to a stationary object (another tractor). As the driver approached the stationary object, the Bendix system made an audible tone (loud “beep”) and illuminated a light bar on the Bendix display unit. The closer the tractor got to the stationary object, the louder the alert sounded, until the Bendix system displayed all three light bars at the top of the device. An example of the Bendix system showing an stationary object detected is shown in **Figure 1**.



Figure 1. Bendix Wingman Advanced System Showing Object Detected (Source: Bendix Wingman Manual)

²⁵ Photos of exemplar truck-tractor, see Motor Carrier Photos #5 – 7.

The system also has an additional feature called the “blind spotter” sensor, which is mounted on the right (passenger) side of the truck-tractor.²⁶ This aspect of the system will alert the driver if there is another vehicle on his right side (blind side) if the driver activates the right turn signal.

The Bendix system also has the capability to produce a wireless communication if there is a “hard-brake” event. A hard-brake event is triggered by a 9 mph deceleration in 1 second. Additionally, the system is designed to record a “stability control” event. This event is triggered by sudden driver steering input that could result in a potential rollover. When either of these events is initiated, the system generates a “critical event report” (CER). A review of the accident driver’s file shows that he had accumulated 9 CER’s with the motor carrier since his hire date.²⁷ A summary of the CERs and the reason the report was generated are highlighted in **Table 1**.

Table 1. Accident driver CERs.

Date	Reason for CER
March 9, 2014	Hard-Brake
April 13, 2014	Stability Control
April 13, 2014	Stability Control
April 26, 2014	Hard Brake
May 16, 2014	Stability Control
May 18, 2014	Stability Control
May 25, 2014	Hard-Brake
June 01, 2014	Stability Control
June 06, 2014	Hard-Brake

The download from the Bendix system was obtained by the NTSB Recorder’s Specialist. The downloaded data and additional detail pertaining to the Bendix Wingman ACB system are highlighted in the *NTSB Recorder Specialists Factual Report*.

In addition to generating a CER, the system also produces an email that is immediately sent to the local safety manager when a CER is generated. A CER email was sent to the Smyrna DC’s safety manager when the accident driver generated a hard brake CER associated with the crash.²⁸ Drivers who generate a CER event are documented by the carrier and may be subject to counseling up to and including termination. See **Figure 2** for additional details.

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²⁶ Photos of accident truck-tractor blind spotter sensor, see Motor Carrier Photos #8 – 9.

²⁷ Accident Driver CER Reports, see Attachment 14.

²⁸ The CER recorded the hard brake event in central daylight time.



Figure 2. CER message for this accident.

CER events are not monitored or evaluated at the corporate level, but reviewed by the local safety manager at each DC. The carrier has no established limits on the number of CER events generated by a driver. Because a CER is not necessarily indicative of unsafe driving, CERs are evaluated on a case-by-case basis. In some cases, a CER event may represent a safe maneuver by the driver. For example, a driver could produce a hard brake to avoid hitting a vehicle that ran a red light. The system is designed to assist the driver in maintaining adequate following distances as well as to assist the carrier in identifying drivers who fail to observe.

1.11 Performance Tracking Log (PTL)

Walmart safety officials stated that the corporate philosophy did not embrace the term “discipline” but rather considered infractions with drivers as an opportunity of coaching and leading. If a driver’s behavior or performance warranted a discussion with the safety manager, this action would be recorded on a “performance tracking log” or PTL. The accident driver had three PTL’s on file. Two were for log violations: one 11-hour violation and one 14-hour violation. An example of a PTL the accident driver received was for a preventable accident. The PTL documented the following:

“On 4/19/14 [Cranbury accident driver] was attempting to back into the dock area at store XXX. While backing he failed to see another parked trailer and backed into the trailer. This is a preventable incident and will remain open for 12 months and expire on 4/19/15.”

According to Walmart safety officials, consequences varied for such PTL events. In the April 19 incident referenced above, the accident driver lost his safety bonus for the

first quarter and lost one safety day. For additional details concerning the accident driver's PTL records see Attachment 13. Per the driver's handbook, Walmart outlined serious offenses that could result in immediate termination. Such offenses included serious traffic offense, possession of guns or weapons, log falsification, DUI conviction, driving under the influence, failing to comply with a USDOT drug or alcohol test, or harassment.

1.12 Driver Compensation

Drivers are paid on a comprehensive formula which tracks five factors: mileage rate, activity pay, unscheduled time, scheduled time, and USDOT breaks.²⁹ Mileage pay is miles earned per day. Activity pay time covers such activities as arriving at a terminal, hooking up a load, making a scheduled stop, laying over for a USDOT stop, and unloading. Unscheduled time refers to events such as weather, traffic, and mechanical delays. Scheduled time refers to events such as a company training meeting or driver random drug test. According to safety officials there is no financial incentive paid to drivers based on the number of loads they haul in a day. Drivers are incentivized by safe driving miles not load production. Drivers are instructed that they are the "captain of their ship" and that they control all aspects of how many loads they can safely transport daily.

1.13 Drug and Alcohol Testing

The carrier has implemented a random drug and alcohol testing program. The carrier met or exceeded the federal requirements for random testing for calendar year 2013.³⁰

1.14 Obstructive Sleep Apnea (OSA) Testing

Walmart initiated an OSA screening program in October 2013. At the time of the accident, Walmart estimated 700 drivers had been screened for OSA.³¹ Drivers are referred for testing of OSA based on the following factors: a body mass index (BMI) of 30 or more, 17 inch neck size (15.5 inches for women drivers), hypertension, evidenced fatigue, or other symptoms outlined in the Sleep Safe Drivers referral form. Drivers who meet this criteria by the company doctor during the initial or renewal USDOT physical are classified as potential OSA candidates. The OSA candidate is then referred to a third-party vendor, "Sleep Safe," which monitors the testing. The carrier pays for all the testing and supplies with the exception of newly hired drivers. All drivers in the program must comply with the testing requirements, or they will not be allowed to be dispatched. According to the carrier records, the accident driver was screened for OSA and did not meet the criteria for further evaluation. Walmart officials were specifically questioned if they had a fatigue management program or policy, and they replied "no." Walmart officials were questioned if they had any policy on reporting to work tired or fatigued,

²⁹ Required DOT Breaks: Commercial Drivers subject to §395 must receive 10 hours off after being on duty 14 hours. Additionally, a driver must take a 30-minute break after coming on duty for 8 hours.

³⁰ Walmart Random Drug / Alcohol Testing, see Attachment 15.

³¹ Walmart OSA Policy, see Attachment 16.

and they replied “no.” Walmart officials, however, further stated that driver’s receive a block of instruction on driver fatigue during company in-service training. That section of instruction consists of six PowerPoint slides in the defensive driving module.³²

2. FMCSA Oversight

2.1 CSA and SMS

In 2010, the FMCSA introduced the Compliance, Safety, Accountability (CSA) system as an initiative to improve large truck and bus safety and ultimately reduce crashes, injuries, and fatalities that are related to CMVs. It introduced a new enforcement and compliance model that allows the FMCSA and its state partners to contact a larger number of carriers earlier in order to address safety problems before crashes occur. Along with CSA, the FMCSA also rolled out a new operational model called the Safety Measurement System (SMS), which replaced its predecessor, known as the SAFESTAT model. SMS uses a motor carrier’s data from roadside inspections, (including all safety-based violations), state-reported crashes, and the Federal Motor Carrier Census to quantify performance in the following Behavior Analysis and Safety Improvement Categories (BASICS).

2.2 CSA BASICS³³

- **Unsafe Driving** — Operation of CMVs by drivers in a dangerous or careless manner. *Example violations:* Speeding, reckless driving, improper lane change, and inattention. (FMCSR Parts 392 and 397)
- **Hours-of-Service (HOS) Compliance** — Operation of CMVs by drivers who are ill, fatigued, or in non-compliance with the HOS regulations. This BASIC includes violations of regulations pertaining to records of duty status (RODS) as they relate to HOS requirements and the management of CMV driver fatigue *Example violations:* false HOS RODS, and operating a CMV while ill or fatigued. (FMCSR Parts 392 and 395)
- **Driver Fitness** — Operation of CMVs by drivers who are unfit to operate a CMV due to lack of training, experience, or medical qualifications. *Example violations:* Failure to have a valid and appropriate commercial driver’s license (CDL) and being medically unqualified to operate a CMV. (FMCSR Parts 383 and 391)
- **Controlled Substances and Alcohol** — Operation of CMVs by drivers who are impaired due to alcohol, illegal drugs, and misuse of prescription or over-the-counter medications. *Example violations:* Use or possession of controlled substances/alcohol. (FMCSR Parts 382 and 392)
- **Vehicle Maintenance** — Failure to properly maintain a CMV and/or properly prevent shifting loads. *Example violations:* Brakes, lights, and other mechanical defects, failure to make required repairs, and improper load securement. (FMCSR Parts 392, 393, and 396)

³² PowerPoint slides on fatigued driving, see Attachment 17.

³³ CSA Methodology retrieved from www.fmcsa.dot.gov

- **Hazardous Materials (HM) Compliance** — Unsafe handling of HM on a CMV. *Example violations:* Release of HM from package, no shipping papers (carrier), and no placards/markings when required. (FMCSR Part 397 and Hazardous Materials Regulations Parts 171, 172, 173, 177, 178, 179, and 180)
- **Crash Indicator** — Histories or patterns of high crash involvement, including frequency and severity based on information from state-reported crashes

A carrier’s measurement for each BASIC depends on the following:


- The number of adverse safety events (violations related to that BASIC or crashes).
- The severity of violations or crashes.
- When the adverse safety events occurred (more recent events are weighted more heavily).

After a measurement is determined, the carrier is then placed in a peer group (i.e., other carriers with similar numbers of inspections). Percentiles from 0 to 100 are then determined by comparing the BASIC measurements of the carrier to the measurements of other carriers in the peer group. A percentile of “100” indicates the worst performance.

The FMCSA established threshold levels that would require agency action. Unsafe Driving, HOS, and Crash BASICs were set at lower thresholds because of their inherent risk. Additionally, passenger and hazmat carriers have lower thresholds than all other carriers because of their inherent risk. **Table 2** represents the thresholds set by the FMCSA that help prioritize agency intervention and resource management.³⁴ Walmart is classified as a hazmat carrier under these criteria.

Table 2. BASIC thresholds.³⁵

BASIC	Passenger Carriers	HM Carriers	All Other Motor Carriers
Unsafe Driving, HOS, Crash	50%	60%	65%
Driver Fitness, Drug/Alcohol, Maintenance	65%	75%	80%
Hazardous Material	80%	80%	80%

On a carrier’s SMS profile, which is publicly available on the Safer website,³⁶ an alert symbol  is displayed in any designated BASIC where the carrier has exceeded the corresponding threshold. This is also referred to as having an “alert” in a BASIC. At

³⁴ Retrieved from www.fmcsa.dot.gov.

³⁵ Retrieved from <http://csa.fmcsa.dot.gov/FAQs.aspx>.

³⁶ Safer website: <http://safer.fmcsa.dot.gov/CompanySnapshot.aspx>.

the time of the crash the carrier displayed zero alerts in any of the BASICs. **Figure 3** reflects the carrier’s SMS data at the time of the crash.

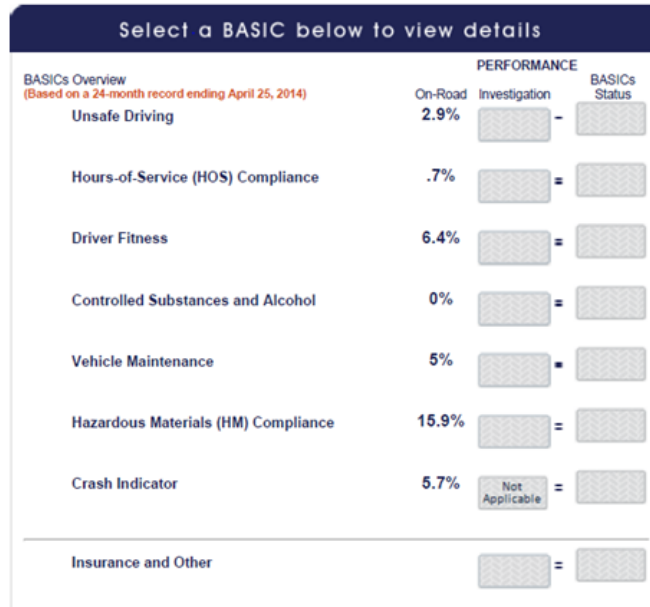


Figure 3. Carrier SMS scores at the time of the crash.

Although not documented in the SMS data, the MCMIS carrier profile reported that Walmart Transportation had the following crash events in 2013: 5 fatal crashes, 73 injury crashes, and 360 tow-away crashes.³⁷

2.3 Compliance Review History

The carrier’s registration with the FMCSA predates the New Entrant Program. The carrier has had three compliance reviews (CR) with the FMCSA since obtaining its USDOT number. As a result of this accident, the FMCSA conducted postcrash investigation on the accident driver, but it did not conduct a focused or comprehensive CR on the carrier. Results of the carrier’s CRs are as follows:

- September 2, 1987- Satisfactory
- March 17, 1994 - Satisfactory
- July 8, 1994 – Satisfactory
- September 9, 2004- Non Rated –HM shipper review

According to the MCMIS profile, the carrier had no BASICs in alert status at the time of the accident.³⁸ A review of the carrier profile showed no alerts in any BASICs over the past 24 months. At the time of the accident, the BASICs reflected the following statistics:

³⁷ Walmart MCMIS Carrier Profile, see Attachment 18.

³⁸ Walmart MCMIS Carrier Profile, see Attachment 18.

- Unsafe Driving – 2.9 percent
- HOS – 0.5 percent
- Driver Fitness – 9 percent
- Controlled Substances and Alcohol – 0 percent
- Vehicle Maintenance – 4.8 percent
- Hazardous Materials – 18.6 percent
- Crash Indicator- 5.7 percent

2.4 Roadside Inspection History

According to the MCMIS carrier profile, the carrier had 2,784 driver roadside inspections and 1,615 vehicle inspections and 909 HM inspections from June 9, 2013, to June 9, 2014. The driver out-of-service (OOS) rate was 0.287 percent, the vehicle OOS rate was 3.406 percent, and the HM OOS rate was 0.685 percent. This is in comparison to the national OOS rate of 20.72 percent for vehicle, 5.51 percent for driver, and 4.5 percent for HM. The accident tractor was subject to one roadside inspection during the past 365 days. That inspection took place on May 24, 2013. No violations were documented for the 2011 Peterbilt.³⁹ There were no documented roadside inspections involving the semitrailer.

3. Accident Driver

3.1 Accident Driver’s Driver Qualification

The driver’s qualification (DQ) file contained documents that met the requirements of 49 CFR 391.51. The DQ file contained the following documents: driver application, record of violations, road test, inquiry into previous employers, and DMV record. According to the DQ file, the accident driver had two medical certificates on file. The accident driver’s first medical certificate showed an issue date of May 20, 2013, and an expiration date of May 20, 2015. This medical certificate was issued with a Florida medical examiner’s license. The second medical certificate was issued by a Walmart-designated medical examiner that held a Delaware medical examiner’s license. The second medical certificate had an issue date of December 6, 2013, and an expiration date of December 6, 2015.

3.2 Accident Driver’s Driving and Employment History

At the time of hire, the accident driver held a Florida Class A CDL that was issued March 2010 and had an expiration date of December 2016.⁴⁰ The Florida CDL had “T” doubles/triples and “X” placarded Hazmat and Tank vehicle endorsements. The Florida CDL listed no restrictions. At the time of the accident, the driver held a Georgia Class A CDL with an issue date of April 2014 and an expiration date of December 2017. The Georgia CDL had “T” and “X” endorsements and had no restrictions.⁴¹ According to

³⁹ Driver Vehicle Roadside Inspection, see Attachment 19.

⁴⁰ Accident driver DQ file, see Attachment 20.

⁴¹ Accident driver Georgia CDL, see Attachment 21.

his Walmart application, the driver had an accident in his personal vehicle on December 6, 2013.

The Walmart application indicated that the accident driver had been employed as a CDL driver for two previous motor carriers. Prior to being a commercial driver, the accident driver held various employment positions. A summary of accident driver’s employment history is documented in **Table 3**:

Table 3. Accident driver employment history

Employer	Position Held	Start Date	End Date
Werner Enterprise	OTR ⁴² driver	June 17, 2011	September 20, 2013
Miami Herald	Independent Contractor ⁴³	February 5, 2011	June 13, 2011
CRST	OTR driver	April 4, 2010	December 30, 2010
Brands-Mart USA	Returns Supervisor ⁴⁴	December 17, 2005	March 30, 2010
Walmart	Deli Clerk	November 4, 2004	March 30, 2010
Big Lots	Assistant Manager	September 9, 1999	September 11, 2004

3.3 Driver Hiring Process

All Walmart driver applications are reviewed and approved at the corporate office in Bentonville, Arkansas. If the driver applicant passes the initial phone interview conducted by corporate staff, the driver proceeds to the local DC to undergo additional interviewing, road test, USDOT physical and pre-employment drug testing at the local DC. According to Walmart human resources (HR) staff, the accident driver first applied for a previous driver position on July 18, 2012; however, the driver’s application did not meet the minimum qualifications and was rejected.⁴⁵ The driver had reapplied on December 21, 2013, and according to the HR staff, the application met the minimum standards. The accident driver was hired and had a start date of February 10, 2014. The HR staff was questioned if there were any follow-up questions regarding the driver’s residence being in Georgia and his report location being in Delaware. They replied that it was not unusual for out-of-state drivers to apply for a driver position in a different state. They further stated that drivers did have the opportunity to apply for a transfer to another driving position after 1 year of employment. The HR staff was questioned if the driver had a residence in Georgia and a work-reporting location in Delaware, would that represent any red flags? They replied, “No, it was up to the driver to report on-time to his work location each day.” Walmart staff was also questioned if any of the accident driver’s employment history raised any issues, and they replied “No.”

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⁴² OTR stands for over-the-road driver.

⁴³ Not a designated DOT safety-sensitive position regulated by the FMCSA.

⁴⁴ Not a designated DOT safety-sensitive position regulated by the FMCSA.

⁴⁵ Accident driver lacked minimum driving experience.

3.4 Accident Driver Residency

According to the accident driver's Walmart application, he resided in Cutler Bay, Florida, from August 11, 2009, to September 20, 2013. The DQ file shows the driver entering a new address when he was interviewed with the DC staff on December 6, 2013, and updated his application with a Jonesboro, Georgia, address. Walmart safety personnel were questioned about the living arrangements of the accident driver. All members of the driver's management team were questioned about the accident driver's residence. The management staff knew that the accident driver had a residence in Georgia but did not know of his living arrangements in Smyrna, Delaware. The only Walmart employee who had knowledge of his living arrangements was the accident driver's driver-trainer. According to the driver-trainer, the accident driver was staying in a Best Western hotel near the DC. NTSB investigators obtained hotel records verifying the accident driver's frequent residence at the hotel. The records indicated that the accident driver had stayed at the hotel all of the available off-duty days the driver had since the start of his employment at Walmart, with the exception of the June 3-5, 2014 timeframe.⁴⁶ The carrier did not have any policy that addressed commuting distances from a driver's residence to the reporting terminal.

3.5 Accident Driver's Drug and Alcohol Testing

According to the carrier's documents, the accident driver had two FMCSA-regulated drug tests on file. The first regulated drug test was classified as a pre-employment drug test conducted on December 6, 2013, and it had a verification date of December 13, 2013, showing a final disposition of "negative." The second regulated drug test was classified as a post-accident drug test conducted on June 7, 2014. It had a verification date of June 10, 2014, and showed a final disposition of "negative."

3.6 Accident Driver's HOS

The accident driver's 30-day period prior to the accident was reviewed by NTSB investigators. No 11-, 14-, or 70-hour violations were noted. The review of the logs identified 21 form and manner violations.⁴⁷ A form and manner violation would be documented under §395.15(c). This violation was also noted on the post-accident Driver/Vehicle Inspection Report conducted by the New Jersey State Police (NJSP).⁴⁸ A summary of the driver's 30-day HOS are reviewed in **Table 4**.

⁴⁶ Best Western Hotel history, see Attachment 22.

⁴⁷ Accident driver's E-logs, see Attachment 23. (Driver's HOS are recorded in eastern standard time.) The use of automatic On-board recording devices as outlined under §395.15(c) requires that duty status and other additional information be recorded as one of thirteen specific reporting codes. Examples of these reporting codes include duty status variables such as "Off-duty", "Sleeper Berth" and "On-duty not driving". And, examples of codes used for additional information include items such as the "Date" the "Name of Carrier" and the "Shipping document numbers or name of shipper and commodity". Omitting such additional information would constitute a "form & manner" violation. In the 21 discrepancies noted on the accident driver's logs, the driver recorded deliveries / drops and hooks using a duty status code of "off duty" instead of "on-duty, not driving."

⁴⁸ NJSP Driver/Vehicle Inspection Report, see Attachment 24.

Table 4. Accident driver's HOS (total hours on-duty)

Date	Hours	Discrepancies
May 7, 2014	10:27	0
May 8, 2014	00:00	0
May 9, 2014	12:30	Form & Manner (2)
May 10, 2014	12:38	Form & Manner (2)
May 11, 2014	11:30	Form & Manner (2)
May 12, 2014	11:43	0
May 13, 2014	11:25	Form & Manner (2)
May 14, 2014	08:49	Form & Manner
May 15, 2014	00:00	0
May 16, 2014	09:52	0
May 17, 2014	11:58	Form & Manner
May 18, 2014	12:02	Form & Manner
May 19, 2014	12:47	Form & Manner
May 20, 2014	11:04	Form & Manner
May 21, 2014	11:00	0
May 22, 2014	00:00	0
May 23, 2014	12:17	0
May 24, 2014	12:11	Form & Manner
May 25, 2014	12:12	0
May 26, 2014	10:40	Form & Manner
May 27, 2014	11:58	Form & Manner
May 28, 2014	09:02	Form & Manner (2)
May 29, 2014	00:00	0
May 30, 2014	12:58	0
May 31, 2014	11:36	Form & Manner
June 1, 2014	11:30	Form & Manner
June 2, 2014	13:11	0
June 3, 2014	05:39	0
June 4, 2014	00:00	0
June 5, 2014	00:00	0
June 6, 2014	10:09	Form & Manner
June 7, 2014	34 min (accident)	0

All Walmart drivers companywide utilize an electronic logging (E-log) system for the HOS requirements under §395. NTSB investigators obtained a copy of the past 90 days of the accident driver's logs. According to Walmart staff, the accident driver's normal shift was Friday to Tuesday. According to the accident driver's E-log, he went off duty on June 3 at 5:51 p.m. and remained off duty until 11:22 a.m. on June 6.⁴⁹ According to the E-log system, the accident driver was off duty 65 hours and 31 minutes before reporting back to work on June 6.

⁴⁹ Accident Driver E-logs, see Attachment 23.

Immediately following the accident, the NJSP determined that the accident driver had been awake in excess of 24 hours prior to the crash.⁵⁰ The distance from Jonesboro, Georgia, to Smyrna, Delaware, is approximately 753 miles and requires approximately 11:53 hours of drive time.⁵¹ According to the Walmart security cameras at the Smyrna DC, the accident driver arrived at the terminal at 10:58 a.m. on June 6. The E-log records the accident driver as resuming on-duty status at 11:22 a.m. At the time of the crash, the driver had been on duty 13:32 hours of a legal 14-hour duty day. According to the NJSP, the accident driver stated “I fell asleep,” referring to the period just prior to the crash.⁵² The 7 days prior to the accident were reviewed by NTSB investigators and showed the following timeline disposition (see **Table 5**):

Table 5. Accident driver’s 72-hour history

Date	Disposition of Hours	Source of Information
May 30, 2014	12 hours, 58 minutes on duty	E-log
May 31, 2014	11 hours, 36 minutes on duty	E-log
June 1, 2014	11 hours, 30 minutes on duty	E-log
June 2, 2014	13 hours, 11 minutes on duty	E-log
June 3, 2014	5 hours, 39 minutes on duty	E-log
June 4, 2014	24 hours off duty	E-log
June 5, 2014	24 hours off duty	E-log
June 6, 2014	10:58 a.m. Driver arrives at DC in Delaware	Walmart security cameras
June 6, 2014	11:06 a.m. Driver arrives in driver break room	Walmart security cameras
June 6, 2014	11:22 a.m. Driver records on-duty status	E-log
June 6, 2014	11:43 a.m. Driver picks up trailer in Walmart yard	Walmart security cameras
June 6, 2014	11:56 a.m. Driver exits Walmart DC	Walmart security cameras
June 6, 2014	13:38 Driver arrives at Cherry Hill, NJ Walmart	E-log and driver trip report

⁵⁰ NJSP Crash Investigation Report, see Attachment 25.

⁵¹ Google Maps Distance Calculator: retrieved from: <https://www.google.com/maps/dir/Smyrna,+DE/Jonesboro,+GA/@36.3877896,-82.3694524,7z/data=!3m1!4b1!4m13!4m12!1m5!1m1!1s0x89c770d8a0de6649:0x4fc3f78bf011cd3b!2m2!1d-75.6046494!2d39.2998339!1m5!1m1!1s0x88f4ef5d10103fa3:0xbeb7dc87d982385d!2m2!1d-84.3538128!2d33.5215013>.

⁵² NJSP Crash Investigation Report, see Attachment 25.

June 6, 2014	13:38 Driver takes unscheduled break, 24 minutes	E-Log
June 6, 2014	14:02 Driver leaves Cherry Hill to go back to DC	E-log and driver trip report
June 6, 2014	15:58 Driver arrives at DC; driver swaps out tractor 20449 and gets tractor 02568	E-log and driver trip report
June 6, 2014	17:09 Driver departs DC heading to Vineland, NJ	E-log and driver trip report
June 6, 2014	18:46 Driver arrives at Vineland, NJ, Walmart	E-log and driver report
June 6, 2014	18:55 Driver takes "30 minute legal break"	E-log
June 6, 2014	19:34 Driver departs Vineland, NJ, Walmart	E-log
June 6, 2014	21:07 Driver arrives at DC	E-log and driver report
June 6, 2014	21:56 Driver departs DC for Levittown, PA	E-log and driver Report
June 6, 2014	23:56 Driver arrives at Levittown, PA Walmart	E-log and Driver report
June 7, 2014	00:20 Driver leaves Levittown, PA, Walmart to head to Perth Amboy, NJ, to get backhaul from Morton Salt Company	E-log and QUALCOMM text message
June 7, 2014	00:54:45 Accident	Cummings engine download

4 Accident Vehicle

The vehicle involved in this accident was a 2011 Peterbilt truck-tractor (unit #02568) in combination with a 2003 Great Dane semitrailer (unit #77397). The carrier provided the maintenance records and Driver Vehicle Inspection Reports (DVIRs) for both vehicles.

4.1 2011 Peterbilt Tractor Maintenance Records

According to carrier records, June 6, 2014, was the first time that unit #02568 was assigned to the accident driver.⁵³ The maintenance file for the 2011 Peterbilt displayed a valid annual inspection that was conducted on June 6, 2014.⁵⁴ Maintenance files obtained by the NTSB do not reflect any significant maintenance repairs (i.e. engine, clutch, or

⁵³ Truck-Tractor Assignment Sheet, see Attachment 26.

⁵⁴ Annual Inspection for 2011 Peterbilt, see Attachment 27.

transmission) made to the tractor during the past 365 days. Routine and preventative maintenance (i.e. oil changes, tire replacement, filter changes, etc.) were documented in the truck-tractor maintenance file.⁵⁵ According to the carrier's maintenance department, ageing truck-tractors are replaced every 600,000 miles or every 5 years. For additional information, see *Vehicle Factors Group Chairman Report*.

4.1.2 Great Dane Semitrailer Maintenance Records

The 2003 Great Dane semitrailer had an annual inspection on April 14, 2014. The maintenance files obtained by NTSB investigators for the Great Dane semitrailer did not indicate any significant maintenance repairs. Routine and preventative maintenance (i.e. grease applications, light bulb replacements, brake and tire repairs) were documented in the semitrailer maintenance file.⁵⁶ For additional information, see *Vehicle Factors Group Chairman Report*.

4.2 Accident Vehicle DVIRs

NTSB investigators obtained copies of the DVIRs for the accident tractor for the 90 days prior to the accident. Remarks made on the DVIR for the Peterbilt tractor included the following:

- March 9, 2014: “1) Peterbilt engine lite (sic) on again. 2) Clutch needs adjusting.”
- March 19, 2014: “Windshield wiper fluid cap missing, shop ordered one.”
- April 6, 2014: “O.B.C bracket loose, OBC shakes while riding down road.”

The DVIRs recovered at the accident scene indicated that the tractor had a vehicle write up on May 31, 2014. Another Walmart driver (not the accident driver) who was driving the accident vehicle wrote the following deficiencies on the DVIR: “*truck wanders bad over bumps, rough road. Hit 2 medium pot holes ripped steering wheel from my hand. Tires shake steering.*”⁵⁷ According to the carrier, the shop mechanic inspected the vehicle, greased the front end, and took the steering shaft apart and cleaned and greased the unit. This repair order was documented in the maintenance file under work order #9218003.⁵⁸ The unit was then put back into operation.

The 7 days of DVIRs prior to the crash reflected the following information (none were authored by the accident driver):

- June 1, 2014 – No Deficiencies
- June 2, 2014 – No Deficiencies
- June 3, 2014 – No Deficiencies
- June 4, 2014- No Deficiencies
- June 5, 2014 – No Deficiencies
- June 6, 2014 -“*Steering shakes when you hit a bump in the road*” (Not authored by the accident driver).

⁵⁵ Maintenance File for 2011 Peterbilt, see Attachment 28.

⁵⁶ Maintenance File for 2003 Great Dane Semitrailer, see Attachment 29.

⁵⁷ DVIRs for 2011 Peterbilt, see Attachment 30.

⁵⁸ Walmart work order #9218003, see Attachment 31.

According to the Walmart safety representatives, all DVIRs go to the DC maintenance shop. When the accident driver reported to work and saw the DVIR for tractor #02568, he reported to the transportation office and was issued another tractor #20449. The accident driver made his first delivery on his trip sheet and returned to the DC at approximately 3:48 p.m. The accident driver returned to the maintenance shop to check on the status of the tractor #02568. The mechanic on duty stated that he had not had the chance to inspect the unit. The accident driver asked the mechanic if he could see how it performed, stating “I have a short local trip. Let me test drive it and see how it does.” According to the mechanic, he said “no problem.” The accident driver made a local delivery to Vineland, New Jersey, approximately 148 miles roundtrip, and then reported back to the DC at approximately 4:13 p.m. The accident driver reported to the same mechanic that he did not encounter any issues with the tractor. The mechanic then annotated on the DVIR: “Driver test drove truck, no problems noted.”⁵⁹ Additional information concerning Vehicle 1 is highlighted in the *Vehicle Factors Group Chairman Report*.

5 Atlantic Transportation Services LLC

5.1 Carrier History and Operations

Vehicle 2, the Mercedes-Benz Sprinter limo van that was struck by vehicle 1, was owned and operated by Atlantic Transportation Services LLC. Atlantic Transportation Services is a for-hire passenger motor carrier and was issued USDOT #1415859.⁶⁰ The carrier holds valid passenger operating authority and was issued MC #537941.⁶¹ The motor carrier became a New Entrant carrier on September 15, 2005. The carrier originally started operations under the trade name of Bayside Limo in Dover, Delaware. After some corporate reorganization, the carrier changed its name to Atlantic Transportation LLC and moved its operations to Rehoboth, Delaware. The carrier owner was interviewed by NTSB investigators on June 11, 2014. The owner was questioned about the carrier’s history, carrier operations, and events leading up to the accident.⁶² Although not required, the owner stated that the driver did not provide a pre-trip safety briefing to the passengers before departing on the trip to Delaware on June 6, 2014. The carrier did not have a mandatory seatbelt policy and no seatbelt instructions were provided to the passengers on the Mercedes-Benz Sprinter limo van upon its departure from Dover Downs.

At the time of the accident, the carrier owned the following vehicles:

- 3 Vans, 9-15 passenger
- 5 Mini-buses, 16 or more passengers
- 4 Limousine, 8 or more passengers
- 2 Sedans, 6 passenger

⁵⁹ DVIR for Peterbilt truck-tractor #02568, see Attachment 32.

⁶⁰ Atlantic Transportation Services MCS-150, see Attachment 33.

⁶¹ Atlantic Transportation Services Authority History, see Attachment 34.

⁶² NTSB Interview with Atlantic Transportation Owner, see Attachment 35.

- 2 Trailers, under 10,000 Gross Vehicle Rating (GVWR)

The carrier employed 27 drivers (19 holding CDLs). The carrier's service area comprised Delaware, Pennsylvania, New Jersey, Maryland, and occasionally New York. The carrier provided NTSB investigators with copies of company policies, DQ files, HOS records, and maintenance records.

5.2 Vehicle 2 Driver History

The driver of the limo van is also the president of Atlantic Transportation. At the time of the accident, the limo van driver held a valid Class A CDL. The CDL was issued May 2014 and has an expiration date of May 2019. The CDL has "Z" (Taxi cab and Limousine), "N" (Tank) and "P" (passenger) endorsements and indicated no restrictions. The limo van driver had a valid medical certificate at the time of the accident that showed an issued date of December 2013 and an expiration date of July 2014.⁶³ The carrier conducted a post-accident drug test on June 7, 2014, that resulted in "negative" disposition.⁶⁴

5.3 Vehicle 2 Maintenance History

Vehicle 2 was identified as a 2012 Mercedes-Benz limo van. According to carrier documents, the 2012 Mercedes-Benz limo van had an annual inspection on May 22, 2014.⁶⁵ The carrier provided DVIRs that indicated no deficiencies with the 2012 Mercedes-Benz limo van on the day of the crash. The carrier provided the maintenance file for the 2012 Mercedes-Benz limo van and indicated no major repairs or services had been performed on the vehicle in the past year. During the post-accident vehicle inspection, the NJSP identified the following violations: failing to inspect emergency equipment, no/insufficient warning devices, no fire extinguisher, and USDOT number not displayed.⁶⁶ Additional details concerning Vehicle 2 involved in this accident are highlighted in the *Vehicle Factors Group Chairman Report*.

5.4 Sprinter Limo Van Driver HOS

The driver of the Sprinter limo van is also the owner of Atlantic Transport. The owner stated that he typically conducts operations and office work and rarely performs duties as a driver. The owner of Atlantic Transportation provided a 100 air-radius time record for the 7-day period prior to the crash.⁶⁷ The regulations state that: "A driver is exempt from the requirements of §395.8 (log book) if the driver operates within a 100 air mile radius of the normal work reporting location." The charter order involved in this crash required a pickup in Cresskill, New Jersey.⁶⁸ The distance from the carrier's office

⁶³ Vehicle 2 Driver's Medical Certificate, see Attachment 36.

⁶⁴ Vehicle 2 Driver's Post-Accident Drug Test Result, see Attachment 37.

⁶⁵ Vehicle 2 Annual Inspection, see Attachment 38.

⁶⁶ NJSP Driver/Vehicle Examination Report, see Attachment 39.

⁶⁷ Vehicle 2 Driver's 100 air radius time record, see Attachment 40.

⁶⁸ Atlantic Transportation Charter Order, see Attachment 41.

in Rehoboth Beach, Delaware, to Cresskill, New Jersey, is 171 miles.⁶⁹ At the time of the accident, the limo van driver had exceeded the 100 air-radius rule and was in violation of §395.8(a). This violation was cited by the NJSP on the post-accident Driver/Vehicle Examination Report. The 100 air-radius time records provided to the NTSB investigators reflected the following hours:

- June 1, 2014 – 0 hours (off duty)
- June 2, 2014 – 5 hours (office)
- June 3, 2014– 5 hours (office)
- June 4, 2014 – 5 hours (office)
- June 5, 2014 – 5 hours (office)
- June 6, 2014 - on duty at 11 a.m. off duty at 8:30 p.m. On duty 10:30 p.m. off duty 12:00 midnight. Total on duty 11 hours
- June 7, 2014 - on duty 12:00 a.m. to 1:30 a.m. Total on-duty hours 1.5 hours
- Total hours = 12:30

Because the driver did not take the required 8-hour USDOT break, the driver was in violation of the 10-hour rule §395.5(a)(1). These discrepancies were noted on the post-accident Driver/Vehicle Examination Report conducted by the NJSP.⁷⁰

6. State of Delaware Oversight

6.1 Certificate of Public Convenience and Necessity

The rules and regulations that govern “public carrier” intrastate operations in the state of Delaware fall under Title 2 Chapter 18.⁷¹ In order for motor carriers to operate in the state of Delaware they must obtain a “Certificate of Public Convenience and Necessity.” The process involves the following steps:

- All applicants that wish to become licensed as a public carrier must first submit an application to the Office of Public Carrier Regulation. Vehicles cannot be registered with the Division of Motor Vehicles under the operating authority of a public carrier until the application process is completed. Any company that is determined to be operating as a public carrier prior to approval by the Office of Public Carrier Regulation may be subject to the penalties and/or their application being denied.

⁶⁹ PC Miler Report, see Attachment 42.

⁷⁰ NJSP Driver/Vehicle Roadside Inspection Report, see Attachment 39.

⁷¹ “Public Carrier” includes every individual, partnership, association, corporation, joint stock company, agency or department of this State, or any association of individuals engaged in prosecution in common of a productive enterprise (commonly called a cooperative) their lessees, trustees or receivers appointed by any court whatsoever, that now operates or hereafter may operate, within this State, any railroad, street railway, traction railway, taxicab, limousine, motor bus or electric trackless trolley coach service, system, plan or equipment for public use other than transportation authorities created pursuant to chapter 13 of this title. Retrieved from: <http://regulations.delaware.gov/AdminCode/title2/2000/2200/Vehicle/2287.shtml>

- A complete business plan must be submitted explaining what type of operations will be offered to the public to show that the proposed operations will serve a useful public purpose, a useful public necessity, and useful public convenience response to public demand as outlined under 2 Del. C. §1802(e)(1).

Atlantic Transportation Services LLC applied for a certificate of public convenience and necessity and was granted its Certificate of Public Convenience and Necessity for Limousine Rights on June 19, 2013.⁷²

6.2 “Z” Endorsement

Delaware law requires limousine operators to carry a taxicab/limousine operator (“Z”) endorsement on their driver’s license. The law also expanded the criminal history background check to include both a national and state report and expanded the crimes that could disqualify drivers from operating taxis and limousines in an effort to improve public safety. Effective September 26, 2012, a company may not employ an individual or lease to any individual who operates a taxicab or limousine in the state who does not hold the “Z” endorsement on their driver license. In order to drive a taxicab or limousine in the state of Delaware, a person must obtain a “Z” endorsement on his or her license. To qualify for a “Z” endorsement, the applicant must meet all of the following requirements:

- (1) Be at least 18 years of age with 1 year of driving experience;
- (2) Meet the requirements of § 2707 of this title; (Title 21, Chapter 27, Subchapter V);
- (3) Never have been convicted of any of the following crimes under the laws of this State or any other jurisdiction:
 - a. Any crime constituting the manufacture, delivery or possession of a controlled substance or a counterfeit controlled substance classified as such in Schedule I, II, III, IV or V of Chapter 47 of Title 16;
 - b. Any crime against a child;
 - c. Any crime constituting a class A or B felony;
 - d. Any crime constituting a felony homicide, including, but not limited to, murder, manslaughter, and vehicular homicide;
 - e. Any crime constituting a felony sexual offense;
 - f. Any crime constituting a felony offense against public administration involving bribery, improper influence, or abuse of office; or
 - g. Any crime, other than those listed in this paragraph, constituting a felony for which the person has not been pardoned or for which less than 5 years have passed

⁷² Certificate of Public Convenience and Necessity, see Attachment 43.

since the person fully discharged all imposed sentences. As used herein, the term “sentence” includes, but is not limited to, all periods of modification of a sentence, probation, parole or suspension, and all forms of fines, restitution or community service; or

(4) Has had that person's driver's license suspended, revoked, or disqualified in this State or any other jurisdiction for moving violations during the immediate preceding 5 years.

(b) Any taxicab and limousine endorsement issued shall automatically be rescinded by the Director of the Division of Motor Vehicles if the applicant has not shown evidence of having satisfactorily completed, within 30 days of the date of endorsement, a defensive driving course approved by the Director of the Division of Motor Vehicles.

(c) The Department may conduct a criminal history background check pursuant to the procedures set forth in Chapter 85 of Title 11 for the purposes of issuing a taxicab and limousine endorsement pursuant to this section. This check shall include a national criminal history background check, in addition to a review of the applicant’s Delaware-based criminal history, a fingerprinting of applicants who are to be subjected to a national criminal history background check, and expressly authorizes the use of records of the Federal Bureau of Investigation for screening the applicants.⁷³

Atlantic Transport LLC held a valid Certificate of Public Convenience and Necessity at the time of the accident, which had an issue dated of June 19, 2013. The driver of Vehicle 2 and 23 additional drivers held “Z” endorsements issued by the State of Delaware.

6.3 FMCSA Oversight

The carrier had a New Entrant Safety Audit on February 2, 2006 and exited the New Entrant program on March 15, 2007. The carrier had a CR on August 8, 2008, and received a “satisfactory” safety rating. The carrier had no other interventions from the FMCSA. At the time of the accident, the carrier had no alerts in the BASICS and had a value of zero (“0”) in all BASICS during the 24 months prior to the accident.

6.4 Roadside Inspection History

According to the MCMIS carrier profile, the carrier had zero roadside inspection history in the past 24 months.

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⁷³ Title 21 Motor Vehicles Registration, Title and Licenses Chapter 27, retrieved from State of Delaware Department of Motor Vehicles website: <http://delcode.delaware.gov/title21/c027/sc05/index.shtml>.

7 “4” Way Transport LLC

7.1 Carrier History and Operations

The motor carrier of Vehicle 6 in this accident was identified as 4 Way Transport LLC. The carrier is currently a New Entrant. The carrier applied for new entrant status on May 3, 2013, and was issued a USDOT #2402309. The carrier is currently domiciled in Philadelphia, Pennsylvania. An NTSB investigator visited the carrier of Vehicle 6. Present during the carrier visit was the carrier office manager and the carrier operations manager. The carrier hauls fresh produce and services a delivery area to include: New Jersey, New York, Ohio, Massachusetts, and Pennsylvania. At the time of the accident, the carrier had allowed its insurance to elapse, causing its operating authority to become revoked. The vehicle involved in the accident was transporting fruits and vegetables (classified as exempted commodities) and was not subject to the requirements of operating authority regulations under §392.2.

7.2 FMCSA Oversight

At the time of the accident, the carrier had not received any safety audit or CR. According to the MCMIS carrier profile, the carrier was subject to two roadside inspections between June 8, 2013, and June 7, 2014.⁷⁴ The carrier had one level 3 roadside inspection, which resulted in zero violations, and one level 2 roadside inspection on March 5, 2014 which resulted in one vehicle OOS for lights. The carrier lacked sufficient data to generate any percentages in the SMS methodology.

At the time of the crash, the company owned two truck-tractors and two semitrailers. The carrier had employed four drivers over the past 365 days. The NTSB investigator requested company policies and training records but could not produce any. During the interview with the carrier officials, the Pennsylvania Public Utility Commission (PUC) was present and conducted a safety audit on the carrier. The carrier was cited for 1 acute and 11 critical violations, which resulted in a “FAILED” safety audit.⁷⁵ Two of the violations were classified as “automatic failure questions,” which included the following discrepancies:

- §382.115(a) - Failure to implement an alcohol and/or controlled substance testing program
- §396.17(a) – Failure to produce evidence of periodic (annual) inspections for selected vehicles

Additional discrepancies included the following:

- §390.15(b)(2) – Failing to provide copies of all accident reports required by states or other government entities or insurers
- §391.51(a) –Failing to maintain driver qualification files

⁷⁴ “4” Way Transport LLC MCMIS Carrier Profile, see Attachment 44.

⁷⁵ “4” Way Transport LLC Safety Audit, see Attachment 45.

- §391.45(b)- Using a driver without a medical certificate or with an expired medical certificate
- §391.51(b)(2)- Failing to maintain driving inquiry data in the driver qualification file
- §395.8(k)(1)- Failing to produce records of duty status and supporting documents
- §395.3(a)(1) – Allowing a driver to exceed the 11-hour rule
- §395.3(a)(2) – Allowing a driver to exceed the 14-hour rule
- §395.8(e) – Allowing a driver to prepare a false record of duty status
- §392.2 – Failing to ensure drivers operate CMVs in accordance with the laws, ordinances, and regulations of the jurisdictions in which they operate
- §396.3(b)- Failing to produce maintenance files for requested vehicles

Under 49 CFR 385.319, the carrier was afforded the opportunity to submit a corrective action plan (CAP) to address the violations identified during the safety audit. The regulations also state that the carrier must submit the CAP within 60 days, or it may be subject to revocation of authority and an out-of-service order. The carrier submitted a CAP to the FMCSA, and it was accepted on September 18, 2014.

7.3 Vehicle 6 Accident Driver History

According to the motor carrier, the June 5, 2014, trip was the first the driver conducted with the company. At the time of the accident, the driver held a Pennsylvania Class A CDL that was issued in December 2013 and had an expiration date of December 2017.⁷⁶ The driver also held a valid medical certificate with an issue date of November, 2013 and an expiration date of November 2015.⁷⁷ According to the carrier officials, the driver left the accident scene after he was released by the NJSP. The carrier stated that the driver took a new driver position in Florida with another motor carrier. The driver was not available for interview during the investigation.

7.4 Driver Qualification

The NTSB requested the driver's DQ file. The carrier provided a copy of the driver's application and a copy of the driver's CDL. Lacking from the DQ file were copies of the driver's DMV record, medical card, previous employer checks, and road test. The driver had no pre-employment drug test on file, and the carrier did not perform a post-accident drug or alcohol test.

7.5 Driver's HOS

The driver's logbook began with May 20, 2014, and had logs for the days leading up to the day of the accident. The driver's logbook provided the following HOS:⁷⁸

May 20, 2014 through June 4, 2014 – Off duty
 June 5, 2014 – 6 hours on duty and driving

⁷⁶ Vehicle 6 Driver's CDL, see Attachment 46.

⁷⁷ Vehicle 6 Driver's Medical Certificate, see Attachment 47.

⁷⁸ Vehicle 6 Driver's Logs, see Attachment 48.

June 6, 2014 - 6 hours on duty and driving
June 6, 2014 – Off duty from 06:00 a.m. to 10:30 p.m.
June 6, 2014 – On duty driving at 11:00 p.m.
June 7, 2014 - Accident occurs at 01:00 a.m.

During the inspection of Vehicle 6, a copy of a torn-up log dated June 4, 2014, was found in the cab of the truck. The June 4 log showed driving activity on that day.⁷⁹ The NJSP post-accident driver/vehicle inspection report cited the driver for a false log for his entry on June 4, 2014.⁸⁰ Additional violations were identified on the post-accident Driver/Vehicle Roadside Inspection Report. See Attachment 48 for further details.

E. DOCKET MATERIAL

The following attachments and photographs are included in the docket for this investigation:

LIST OF ATTACHMENTS

Motor Carrier Attachment 1 - Walmart MCMIS Report
Motor Carrier Attachment 2 - Walmart MCS-150 Report
Motor Carrier Attachment 3 – Driver Handbook Excerpts
Motor Carrier Attachment 4- Walmart Driver Safety Incentive Program
Motor Carrier Attachment 5- Walmart Driver Handbook Excerpts
Motor Carrier Attachment 6- Walmart Weekend Off Policy
Motor Carrier Attachment 7- Walmart Fitness to Work Policy
Motor Carrier Attachment 8-Walmart Distracted Driver Policy
Motor Carrier Attachment 9-Walmart Transportation Philosophy
Motor carrier attachment 10- EOBR Training Document
Motor Carrier Attachment 11-Walmart Log Verification Procedures
Motor Carrier Attachment 12- Walmart USDOT Compliance Policy
Motor Carrier Attachment 13-Qualcomm Screen Shot for Accident Driver
Motor Carrier Attachment 14-Accident Driver’s CER Reports

⁷⁹ Vehicle 6 Driver logs, see Motor Carrier Photo #10 - 11.

⁸⁰ Vehicle 6 NJSP Driver/Vehicle Inspection Report, see Attachment 49.

Motor Carrier Attachment 15- Walmart Random Drug/Alcohol Testing

Motor Carrier Attachment 16-Walmart OSA Policy

Motor Carrier Attachment 17- Power Point Slides on Fatigue Driving

Motor Carrier Attachment 18-Walmart MCMIS Carrier Profile (Modified)

Motor Carrier Attachment 19-Driver Vehicle Roadside Inspection

Motor Carrier Attachment 20- Accident Driver DQ File

Motor Carrier Attachment 21- Accident Driver Georgia CDL

Motor Carrier Attachment 22-Best Western Hotel History

Motor Carrier Attachment 23-Accident Driver's E-logs

Motor Carrier Attachment 24-NJSP Driver/Vehicle Inspection Report

Motor Carrier Attachment 25-NJSP Crash Investigation Report

Motor Carrier Attachment 26-Truck-Tractor Assignment Sheet

Motor Carrier Attachment 27- Annual Inspection for 2011 Peterbilt

Motor Carrier Attachment 28-Maintenance File for 2011 Peterbilt

Motor Carrier Attachment 29- Maintenance File for 2003 Great Dane Semitrailer

Motor Carrier Attachment 30-DVIRs for 2011 Peterbilt

Motor Carrier Attachment 31- Walmart Work Order #9218002

Motor Carrier Attachment 32- DVIR for Truck-Tractor #02568 dated 6/26/14

Motor Carrier Attachment 33- Atlantic Transportation Services MCS-150

Motor Carrier Attachment 34- Atlantic Transportation Services Authority History

Motor Carrier Attachment 35- NTSB Interview with Atlantic Transportation Owner

Motor Carrier Attachment 36- Vehicle 2 Driver's Medical Certificate

Motor Carrier Attachment 37- Vehicle 2 Driver's Post-Accident Drug Test

Motor Carrier Attachment 38- Vehicle 2 Annual Inspection

Motor Carrier Attachment 39-NJSP Driver/Vehicle Examination Report

Motor Carrier Attachment 40- Vehicle 2 Driver's 100 Air Radius Time Record

Motor Carrier Attachment 41-Atlantic Transportation Charter Order

Motor Carrier Attachment 42-PC Miler Report

Motor Carrier Attachment 43- Certificate of Public Convenience and Necessity

Motor Carrier Attachment 44- "4" Way Transport LLC MCMIS Carrier Profile

Motor Carrier Attachment 45- "4" Way Transport LLC Safety Audit

Motor Carrier Attachment 46- Vehicle 6 Driver's CDL

Motor Carrier Attachment 47- Vehicle 6 Driver's Medical Certificate

Motor Carrier Attachment 48- Vehicle 6 Driver Logs

Motor Carrier Attachment 49- Vehicle 6 NJSP Driver/Vehicle Inspection Report

PHOTOGRAPHS

Motor Carrier Photos #1-4: Walmart Safety Slogans

Motor Carrier Photos #5-7: Exemplar Vehicle with QUALCOMM Device

Motor Carrier Photos # 8 – 9: Accident Vehicle Blind Spotter Sensor

Motor Carrier Photo #10- 11: Driver 6 Driver Log

END OF REPORT

Michael S. Fox
Highway Accident Investigator