National Transportation Safety Board
Office of Highway Safety
Washington, DC 20594

HWY24MH013

MOTOR CARRIER FACTORS

Group Chair's Factual Report

TABLE OF CONTENTS

A. Crash 3
B. Motor Carrier Factors Group 3
C. Crash Summary 3
D. Details of the Investigation 3
1.0 Best National Industries Incorporated 3
2.0 Management Safety Practices 4
2.1 Hiring Practices 4
2.2 Carrier Policies and Procedures 4
2.3 Hours of Service 5
2.4 Controlled Substance and Alcohol Testing 5
2.5 Additional Safety Technology 6
3.0 Driver 6
3.1 Driver Qualifications and History 6
3.2 Driver's Hours of Service 7
3.3 Driver's Controlled Substance and Alcohol Testing 7
3.4 Driver's Roadside Inspection History 7
4.0 Government Oversight 8
4.1 Federal Motor Carrier Safety Administration (FMCSA 8
4.2 State Regulatory Oversight 12
5.0 Vehicle Maintenance 12
6.0 Subsequent Crashes 13
6.1 5:54 a.m. Crash Carrier Description 13
6.2 6:24 a.m. Crash Carrier Description 14
E. Docket Material 14

LIST OF TABLES

Table 1. Driver's Hours of Service 7
Table 2. Driver's Roadside Inspection History 8
Table 3. BASIC Thresholds 10
Table 4. Compliance Reviews 11
Table 5. 5:54 a.m. Crash Carriers 13
Table 6. 6:24 a.m. Crash Carriers 14

A. CRASH

Location: Swanton, Lucas County, Ohio
Date: August 15, 2024
Time: 5:29 a.m. EDT

B. MOTOR CARRIER FACTORS GROUP

Group Chair	Shawn Currie National Transportation Safety Board/Highway Safety
Group Member	William Jagnow, Hazardous Materials Safety Investigator Federal Motor Carrier Safety Administration/Illinois
Group Member	Melanie Kurtz, Hazardous Materials Specialist II Public Utilities Commission of Ohio

C. CRASH SUMMARY

For a summary of the crash, refer to the *Crash Information and Summary Report*, which can be found in the NTSB for this investigation.

D. DETAILS OF THE INVESTIGATION

1.0 Best National Industries Incorporated

The motor carrier in this crash was Best National Industries Incorporated doing business as CJJ Industries Inc. (CJJ) of Lombard, Illinois. The Federal Motor Carrier Safety Administration (FMCSA) had issued CJJ USDOT number 2927244. CJJ was registered as a for hire, interstate carrier of property that specifically carried general freight and chemicals. According to CJJ's MCS-150 that was filed on April 23, 2024, they owned one truck tractor and eight semi-trailers, leased two straight trucks and three truck tractors.[1] The truck tractor involved in this crash was leased from M&K National Lease on August 5, 2024.

[1] (a) MCS-150 is a Motor Carrier Identification Report. (b) See Motor Carrier Attachment – MCS-150 CCJ Dated 04/23/2024

The truck tractor in combination with a semi-trailer in this crash was transporting a mixed load of freight to include hazardous materials.[2] The carrier was transporting the load for Brenntag from their facility in Chicago, Illinois, to their facility in Toledo, Ohio, a trip of about 245 miles and 3 hours and 54 minutes under normal driving conditions.[3] CJJ officials stated that this was a normal trip for the driver, and he had been driving it for several years.[4]

2.0 Management Safety Practices

2.1 Hiring Practices

CJJ was the employer of the driver. CJJ had hired and vetted the driver for commercial vehicle operation. CJJ had a formal written hiring process.[5] If a driver applicant was interested in employment with CJJ, they contacted them. A phone call would be used to begin the screening process and determine if an in-person interview was warranted. If the applicant was invited for an interview, they would be required to fill out a job application and sign an authorization to allow a background check. The applicant would be required to produce a valid commercial driver's license, a valid medical examiner's certificate and proof of US citizenship.

The applicant would then be required to take an on-the-road test that was critiqued. If the test was successful, the applicant would be subject to a final interview and a review by the carrier's insurance company. If the insurance company review and final interview were successful, the applicant would be offered a driving position. Once the applicant accepted the driving position, CJJ would initiate a driver's qualification file, obtain a pre-employment-controlled substance test and conduct initial training.

2.2 Carrier Policies and Procedures

CJJ provided its drivers with written policies and procedures as well as a driver's handbook. All drivers were required to sign an acknowledgement form for both the handbook and policies. Within these documents, the subjects covered were:

- Pre-trip inspections
- Accident reporting procedures
- Cellular phone use policy
- Safe Driving
- Hazardous materials safety plan

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[2] For further information refer to the Hazardous Material Group Chair's Factual Report
[3] (a) www.brenntag.com/en-us/ (b) Information obtained through Google Maps.
[4] See Motor Carrier Attachment – CJJ Interview
[5] See Motor Carrier Attachment – Hiring Process

- Alcohol and Controlled substance policy

CJJ officials also stated the carrier would conduct three to four safety meetings per year. Covering topics relating to safe operation, hazardous materials, and winter driving.

The carrier did not have a formal policy regarding fatigue management for safe operation of the commercial vehicle. CJJ officials stated they informed their drivers to pull over if they were tired, but did not have many fatigue issues as they were mostly local drivers who worked a normal fixed schedule that was well within the hours-of-service restrictions and slept at home when off-duty.

2.3 Hours of Service

In December 2017, FMCSA required carriers to install and maintain an Electronic Logging Device (ELD) to track the driver's hours of service.[6] An ELD is a device or technology that automatically records a driver's driving time and facilitates the accurate recording of the driver's hours of service.

There are certain parameters that would allow carriers to be exempt from the ELD requirements. These parameters include operating a commercial vehicle in a manner requiring completion of a record of duty status on not more than 8 days within any 30-day period; in a driveaway-towaway operation in which the vehicle being driven is part of the shipment being delivered; in a driveaway-towaway operation in which the vehicle being transported is a motor home or a recreation vehicle trailer; or in a commercial vehicle manufactured before model year 2000. The truck-tractor operated by CJJ in this crash was not exempt from the requirements and had to be equipped with and utilize an ELD to track the driver's compliance with the hours-of-service regulations.

CJJ utilized Samsara as a provider for its electronic logging device.[7] Samsara is on the list of self-certified devices approved by FMCSA. CJJ provided both electronic and printed ELD information for the driver in this crash.

2.4 Controlled Substance and Alcohol Testing

CJJ had an established controlled substance and alcohol testing program and policy. The carrier provided copies of their annual drug and alcohol testing for the past four quarters. The controlled substance testing program met the regulatory requirements under Title 49 *Code of Federal Regulations (CFR)* Part 382.305. The crash-involved driver was not tested post-crash for either controlled substances or

[6] eCFR: 49 *CFR* Part 395 -- Hours of Service of Drivers
[7] ELD Compliance Solutions | Samsara

alcohol, due to his ongoing medical treatment. CJJ included a letter explaining the reasons for not testing the driver in the driver's file.

2.5 Additional Safety Technology

The commercial vehicle in this crash was equipped with a Samsara dual facing camera which monitored the environment forward of the vehicle, through the windshield, as well as the driver's in-cab actions. Although the gateway module used to transmit video and data to Samsara was not damaged during the crash, the windshield-mounted camera, which stored data, was not recovered after the windshield was ejected from the vehicle during the crash. No crash-related video or data had been transmitted by the gateway module, which did not store video or telematics data.

The carrier stated the leased vehicles did not have any forward collision avoidance systems or automatic emergency braking systems.

3.0 Driver

The driver in this crash was a 43-year-old male with a valid Class A Illinois, Commercial Driver's License (CDL). The driver's most recent CDL was issued in August of 2024 and was due to expire in August of 2028. The driver has held a CDL since about 2012. The driver had permissions for operation of passenger vehicles, double/triple trailers and combined tank/hazardous materials. The driver was required to wear corrective lenses while operating a vehicle. The driver had been employed by CJJ since October of 2017.

3.1 Driver Qualifications and History

The driver's most recent DOT physical qualification exam before the crash was on October 20, 2022. The driver was issued a two-year medical examiner's certificate with the medical examiner's certificate due to expire on October 20, 2024. The medical provider that conducted the examination was listed on FMCSA's list of qualified medical professionals.

The crash driver had attended Progressive Driving School, a commercial driving school, in December of 2012 to obtain his CDL. Upon graduation and obtaining his CDL he held several driving jobs. A school bus driver, then as a truck driver for Pepsi Cola for two years and finally as a temporary driver prior to his starting driving for CJJ. All in all, the crash driver had about 12 years of commercial driving experience.

3.2 Driver's Hours of Service

As previously stated, the carrier utilized Samsara as an ELD provider. The application was being utilized on an app based cellular phone that was recovered from the wreckage of the truck tractor. The ELD data was uploaded without issue. Table 1 is a list of the driver's hours from August 8th at midnight to the time of the crash on August 15th. From statements made by carrier officials, the crash driver, and examination of the ELD data, the driver's normal hours of work were from about 11:30 pm to 12:30 pm Monday through Friday with weekends off.

Table 1. Driver's Hours of Service

Date	On-Duty	Driving
August 8, 2024	3:23 hours	10:10 hours
August 9, 2024	3:12 hours	9:37 hours
August 10, 2024	Off Duty	Off Duty
August 11, 2024	0:14 hours	0:23 hours
August 12, 2024	3:54 hours	9:39 hours
August 13, 2024	3:50 hours	9:24 hours
August 14, 2024	3:49 hours	9:31 hours
August 15, 2024	0:38 hours	3:50 hours

3.3 Driver's Controlled Substance and Alcohol Testing

The driver had been subject to a pre-employment-controlled substance and alcohol test when hired on October 4, 2017. The driver was subjected to three random urinalysis tests to test for controlled substances on January 28, 2020, August 4, 2022, and finally on February 7, 2023. The driver had also been subjected to two post-crash-controlled substance tests on November 10, 2023, and again on July 22, 2024. The results of all the random and post-crash tests were reported as negative.

As previously stated, CJJ was unable to obtain a post-crash-controlled substance test from this crash as the driver was in the hospital receiving medical treatment.

3.4 Driver's Roadside Inspection History

The driver in this crash had been subject to four prior roadside inspections since November 2022. Table 2 is a summary of the inspections, locations, and violations discovered.

Table 2. Driver's Roadside Inspection History

Date	State	Level of Inspection[8]	*CFR* section	Violation
July 22, 2024	Illinois	3	None	None
October 16, 2023	Indiana	3	392.2S 395.8 395.8(k)(2)	Speeding Logbook (form and manner) No previous 7 days of logs
July 17, 2023	Indiana	1	395.22(g) 393.75(a)(3)	Portable ELD device not mounted in a fixed position viewable to driver Flat tire
March 27, 2023	Indiana	1	395.8 395.22 (h)(4) 392.2S 392.2ML	Logbook (form and manner) No supply of blank log pages Speeding Failing to maintain lane

4.0 Government Oversight

4.1 Federal Motor Carrier Safety Administration (FMCSA

4.1.1 CSA and SMS

The FMCSA's Compliance, Safety, Accountability (CSA) system is an enforcement and compliance model that allows the FMCSA and its state partners to contact a larger number of carriers earlier to address safety problems before crashes occur and is intended to improve large truck and bus safety and ultimately reduce crashes, injuries, and fatalities that are related to Commercial Motor Vehicles (CMVs). Along with CSA, the FMCSA also utilizes an operational model called the Safety Measurement System (SMS), which uses a motor carrier's data from roadside inspections, (including all safety-based violations), state-reported crashes, and the Federal Motor Carrier Census to prioritize interventions and quantify performance in the following Behavior Analysis and Safety Improvement Categories (BASICs).

4.1.2 CSA BASICs[9]

- **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)

[8] All Inspection Levels - CVSA – Commercial Vehicle Safety Alliance
[9] CSA Methodology retrieved from www.fmcsa.dot.gov

- **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)
- **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 and carrier size). 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.

CJJ's BASICs were recorded in FMCSA's MCMIS system at the time of the crash as:

- Unsafe Driving – 50
- Crash Indicator – 59
- **Hours of Service Compliance – 63 Alert**
- Vehicle Maintenance – 59
- Driver Fitness –0
- Hazardous Materials – Less than 5 HM inspections with violations

- Controlled Substance and Alcohol – 0

The FMCSA has established threshold levels that would require agency action. Unsafe Driving, HOS, and Crash BASICs are set at lower thresholds because of their inherent risk. Additionally, passenger carriers and hazardous materials carriers have lower thresholds than all other carriers because of their inherent risk. Table 3 represents the thresholds set by the FMCSA that help prioritize agency intervention and resource management.[10]

Table 3. BASIC Thresholds[11]

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

On a carrier's SMS profile, which is publicly available on the SAFER website for only passenger carriers, an alert symbol ⚠ is displayed in any designated BASIC where the carrier has exceeded the corresponding threshold.[12] This is also referred to as having an "alert" in a BASIC. At the time of the crash, the carrier displayed an alert in the hours of service BASIC. The SMS profile also shows that at the time of the crash, the carrier's driver out of service rate was 3.2% and the vehicle out of service rate was 38.1%. These rates were in comparison to the national averages of 6.0% and 21.4%, respectively. This information was based upon roadside inspection data discussed below.

Since becoming a carrier, CJJ had never been subject to a compliance review (CR) prior to this crash. CJJ had been subject to a new entrant safety audit in October of 2017. The audit was conducted by the Illinois Department of Transportation and CJJ successfully exited the new entrant process.[13]

A focused CR is used when two or fewer BASICs have exceeded their thresholds or when only certain portions of the Code of Federal Regulations (*CFR*) are reviewed related to the carrier's operations. A focused CR normally does not result in a safety rating and usually is classified as "non-rated" when completed, however it may result

[10]Retrieved from www.fmcsa.dot.gov
[11]Retrieved from http://csa.fmcsa.dot.gov/FAQs.aspx.
[12]FMCSA BASIC information publicly available for Passenger and Hazardous Material carriers only. See additional information at the FMCSA Safer website: http://safer.fmcsa.dot.gov/CompanySnapshot.aspx.
[13] See Motor Carrier Attachment – New Entrant Safety Audit

in an adverse safety rating (conditional or unsatisfactory).[14] A comprehensive CR is used when three or more BASICs have exceeded their thresholds. A comprehensive CR may also be used if the carrier was involved in a crash or there has been a complaint made. A comprehensive CR addresses all aspects of the carrier's operation and normally results in a safety rating. The safety rating is determined by the FMCSA using safety rating methodology outlined in 49 *CFR* 385.5 which evaluates patterns of critical and acute violations.[15] Table 4 summarizes the carrier's CR history to include the post-crash CR.

Table 4. Compliance Reviews

Type of CR	Review Date	Safety Rating
Compliance Review - Significant crash	10/31/2024	Not Rated
New Entrant Safety Audit	10/11/2017	Exited New Entrant Program

The Illinois Division office of FMCSA conducted a preliminary crash investigation (PCI) beginning on August 20, 2024, and closing on October 31, 2024. Additionally, as part of the PCI process FMCSA reviewed the carrier to ensure that it was not operating under an out of service order or a subsidiary of a carrier that was under an out of service order. FMCSA determined the carrier was not a reincarnated carrier.[16]

A PCI of a significant crash can be conducted by FMCSA personnel when the actions of the CMV driver may have been a contributing factor to the cause of the crash; preliminary findings from officers' investigation at the scene or post-crash inspection reveal possible violations of the FMCSR or Hazardous Materials Regulations (HMR) that existed prior to or at the time of the crash; or, other factors that indicate that further investigation is warranted (e.g., unknown motor carrier, Mexican-domiciled motor carrier). A PCI includes: (1) A review of the driver's: Driver Qualification (DQ) File, including Commercial Driver's License Information System (CDLIS) report; compliance with the controlled substance testing regulations; and HOS during the 8-day period

[14] Safety rating or rating means a rating of "satisfactory", "conditional", or "unsatisfactory" using the factors prescribed in 49 *CFR* 385.7 as computed under the Safety Fitness Methodology. **Safety Ratings:** (1) **Satisfactory** means a motor carrier has in place, functioning safety management controls to meet the safety fitness standards prescribed in 49 *CFR* 385.5. (2) **Conditional** means a motor carrier does not have adequate safety management controls in place to ensure compliance with the safety fitness standards that could result in occurrences listed in 49 *CFR* 385.5 (a) through (k). (3) **Unsatisfactory** means a motor carrier does not have adequate safety management controls in place to ensure compliance with the safety fitness standard which has resulted in occurrences listed in 49 *CFR* 385.5 (a) through (k). (4) **Unrated** means that a safety rating has not been assigned to the motor carrier by FMCSA.

[15] Acute violations are those identified where non-compliance is so severe as to require immediate corrective action by the motor carrier regardless of the overall safety posture of the carrier. Critical violations relate to management and/or operational controls that show a pattern of non-compliance. A list of acute and critical violations is listed in Appendix B of 49 *CFR* 385.

[16] For a definition of reincarnated carrier see 49 *CFR* 386.73

prior to and at the time of the crash; (2) An inspection of the CMV(s) involved in the crash if no State inspection is conducted or a review of the vehicle inspection or investigative report prepared by a State agency; and, (3) A review of the inspection and maintenance records for that vehicle, which are required by 49 CFR Part 396. Violations discovered during the PCI should be documented and if warranted, an enforcement case prepared.

As a result of the PCI, FMCSA documented two violations of the FMCSRs: 1) Failing to make a report of a hazardous materials incident involving transportation (49 *CFR* 171.16) and 2) Failing to require a driver to prepare record of duty status in form and manner prescribed – no shipping document number or name of shipper and commodity (49 *CFR* 395.8(f)).[17]

4.1.3 Roadside Inspections

CJJ's had been subject to 31 roadside inspections since August 25, 2022, resulting in 36 violations of the Federal Motor Carrier Safety Regulations (FMCSRs).

4.2 State Regulatory Oversight

4.2.1 Illinois State Police

The Illinois State Police – Commercial Vehicle Section, was responsible for enforcement of state and federal motor carrier regulations and conducting roadside inspections. The State Police – Commercial Vehicle Section derives its authority from 625 ILCS 5/18B-100, et seq., "The Illinois Motor Carrier Safety Law".[18]

4.2.2 Illinois Department of Transportation

The Illinois Department of Transportation also is responsible for enforcement of state and federal motor carrier safety regulations and conducts new entrant safety audits and compliance reviews. The Illinois Department of Transportation conducted the new entrant safety audit in 2017.

5.0 Vehicle Maintenance

Both the truck tractor and semi-trailer involved in this crash were leased vehicles. The truck tractor was leased from M&K NationaLease on August 5, 2024. The truck tractor had its annual inspection completed on June 25, 2024, at M&K NationaLease in Summit, Illinois. The semi-trailer was also leased from Systems Transportation Systems

[17] See Motor Carrier Attachment – Preliminary Crash Investigation
[18] For further information on the Motor Carrier Safety Law - 625 ILCS 5/ Illinois Vehicle Code. (ilga.gov)

Inc of Bellwood, Illinois. The semi-trailer had its annual inspection completed on July 11, 2024, at Southern Tire Mart at the Pilot Truckstop in Byron, Georgia.

CJJ's company policies covered maintenance and spelled out the intervals for preventive maintenance. Truck-tractors were to be serviced every 12,500 miles or three months and semi-trailers were to receive maintenance every three months.

6.0 Subsequent Crashes

Following the initial crash, two additional crashes occurred in proximity on I-80; one at 5:54 a.m. and another at 6:24 a.m. This section provides a basic description of the carriers involved in those crashes.

6.1 5:54 a.m. Crash Carrier Description

The crash that occurred at 5:54 am involved four commercial carriers. The information from those carriers is summarized in Table 5 below.

Table 5. 5:54 a.m. Crash Carriers

Carrier Name	USDOT #	Number of Drivers	Number of Power Units	Location
TL Trucking 2302 Inc	4219421	41	41	Chicago, IL
Pulli Express Ince	1951348	4	4	Indian Head Park, IL
John Deere Shared Services Inc	122430	222	133	Davenport, IA
Mike Proctor Hauling LLC	2727657	6	6	Cranesville, PA
Miller Brothers Construction	103659	61	79	Archbold, OH

6.2 6:24 a.m. Crash Carrier Description

The crash that occurred at 6:24am involved three commercial carriers the information from those carriers is summarized in Table 6 below.

Table 6. 6:24 a.m. Crash Carriers

Carrier Name	USDOT #	Number of Drivers	Number of Power Units	Location
AD Express Trucking LLC	3066495	278	255	Philadelphia, PA
Tarpstop LLC	1908754	2	3	Toledo, OH
Saia Motor Freight Line LLC	29124	6951	6176	Johns Creek, GA

E. DOCKET MATERIAL

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

Motor Carrier Attachment – MCS-150 CCJ Dated 04/23/2024
Motor Carrier Attachment – CJJ Interview
Motor Carrier Attachment – Hiring Process
Motor Carrier Attachment – New Entrant Safety Audit
Motor Carrier Attachment – Preliminary Crash Investigation

Submitted by:

Shawn Currie
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