



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

**HUMAN PERFORMANCE FACTORS GROUP CHAIRMAN'S
FACTUAL REPORT**

A. CRASH INFORMATION

Location: 4600 block North State Route 25 in Rochester, Fulton County, Indiana
Vehicle #1: 2017 Toyota Tacoma pick-up truck
Operator #1: Private Operator
Pedestrian #1: 6-year-old male
Pedestrian #2: 9-year-old female
Pedestrian #3: 6-year-old male
Pedestrian #4: 11-year-old male
Date: October 30, 2018
Time: Approximately 7:12 a.m. EDT
NTSB #: **HWY19MH003**

B. HUMAN PERFORMANCE FACTORS GROUP

Kenneth J. Bragg, Senior Human Performance Factors Investigator, Group Chairman
NTSB Office of Highway Safety
490 L'Enfant Plaza East, S.W. Washington, DC 20594

C. CRASH SUMMARY

For a summary of the crash, refer to the *Crash Summary Report* (or *Factual Report of the Investigation*, depending on investigation type) in the docket for this investigation.

D. DETAILS OF THE HUMAN PERFORMANCE FACTORS INVESTIGATION

This focus of this report is the driver of a pickup truck which struck four children as they crossed a rural road to board a stopped school bus. The Human Performance factual investigation focused on the behavioral, medical, operational, and environmental factors associated with the pickup truck driver. Factors that potentially contributed to the crash are discussed in the sections below.

1. Behavioral Factors

1.1. Background

The pickup truck driver was a 24-year-old female. At the time of the crash, she was operating her personally owned vehicle which was also occupied by her two children and her younger brother. According to an interview with Indiana State Police, she had just taken her husband to work and was taking her brother to school. Following the crash, the pickup truck driver was charged criminally by the Indiana State Police. The driver declined to be interviewed by NTSB staff.

1.1.1. Licensing

At the time of the crash the pickup truck driver held a valid Indiana Operator Class License. She first obtained an Indiana Learners Permit on June 15, 2010 and obtained a full operator license on August 26, 2011.¹ Since then, the pickup driver has maintained her driver license without interruption. Her current license was issued on her birthday in 2016 and expires on her birthday in 2021. A review of the pickup truck driver's license history shows no records of traffic violations or license suspensions.

A query of the Problem Driver Point System (PDPS) maintained by the National Driver Registry (NDR) found no indication that the accident driver's license has ever been suspended, cancelled or denied².

1.1.2. Crash History

A review of an insurance industry database indicates that the pickup truck driver has had a previous minor vehicle crash on July 9, 2014 in Rochester, Indiana. The crash involved property damage; there were no reported injuries.

1.1.3. Accident Trip

According to the statement the driver proved to the Indiana State Police, she and her family left their home to travel to her husband's place of employment in Talma, Indiana. At that time her

¹ An Indiana Operator Class License permits the holder to operate a motor vehicle with a gross vehicle weight rating (GVWR) of up to 26,000 pounds.

² National Driver Registry is a division in the National Center for Statistics and Analysis within the National Highway Traffic Safety Administration which maintains the Problem Driver Pointer System database. The database contains records of driver's whose privilege to drive has been suspended, cancelled, revoked or denied or who have been convicted of serious traffic-related offenses.

husband had been driving the pick-up truck. After dropping off her husband at his job, the driver intended to travel to her mother's residence in Rochester, Indiana approximately 9.3 miles away. The crash occurred about 3.2 miles into the trip. When asked in an interview with Indiana State if she makes the crash trip frequently, she indicated that she has traveled the road previously, but does not normally do so around the time of the crash.

1.1.4. Pickup Truck Driver's Statement

In an interview with Indiana State Police, the pickup truck driver stated that they left her residence at 4 a.m. and despite the 9-mile distance, they didn't arrive at her husband's place of employment until 7:05 a.m.³ There was no discussion in the interview about what the driver did along the way.

When the pickup driver reached her husband's job, she stated that he briefly spoke with the kids and she departed, headed to her brother's home to prepare him for school. Her two-year-old and three-year-old children were in child seats in the rear seat on either end; her 12-year-old brother was seated in the middle. As she drove, she states that her cell phone was in the center console and that a music application may have been open. As she drove, she talked with her brother; the two younger children were asleep.

The pickup driver approached the crash location, she stated that she saw a vehicle ahead, but she didn't recognize what the vehicle was. She recalls trying to determine "what heavy load it was." She suddenly saw children and tried to stop, but was unable to. She did not realize that the vehicle that she saw was a school bus until after the crash occurred. She described the lighting as dark. She used her high beam headlights prior to reaching the crash site but switched to low beam lights because of oncoming traffic. When asked how fast she was driving, she stated that she was a slow driver and usually drives about 50 mph or slower but, she did not know how fast she was traveling when the crash occurred.

1.1.5. Pickup Driver's Court Testimony

Following the crash, the pickup truck driver was charged criminally in the Fulton County (Indiana) Superior Court.⁴ A criminal trial began on October 16 and concluded on October 18, 2019. In defense of the charges, the pickup truck driver gave sworn testimony. In her testimony, the pickup truck driver gave an account of her actions leading up to, and in during the crash sequence. NTSB Investigators obtained a copy of her transcribed testimony.⁵

In her testimony, the pickup truck driver stated that she attended public elementary, middle, and high school in Rochester, Indiana. She stated that she did not ride a school bus routinely to and from school; she recounted a single instance of riding a school bus once from a friend's house. Even though she did not ride a school bus, she saw them throughout her years at school. The pickup truck driver stated that she first obtained her driver's license in 2012, her junior year of high school. She attended Driver Education training at the high school. However; she did not

³ Human Performance Factors Attachment – Pickup Truck Driver Interview

⁴ State of Indiana vs. Alyssa Shepherd – Fulton Superior Court; case number 25D01-1810-F5-000814.

⁵ Human Performance Factors Attachment – Pickup Truck Driver Trial Transcript

remember specifically what information the training manual provided on what to do when encountering blinking lights.

An attorney asked the pickup truck driver what should she do when she encounters a blinking light while driving. She indicated that circumstances, such as the color or placement of the light would determine what she needed to do. When asked about blinking red lights specifically, she stated that sometimes they are used as a warning of a vehicle or an object and you don't have to stop. When asked if she had ever come upon a school bus that been stopped while in her vehicle, the pickup truck driver did not remember. However, she was aware that she was required to stop.

The pickup truck driver stated that she was familiar with North State Route 25, the accident route; she takes the route a few times a week. However, she typically travels the road during lunch time or during the afternoon and she had never seen a school bus stop at the crash location before. The pickup truck driver was asked if she generally looks for and pays attention to traffic signs; she stated that she did. She went on to state that she was familiar with "stop" and "watch for school bus" signs. She does not remember seeing the "watch for school bus" sign leading up to the crash.

As pickup truck driver exited the curve prior to the crash site, she saw a large vehicle but she could not tell what it was. She stated that it was dark and that the vehicle had flashing lights. She saw that the vehicle was on the opposite side of the roadway and appeared to be moving towards her; she assumed it was an oversized load. She stated that she has seen "lots" of tractors and modular homes on Route 25 and around her home. When asked why didn't she stop or slow down, she stated that she assumed it was a wide load and she was careful to make sure that she was in her own lane and that she did not expect to have to stop since the vehicle was in its own lane. Her first realization that the vehicle was a school bus was when the children entered the roadway in front of her.

1.1.6. Cell Phone Use

Cell phone records, obtained from the cellular service provider indicate that at the time of the crash, the pickup truck driver was not using her cell phone to text or talk.⁶ Additionally, The Fulton County Sheriff's Office conducted a forensic data extraction on the pickup truck driver's cell phone. The data indicates that while there was an application active, there was no conclusive indication that the phone was being manipulated. The pickup truck driver stated in an interview with the Indiana State Police that at the time of the crash, her cell phone was in the center console of the vehicle. She was not using her cellphone to talk, text, or social media.

⁶ Human Performance Factors Attachment – Pickup Truck Driver Cell Phone Records

1.2. Medical Factors

1.2.1. General Health

Information on the pickup truck driver's general health was obtained from pharmacy and medical records from her primary healthcare provider through a canvass for information at pharmacies near the pickup truck driver's home. For more information see the *Medical Factors Factual Report* in the docket for this investigation.

1.2.2. Post-crash Toxicology

Following the crash, the pickup truck driver consented to a toxicology test which was requested by Indiana State Police investigators. A forensic toxicology analysis of the sample was performed by the Indiana Department of Toxicology. The driver's blood tested negative for alcohol or other drugs.⁷

1.3. Vision

At the time of the crash, the pickup truck driver had a corrective lenses restriction on her Indiana drivers license which required that she wear glasses or contact lenses when driving. The pickup truck driver stated that her glasses corrected her vision to 20/20 and that she was wearing her glasses at the time of the crash. No medical information on the pickup truck driver's vision was obtained in this investigation.

1.4. Hearing

No information on the pickup truck driver's hearing was obtained in this investigation,

1.5. Psychological Factors

In an interview with Indiana State Police the pickup truck driver stated that she is married with two children. She made no statements which indicated that the crash occurred as the result of an intentional act. There was no information obtained in this investigation related to the pickup driver's mental health.

1.6. Activities Prior to the Crash

Information related to the pickup truck driver's activities in the days leading up to the crash is limited. Because the driver declined to participate in an interview with NTSB staff, data from a forensic examination of the pickup truck driver's cell phone was used to determine her opportunity for rest. **Table 1** below represents the first and last phone activity for each day. All

⁷ Human Performance Factors Attachment – Indiana Drug Screen and Conformation List

times are given in Eastern Standard Time. The pickup truck driver utilized her phone throughout the day; usage ceased at night and resumed in the morning. Although the exact times the driver slept could not be determined, it's likely that the driver slept during the overnight periods.

Table 1. Driver Activity

Saturday, October 27, 2018		
<u>Time</u>	<u>Event</u>	<u>Source</u>
6:49 a.m.	Outgoing Instant Message	Cell Phone Device
9:56 p.m.	Cell Phone Notes Saved	Cell Phone Device
Sunday, October 28, 2018		
<u>Time</u>	<u>Event</u>	<u>Source</u>
7:45 a.m.	Outgoing Instant Message	Cell Phone Device
9:51 p.m.	Outgoing Instant Message	Cell Phone Device
Monday, October 29		
<u>Time</u>	<u>Event</u>	<u>Source</u>
6:46 a.m.	Incoming Phone Call	Cell Phone Device
10:28 p.m.	Outgoing Phone Call	Cell Phone Device
Tuesday, October 30, 2018		
4:00 a.m.	Driver Leaves Home	Driver Interview
7:02 a.m.	Outgoing Instant Message	Cell Phone Device
7:05 a.m.	Driver Arrives in Talma, IN	Driver Interview
7:12 a.m.	Crash Occurred	

1.6.1. Sleep Habits

There was no information obtained in this investigation pertaining to the pickup truck driver's sleep habits or health.

2. Witness Statements

2.1. School Bus Driver

Following the crash, the school bus driver for the children involved in this crash was interviewed by the Indian State Police. The interview was recorded and subsequently transcribed.⁸ The bus driver stated that while traveling north on State Route 25, he reached the crash location and activated the school bus stop arm. As he did so, he observed the pickup truck approaching at a far distance away. He stated that the roadway was dark; there are no street lights positioned near the crash location. He stated that the children often stand away from the roadway and are in darkness. When the school bus initially stopped, the bus driver assumed that the pickup driver would stop and after about 2 seconds, waved to the children for them to board the bus. As the pickup truck got closer, it appeared to the school bus driver that the pickup truck was not going to stop and he sounded the bus horn. Neither the children nor the pickup truck driver responded to the horn. The bus driver stated that he sounded the horn to alert the pickup truck driver. According to school regulations, the vehicle horn is to be used to warn students of a hazard.⁹

⁸ Human Performance Factors Attachment – School Bus Driver Interview

⁹ See Motor Carrier Factors Factual Report for more information.

2.2. Motoring Witness

Indiana State Police investigators interviewed a motoring witness who stated that she was traveling behind the pickup driver in the moments leading up to the crash.¹⁰ The witness stated that as she approached the location of the crash, she first observed the stopped school bus through a cluster of trees as she entered a curve. She stated that the school bus was stopped with its red light flashing; several small children were crossing the road to board the bus. Upon seeing the stopped school bus the witness stated that she slowed to stop but the vehicle traveling in front of her did not appear as it was going to stop.

The witness described the lighting conditions as dark. She was able to see the children because they were being illuminated by the headlamps of the pickup truck traveling in front of her. She stated that the red lights were flashing on the school bus; a white light was flashing on top of the vehicle. The driver indicated that upon seeing the school bus, she immediately recognized it to be a school bus. She stated that the pickup truck was traveling 50-55 miles MPH when the crash occurred.

3. Environmental Factors

Global Positioning System (GPS) coordinates were utilized to determine relevant environmental conditions for the accident location.

Latitude: N 40.07.2475

Longitude: W 10.2264

3.1. Sight Distance

The factors which influenced the driver's ability to see the stopped school bus and pedestrian children are described in the "*Technical Reconstruction Factors*" Factual Report which can be found in the accident docket for this investigation.

3.1. Weather Information

Historical data for weather station KSBN, South Bend, IN, approximately 45 miles from the crash site, was retrieved and examined. Observations for October 30, 2018, near the time of the accident, are shown in Table 2.¹¹

¹⁰ See the Witness Interviews Attachment in the Survival Factors Group Chairman Report of this crash investigation.

¹¹ Data obtained from <http://www.wunderground.com>.

Table 2. Data from Weather Station KSBN, South Bend, IN

Time (EST)	6:54 a.m.	7:54 a.m.
Temperature	49° F	55° F
Dew Point	40° F	41° F
Humidity	71%	59%
Pressure	29.2 in	29.1 in
Wind Dir.	SSE	SE
Wind Speed	12 mph	13 mph
Wind Gust Speed	N/A	N/A
Precipitation	N/A	N/A
Conditions	Cloudy	Cloudy

3.2. Astronomical Data for October 30, 2018

Using the GPS coordinates listed above, astronomical data for the accident location and date was downloaded from the United States Naval Observatory¹² (USNO). Downloaded astronomical data is summarized below in Table 3.

Table 3. Sun and Moon Date for Rochester, IN for October 30, 2018

Event	Time
ACCIDENT	7:12 a.m.
Begin civil twilight¹³	7:45 a.m.
Sunrise	8:13 a.m.
Sun Transit	1:28 p.m.
Sunset	6:43 p.m.
End civil twilight	7:11 p.m.

¹² Data obtained from

<https://aa.usno.navy.mil/rstt/onedaytable?ID=AA&year=2018&month=10&day=30&state=IN&place=Rochester>

¹³ Morning civil twilight begins when the geometric center of the sun is 6° below the horizon and ends at sunrise.

E. DOCKET MATERIAL

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

LIST OF ATTACHMENTS

Human Performance Factors Attachment – Pickup Truck Driver Interview

Human Performance Factors Attachment – Pickup Truck Driver Trial Transcript

Human Performance Factors Attachment – Pickup Truck Driver Cell Phone Records

Human Performance Factors Attachment – Indiana Drug Screen and Conformation List

Human Performance Factors Attachment – School Bus Driver Interview

END OF REPORT

Kenneth Bragg

Human Performance Investigator