



# National Transportation Safety Board

Washington, D.C. 20594

## Safety Recommendation

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**Date:** November 5, 2013

**In reply refer to:** H-13-039 and -040

The Honorable Anthony R. Foxx  
Secretary  
US Department of Transportation  
Washington, DC 20590

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The National Transportation Safety Board (NTSB) investigated four recent commercial motor vehicle crashes that, together, resulted in 25 deaths and injuries to 83 people. The crashes all raised safety issues about the oversight of US motorcoach and trucking industry operations by the Federal Motor Carrier Safety Administration (FMCSA). Additional information about these specific crashes can be accessed through our website, [www.nts.gov](http://www.nts.gov), under the following report numbers: HWY-13-FH-005 (Pendleton, Oregon), HWY-13-FH-007 (San Bernardino, California), HWY-13-FH-008 (Elizabethtown, Kentucky), and HWY-13-FH-015 (Murfreesboro, Tennessee).<sup>1</sup>

The NTSB investigations of the four crashes described in this letter—two involving motorcoaches and two involving commercial property operations—all prompt concern about FMCSA oversight practices with respect to the motor carriers operating the commercial vehicles. The Pendleton, Oregon, motorcoach crash might have been prevented if FMCSA oversight of the motor carrier during the compliance review (CR) process had identified the safety problems that were subsequently enumerated in a postcrash imminent hazard order. The NTSB investigation of the second motorcoach crash, in San Bernardino, California, found that the FMCSA had conducted CRs on the motor carrier without making a complete review of its business records. In addition, despite the FMCSA's having documented numerous vehicle violations associated with the carrier in roadside inspections, the most recent precrash CR of the carrier did not include inspection of any vehicles. After providing a description of these two motorcoach crashes and the NTSB investigation of the motor carriers involved, this letter discusses the NTSB concerns regarding the quality of CR investigative work.

The third and fourth crashes involved commercial property operations. NTSB investigation of the crash in Elizabethtown, Kentucky, revealed that the FMCSA's investigative work and its on-site focused CR of the commercial property operator, conducted days before the crash occurred, did not uncover the carrier's violations of the Compliance, Safety,

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<sup>1</sup> The reports may be found in the NTSB public docket for these investigations, which is accessible via the website.

Accountability (CSA) program's Behavior Analysis and Safety Improvement Categories (BASICS) in the hours-of-service (HOS) compliance area, despite a history of violations, because the focused review was conducted only on the Unsafe Driving BASIC.<sup>2</sup> In addition, the NTSB investigation of an operator involved in a fatal crash near Murfreesboro, Tennessee, uncovered carrier violations in the HOS compliance area that were not identified in a June 2011 Non-Rated on-site focused CR. The focused CR was prompted by an alert in the Unsafe Driving BASIC, but the carrier had a history of alerts in the HOS BASIC.<sup>3</sup> Following a discussion of these two commercial property operation crashes, this letter explains the NTSB's concern with the limited scope of the focused CRs conducted by the FMCSA. In these cases, focused CRs that considered only the Unsafe Driving BASIC resulted in the failure to detect safety violations by the motor carriers that later contributed to fatal crashes.

## **Two Motorcoach Crashes and the CRs Conducted on the Carriers Involved**

### **Mi Joo Tour & Travel Crash in Pendleton, Oregon**

On Sunday, December 30, 2012, about 10:30 a.m. Pacific standard time (PST), a 1998 Prevost motorcoach, operated by the Canadian motor carrier Mi Joo Tour & Travel, was traveling westbound on Interstate 84, near Pendleton, Oregon. The motorcoach was on a trip from Las Vegas, Nevada, to Vancouver, British Columbia; on the day of the crash, it had departed from Boise, Idaho. Snow and ice had accumulated along the route, which traverses a rural area of the Blue Mountains. The motorcoach, upon encountering ice, slid off the roadway, struck a W-beam roadside barrier, went down an embankment, overturned, and came to rest upright at the bottom of the slope. As a result of the crash, 9 of the vehicle's 47 occupants died. The driver and an additional 37 passengers were injured.<sup>4</sup>

Postcrash investigation by NTSB investigators and the Oregon State Police determined that the motorcoach had been traveling too fast for the weather and roadway conditions. In addition, the driver was unsafely operating the motorcoach with the transmission retarder engaged,<sup>5</sup> and the motorcoach was equipped with a tire not properly speed-rated for highway operations.<sup>6</sup> The NTSB review of Mi Joo Tour & Travel and its driver determined that the driver was operating in violation of the 70-hour rule under federal HOS regulations for passenger-carrying commercial motor vehicles at the time of the crash. The NTSB did not determine a probable cause for this crash; however, based on the driver's HOS violation, fatigue may have contributed to his operational errors of traveling too fast for the road conditions and of

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<sup>2</sup> The BASIC categories are as follows: Unsafe Driving, HOS, Driver Fitness, Controlled Substances/Alcohol, Vehicle Maintenance, Hazardous Materials, and Crash Indicator.

<sup>3</sup> A review of the carrier's history in the Safety Measurement System (SMS) indicated that it had alerts in the HOS BASIC from November 19 to December 17, 2010; from June 24 to August 26, 2011; from October 28 to December 16, 2011; and from April 27, 2012, to May 24, 2013.

<sup>4</sup> See HWY-13-FH-005 for more information.

<sup>5</sup> The motorcoach was equipped with an Allison automatic transmission retarder to help slow the vehicle, thereby reducing the need to use the wheel brakes. Guidance from the *Commercial Driver's License Manual* cautions that "When your drive wheels have poor traction, the retarder may cause them to skid. Therefore, you should turn the retarder off whenever the road is wet, icy, or snow covered." (American Association of Motor Vehicle Administrators, *Commercial Driver's License Manual*, 2006, p. 2-10.)

<sup>6</sup> A postcrash inspection of the motorcoach showed that the vehicle was equipped with one tire that was speed-rated for 55 mph.

leaving the transmission retarder engaged.<sup>7</sup> Mi Joo Tour & Travel had previously been cited twice for Part 395 HOS violations; one of those violations resulted in an out-of-service (OOS) order.

Mi Joo Tour & Travel had passed the US New Entrant Program safety audit in July 2007 and completed the program on August 20, 2008, at which time the Canadian company received permanent authority to operate in the United States. The FMCSA subsequently conducted CRs on Mi Joo Tour & Travel on July 13, 2010, and August 24, 2011. The 2010 CR resulted in a Conditional rating; the 2011 CR resulted in a Satisfactory rating. On the basis of the 2011 CR, the FMCSA issued Mi Joo Tour & Travel a Notice of Claim (NOC) fine of \$2,000 for a driver violation.<sup>8</sup> The company did not pay the NOC fine and on January 9, 2012, the FMCSA issued it an OOS order. Mi Joo Tour & Travel then paid the fine, and the FMCSA rescinded the OOS order on March 27, 2012. Nine months later, the Pendleton, Oregon, crash occurred.

The NTSB postcrash review of the motor carrier determined that Mi Joo Tour & Travel had no safety plan and no written policies or procedures—including no hiring procedures, no preventative maintenance program for its vehicles, no safety management review procedures for monitoring driver hours of service, and no in-service training for its drivers. Following the crash and the NTSB's investigation of the motor carrier, the FMCSA conducted a CR on Mi Joo Tour & Travel, which was completed on January 17, 2013. As a result of the evidence obtained during the postcrash CR, the FMCSA put the company, the crash driver, and a second motorcoach driver on the trip out of service and determined that Mi Joo Tour & Travel was an imminent hazard to public safety. The FMCSA imminent hazard operations OOS order stated (in part) that the basis of the order was as follows:

MI JOO TOUR & TRAVEL wholly fails to take basic measures to ensure that its drivers are properly rested for safe vehicle operations. MI JOO TOUR & TRAVEL fails to monitor and ensure that its drivers comply with drivers' hours of service requirements, drivers' records of duty status (RODS) requirements, and recordkeeping retention requirements, thereby posing a continuing imminent hazard....<sup>9</sup>

Based on the CR records, the problems identified with Mi Joo Tour & Travel were longstanding and systemic, dating to when the company first began operations and passed the New Entrant Program safety audit in July 2007. The fact that Mi Joo Tour & Travel received a Satisfactory rating during its August 24, 2011, CR raises serious concerns regarding the thoroughness of the FMCSA CR process. This 2011 CR noted only two violations of 49 CFR Part 396—in the vehicle maintenance and inspection categories—and neither of those violations were classified as “critical” or “acute”; consequently, the violations did not count toward the carrier's rating. However, the postcrash CR noted the following deficiencies with respect to the carrier's operation:

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<sup>7</sup> Title 49 *Code of Federal Regulations* (CFR) 395.5(b)(2) prohibits driving after 70 hours of on-duty time in a consecutive 8-day period if the employing motor carrier operates passenger-carrying commercial motor vehicles every day of the week.

<sup>8</sup> The 2011 CR was prompted because the carrier had alerts for the Driver Fitness and Controlled Substances/Alcohol BASICS. The carrier also had a postcrash HOS alert (score of 76.9 percent, above the category threshold of 50 percent).

<sup>9</sup> See Imminent Hazard Operations Out-of-Service Order WA-2013-5000-IMH, issued January 8, 2013.

- Continued noncompliance with drug and alcohol testing requirements,
- No postcrash controlled substance testing,
- Failure to maintain driver qualification requirements,
- Failure to comply with the HOS regulations,
- Failure to properly maintain commercial motor vehicles,
- Failure to require drivers to properly prepare driver inspection reports,
- Continued operation while under an OOS order.

Some of the issues involved in the Pendleton crash, such as unsafe speed, improper use of a transmission retarder under slippery roadway conditions, vehicle equipment deficiencies, and possible driver fatigue connected to driving in violation of HOS regulations, can be directly attributed to poor safety management on the part of Mi Joo Tour & Travel. This fatal crash might have been prevented if the FMCSA had exercised more effective federal oversight of the carrier during the CR process. The FMCSA should have identified the safety problems enumerated in the postcrash imminent hazard order before the crash occurred, during the CRs conducted in July 2010 and August 2011, and required corrective action or put Mi Joo Tour & Travel out of business before the crash took place in 2012.

### **Scapadas Magicas LLC Crash in San Bernardino, California**

Five weeks after the Pendleton, Oregon, motorcoach crash, the NTSB investigated a second multiple-fatality motorcoach crash, which took place near San Bernardino, California. On Sunday, February 3, 2013, about 6:29 p.m. PST, a 1996 Van Hool motorcoach was traveling westbound on State Route 38 (SR-38), a two-lane highway with one lane traveling westbound (downhill) and one lane traveling eastbound (uphill), near the end of a mountainous portion of the route. The motorcoach was returning to Tijuana, Mexico, from Big Bear Lake, California. The motorcoach was owned and operated by Scapadas Magicas LLC and was occupied by 40 passengers and a 52-year-old male driver. As the motorcoach continued downhill, the driver had difficulty slowing and lost control of the vehicle. The motorcoach collided with the rear and left side of a 2007 Saturn Aura, occupied by a driver and two passengers, which was ahead of the motorcoach in the same lane. The Saturn was deflected out of the path of the motorcoach. After exiting a left curve, the motorcoach crossed into the opposing (uphill) lane, struck an embankment on the left side of the roadway, and overturned toward the passenger side. The overturned motorcoach collided with a 1985 Ford F-150 Explorer pickup truck that was traveling eastbound (uphill), towing an enclosed utility trailer. The Ford was occupied only by the driver. During the collision sequence, several passengers were ejected from the motorcoach. The motorcoach and the Ford were redirected to the westbound lanes, where the bus rolled upright, struck a boulder adjacent to a drainage ditch on the right side of the roadway, and came to rest blocking both lanes of SR-38. As a result of the crash, 7 motorcoach passengers were fatally injured, the motorcoach driver and 11 passengers were seriously injured, and 22 passengers received minor injuries. The Saturn driver and its two passengers received minor injuries. The Ford driver died as a result of the crash.<sup>10</sup>

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<sup>10</sup> See HWY-13-FH-007 for more information.

Postcrash investigation by NTSB investigators and the California Highway Patrol identified numerous mechanical problems with the Van Hool motorcoach that directly contributed to the crash. Vehicle mechanical deficiencies were identified for all six brakes that would have qualified the brakes as defective according to the North American Standard Inspection Program OOS criteria. The lack of braking capability led to the driver's loss of vehicle control as the motorcoach traveled downhill.

The carrier had begun operating taxi and van service from Mexico to California as a sole proprietor in 1984 under the name "Ramon Ramirez." By 1996, it was doing business as a for-hire passenger carrier conducting interstate charter service under the name "Scapadas Magicas." The carrier received four CRs prior to 2011. The CR rating results were as follows: 2001, Satisfactory; 2007, Conditional; 2008, Satisfactory; and 2009, Satisfactory. In 2011, the company changed its business status from sole proprietorship to limited liability corporation (LLC). This status change prompted it to be identified by the FMCSA as a new entrant. The carrier exited the New Entrant Program with a Satisfactory CR rating in April 2011, and it received permanent operating status from the FMCSA on October 3, 2012.

During 2011 and 2012, Scapadas Magicas LLC received 19 roadside inspections, 6 of which resulted in one or more OOS violations, giving it a 42.8 percent vehicle OOS rate, about six times the annual national average for this factor, which is generally about 5–7 percent for same-class operations. Moreover, the motorcoach that crashed had received five roadside inspections in the previous 24 months; three of those five inspections identified brake OOS violations. Because of its history of problems with vehicle maintenance found during roadside inspections, Scapadas Magicas LLC received an alert in the Vehicle Maintenance BASIC; its score of 74 percent in this BASIC placed it in the worst 26 percent of all motor carriers for vehicle maintenance.

The NTSB's postcrash review of Scapadas Magicas LLC identified a serious lack of safety management controls on the part of the motor carrier. The company had no written safety policies for its drivers and no systematic preventative maintenance program for its vehicles. The carrier did not have a method or system of records for indicating when vehicles were due for service and lacked a systematic method of conducting repairs and servicing, as required under 49 CFR 396.3. The company owner stated that the mechanic who repaired the buses was not a Scapadas Magicas LLC employee. The carrier's operations manager, who was not a licensed mechanic, signed off on the orders for completed maintenance work.

In reviewing the FMCSA's oversight of Scapadas Magicas LLC prior to the crash, the NTSB identified a number of significant deficiencies in the CR process. On January 9, 2013, less than a month before the fatal crash, the FMCSA completed a full CR of Scapadas Magicas LLC and rated the company Satisfactory. The FMCSA conducted this CR because the carrier exceeded the BASIC threshold for roadside safety inspection violations associated with vehicle maintenance.<sup>11</sup> Despite the carrier's having an alert in the Vehicle Maintenance BASIC and a vehicle OOS rate of over 40 percent, the FMCSA conducted the 2013 CR of Scapadas Magicas LLC off site, at a self-storage facility, and no company vehicles were inspected. During

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<sup>11</sup> A vehicle maintenance alert results when the score for that BASIC category exceeds the threshold value. The Vehicle Maintenance BASIC score for Scapadas Magicas LLC was 74 percent, well above the category threshold of 50 percent.

the review, the carrier informed the FMCSA safety investigator that its records were maintained at its principal place of business in Tijuana, Mexico. Those carrier maintenance receipts and repair orders that the carrier provided were written in Spanish. The report of the CR closeout review stated that “the carrier was not able to provide all requested documentation.”

Less than a month after the FMCSA completed the January 2013 CR, which resulted in a Satisfactory rating for Scapadas Magicas LLC, the fatal San Bernardino crash took place, which occurred because of the poor condition of the motorcoach’s brakes. Following the crash, the FMCSA issued an imminent hazard OOS order on February 8, 2013, to stop Scapadas Magicas LLC operations. The order stated that the company “fails to ensure that its commercial operations are systematically inspected, repaired and maintained and fails to ensure that its drivers are properly qualified and have appropriate licenses for the commercial motor vehicles they operate” and that the company “fails to ensure its commercial motor vehicles are properly and regularly inspected, repaired and maintained and fails to ensure that its drivers are knowledgeable in pre-inspection procedures and requirements.”<sup>12</sup> The FMCSA postcrash investigation included safety inspections of two other motorcoaches operated by Scapadas Magicas LLC in the United States. The FMCSA found serious violations with both vehicles and placed them out of service.

Another issue that raises concern is the fact that the motorcoach that crashed had been issued a Commercial Vehicle Safety Alliance (CVSA) decal by an FMCSA safety investigator on October 25, 2012.<sup>13</sup> Vehicles bearing a CVSA decal typically will not be stopped or reinspected during the 3-month time frame in which the decal is valid. The San Bernardino crash occurred 2 days after the decal expired. The NTSB believes that the mechanical conditions that were identified postcrash were longstanding problems and questions whether the vehicle should have received the CVSA decal. Improper vehicle maintenance was a leading investigative issue in this fatal crash, which might have been prevented had the FMCSA exercised effective motor carrier safety controls and adequate oversight of the carrier.

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<sup>12</sup> See Imminent Hazard Operations Out-of-Service Order CA-2013-5000-IMHA, issued February 8, 2013.

<sup>13</sup> To qualify for a CVSA decal, the vehicle must be inspected by an inspector certified to inspect to North American Standard Level I and/or Level V. The decal indicates that the vehicle did not have any violations of the items contained in the operational policy and North American Standard OOS criteria. CVSA decals, when affixed, remain valid for a period not to exceed 3 consecutive months.

## **Oversight Issues Common to Mi Joo Tour & Travel and Scapadas Magicas LLC**

The two carriers involved in the motorcoach crashes discussed above and the deficiencies in the FMCSA's oversight of their operations share disturbing similarities. Mi Joo Tour & Travel began business as a travel agency in Canada; Scapadas Magicas LLC was originally a sole proprietor taxi service in Mexico;<sup>14</sup> thus, both carriers were based outside of the United States and received US operating authority from the FMCSA. Neither company had a safety management plan, a preventative maintenance program, or a driver training handbook. Neither company owned a garage to maintain its fleet nor had a mechanic on staff. They did not have in-service driver training, their driver training files were incomplete, and their driver drug and alcohol programs were noncompliant. Yet both companies received Satisfactory ratings in the CRs the FMCSA conducted prior to their fatal crashes.

The FMCSA's operational monitoring systems—SafeStat and, more recently, the SMS<sup>15</sup>—identified potential safety problems with both of these carriers, specifically in the safety improvement categories related to their fatal crashes (Unsafe Driving and Vehicle Maintenance BASICS). Using the SMS to identify “at-risk” carriers, the FMCSA conducts CRs as the primary investigative and intervention method to determine the safety fitness of commercial operations and to compel operators to comply with the regulations. These monitoring systems triggered the CRs conducted for both carriers because each was indicated as possibly having safety deficiencies. However, the CR conducted on Mi Joo Tour & Travel 17 months prior to its fatal crash and the CR conducted on Scapadas Magicas LLC less than 1 month prior to its fatal crash both resulted in Satisfactory ratings. Then, immediately following each crash, the FMCSA issued an imminent hazard OOS order to stop operations, in recognition that the carriers were unsafe—despite having rated them Satisfactory in their most recent CRs. Also following each crash, NTSB investigators identified a lack of business documentation by the carriers and found that the FMCSA had conducted the most recent precrash CRs without carrying out a complete review of the companies' business records.

### **Questions Concerning FMCSA CR Quality Control Arising from the Pendleton and San Bernardino Investigations**

The two motorcoach investigations described in this letter demonstrate clear problems in the execution of CRs. The NTSB is concerned that the CRs conducted on the carriers involved in these two crashes—Mi Joo Tour & Travel and Scapadas Magicas LLC—did not identify safety problems present at those firms. The carriers were correctly selected for safety review based on elevated SMS risk metrics identifying their safety deficiencies (thresholds exceeded in Unsafe Driving BASIC); however, the CR investigative work did not reflect violations in those BASICS. From the NTSB's vantage point, it is difficult to identify where the FMCSA failed in CR

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<sup>14</sup> Scapadas Magicas LLC incorporated in California in 2011. The April 8, 2013, postcrash CR recorded the carrier's physical business address as being in Tijuana, Mexico. Data from the carrier on FMCSA form MCS-150 showed a San Diego, California, mailing address and cited a principal place of business in National City, California. NTSB inspection of the National City business location indicated that the site was a self-storage unit facility. The FMCSA conducted the most recent CR at a carrier official's personal residence in California. Although the business's principal place of operation had a California address, investigators determined that the carrier's vehicles returned to Mexico each night, were driven by drivers who resided in Mexico, and received mechanical repairs and service in Mexico. Legally, its place of operation was California, but for all practical purposes, the carrier operated out of Mexico.

<sup>15</sup> The SMS program replaced the SafeStat system in December 2010.

execution, but these cases illustrate that discrepancies exist between unsafe carrier operations and the FMCSA's evaluation of those operations. The FMCSA's own postcrash imminent hazard determinations for both carriers confirm that the precrash CRs conducted on them—which had Satisfactory results—were deficient.

As a practical matter, the quality of investigative work is a line management responsibility. The work of conducting CRs is organized under the FMCSA regional service centers;<sup>16</sup> both Mi Joo Tour & Travel and Scapadas Magicas LLC were under the jurisdiction of the FMCSA Western Service Center. An FMCSA field investigator's work is reviewed by federal program managers, and enforcement specialists manage the associated penalties and court cases. The FMCSA periodically reviews selected investigative work. This management structure, which provides for internal oversight and case review, should have identified incomplete CR case work; however, the fact that it did not in these two cases leads the NTSB to conclude that the agency needs more effective processes to assess the quality of its own CR investigative work.

As the FMCSA seeks to increase operational efficiencies and address compliance and safety deficiencies across a broader segment of the motor carrier industry, the quality of its investigative oversight becomes more vital than ever. FMCSA management must ensure the quality of its investigators' work products, specifically for at-risk carriers, which are identified on the basis of a high value (exceeding the threshold) in one or more BASICs or because of their history of past enforcement actions. The FMCSA has repeatedly testified before Congress that CRs are time-intensive and that its staff of a few hundred investigators can conduct CRs on only approximately 3 percent of active motor carriers annually. Given the limited investigative resources available, ineffective use of those resources is troubling. The FMCSA has stated that it is working to expand the types and number of interventions used to reach more at-risk operators. The NTSB is concerned that while the FMCSA works to achieve this goal, its internal oversight may be lacking, both at the staff level, where violations in BASICs are not being documented by CRs, and at the management level, where reviews by federal program managers are not detecting substandard and incomplete investigative work.

The NTSB is aware that the FMCSA's authority to use imminent hazard OOS orders was expanded in 2012 by the Moving Ahead for Progress in the 21st Century Act (MAP-21) and recognizes that issuance of an imminent hazard order is dependent solely on the FMCSA's determination that a condition or on-going action is a significant and immediate safety hazard necessitating cessation of that carrier's operations. Moreover, the NTSB acknowledges that such orders may be issued independent of the CR process. The NTSB applauds the FMCSA's recent targeted actions to use its imminent hazard authority to remove unsafe operators from our roadways and strongly supports the expanded use of imminent hazard OOS orders. The NTSB also appreciates the FMCSA's development of "quick strike" capability by providing more than 50 specially trained safety investigators to target high-risk passenger carriers. However, despite these positive actions, the NTSB remains concerned that, based on the findings with respect to the inadequate CRs conducted on Mi Joo Tour & Travel and Scapadas Magicas LLC, some FMCSA safety investigators working in the field may need additional training, more specific work procedures, and better oversight.

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<sup>16</sup> These are the Western Service Center in Lakewood, Colorado; the Eastern Service Center in Glen Burnie, Maryland; the Midwestern Service Center in Matteson, Illinois; and the Southern Service Center in Atlanta, Georgia.



The FMCSA 2012–2016 Strategic Plan offers a high-level statement of the government requirements to measure programmatic effectiveness in accordance with the Government Performance and Results Act (GPRA) and the GPRA Modernization Act. The FMCSA regularly reports performance metrics of oversight work to Congress and uses focused work models, such as its Compliance Review Effectiveness Model, to estimate the numbers of crashes avoided and lives saved. Although such work metrics provide quantitative estimates of the effects of CRs in the aggregate,<sup>17</sup> they do not necessarily address the quality of investigators' work.

On the basis of the deficiencies identified in the CRs conducted on Mi Joo Tour & Travel and Scapadas Magicas LLC, action is needed to identify the root cause of CR deficiencies and to incorporate more robust quality control systems into the CR process. Therefore, given the safety violations missed by FMCSA investigators in the precrash CRs of Mi Joo Tour & Travel and Scapadas Magicas LLC, the NTSB recommends that the US Department of Transportation (DOT) conduct an audit of the CR processes used by the FMCSA to determine (1) why inspectors are not identifying all violations of safety regulations by motor carriers undergoing review, and (2) why the FMCSA's quality assurance efforts are not fully effective in assessing the accuracy and completeness of CRs; once these determinations have been made, the DOT should require the FMCSA to revise its processes to correct these deficiencies.

## **Two Property Carrier Crashes and the On-Site Focused CRs Conducted on the Carriers Involved**

Although poor quality investigative work by FMCSA investigators is a serious problem, it is not the only issue associated with CRs that has surfaced during recent NTSB investigations. Another area where improvement is needed concerns the nature of the on-site focused CRs that the FMCSA is increasingly using as the primary intervention of choice. Under the CSA program, FMCSA interventions can include the following types of early contact: warning letters, carrier access to safety data and measurement, and targeted roadside inspections. Investigative actions resulting from SMS information can include off-site investigations, on-site focused investigations (referred to in this document as "focused CRs"), and on-site comprehensive investigations. Two recent investigations—of property carrier crashes in Elizabethtown, Kentucky, and Murfreesboro, Tennessee—highlight the NTSB's concern with focused CRs.

### **Highway Star, Inc., Crash in Elizabethtown, Kentucky**

The first case involved a truck-tractor semitrailer operated by a Troy, Michigan, carrier, Highway Star, Inc., which collided with two other vehicles on March 2, 2013, near Elizabethtown, Kentucky.<sup>18</sup> A 2012 Kenworth truck-tractor in combination with a semitrailer was traveling northbound in the right lane of Interstate 65. A Ford Expedition sport utility vehicle (SUV) occupied by a 62-year-old male driver and seven passengers, ranging in age from 8 to 92, was also traveling northbound in the right lane in front of the combination vehicle. In response to a disabled vehicle that was broken down in the right shoulder, vehicles ahead of the Ford SUV

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<sup>17</sup> The Compliance Review Effectiveness Model compares a motor carrier's crash rate for the 12 months following an on-site CR to its crash rate for the 12 months preceding the CR. Results are reported by fiscal year (FY), and the most recent posting of such data is for FY 2008; for more information, see <http://ai.fmcsa.dot.gov/pe/PEReport.aspx?rp=crNat>, accessed October 28, 2013.

<sup>18</sup> See HWY-13-FH-008 for more information.

had slowed, and a traffic queue had formed in the right lane of the interstate. The combination vehicle, which was traveling at a recorded speed of 67 mph, collided with the Ford SUV, pushing it into a 2007 Toyota Avalon. A postcrash fire consumed the Ford SUV. The 47-year-old driver of the combination vehicle reported to police that he “didn’t hit the brakes in time.” The crash resulted in fatal injury to six occupants of the Ford SUV. The two other occupants were transported to area hospitals for treatment of their injuries. The driver of the Toyota received minor injuries, and the driver of the combination vehicle was reportedly not injured.

In a postcrash inventory of the truck-tractor, the Kentucky State Police located the driver’s logbook pages, in which the driver recorded that he had been off duty February 18–25, 2013. No other logbook pages were found at that time. The NTSB requested the driver’s logbook pages from the carrier, Highway Star, and received matching records. A subsequent search of the truck-tractor revealed a second set of logbook pages in which the driver recorded trips from February 21 through the crash date of March 2, 2013. These trips were continuous and had no off-duty days (that is, no 34-hour reset time). This second set of records also indicated that the crash driver had been driving for 10 consecutive days and was in violation of the 70-hour rule.<sup>19</sup> A review of his sleep/wake/work profile and cell phone records indicated that he was most likely fatigued at the time of the crash, which could provide an explanation for his delayed reaction to the traffic queue slowed in front of him.

The FMCSA had previously conducted oversight actions on the motor carrier, Highway Star. After passing a New Entrant Program safety audit (conducted on July 13, 2005), the carrier received two CRs (on October 25, 2007, and February 26, 2010); both resulted in Satisfactory ratings. Highway Star also received a focused CR on February 26, 2013, the same week as the fatal crash, because the carrier had an SMS alert in the Unsafe Driving BASIC. From the end of 2010 to the beginning of 2013, Highway Star had SMS alerts in the Unsafe Driving BASIC; the carrier also had alerts in the HOS BASIC. The 2013 focused CR looked only at the Unsafe Driving BASIC, and it had a Non-Rated outcome. This focused CR, conducted 5 days prior to the crash, did not consider driver HOS records because it was predicated on an SMS alert associated with the Unsafe Driving BASIC. This restrictive review was conducted despite the fact that each of the previous CRs conducted on Highway Star found driver-related violations, including driver HOS violations and driver vehicle inspection report (DVIR) violations.<sup>20</sup>

The NTSB investigation of Highway Star’s operations following the fatal March 2013 crash examined five driver qualification files; each included at least one “critical” violation. Of the five files examined, three had no DVIRs for periods as long as a month, during which time the drivers were concurrently being paid for making freight trips. In addition to reviewing the driving records of the Elizabethtown crash driver, NTSB investigators reviewed the driver logbooks and pay records for seven other Highway Star drivers. Records for the crash driver and another driver revealed that they each had two differing sets of driver logbooks; in both cases, the drivers were found to have violated the 70-hour driving rule. Further, by comparing pay records, gas receipts, roadside inspection records, and travel time for work conducted during January and February 2013, NTSB investigators found falsified records for all eight drivers. The

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<sup>19</sup> From February 26 through March 2, 2013, the crash driver had driven 72.75 hours, in violation of the 70-hour rule. HOS violations are “critical” violations for both driver and carrier, per 49 CFR 395.3(b)(2).

<sup>20</sup> HOS requirements are covered in 49 CFR Part 395, and DVIRs are covered in 49 CFR Part 396.

evidence showed that the carrier routinely scheduled its drivers to make delivery trips that required them to violate HOS regulations.

Following the NTSB investigation of Highway Star, the FMCSA conducted another CR of the carrier, which resulted in an Unsatisfactory rating. The specific violations resulting in the Unsatisfactory determination were in factor 3 concerning 49 CFR 395.8(e), as follows: “False reports of records of duty status 395.8(i)—Failure to require a driver to forward within 13 days of completion, the original of the record of duty status.” The postcrash CR noted eight other violations of the *Federal Motor Carrier Safety Regulations* (FMCSRs); however, none of these violations were classed as either “acute” or “critical,” so they did not adversely affect the carrier’s rating. As a result of the postcrash CR, on March 21, 2013, the FMCSA issued an imminent hazard OOS order to Highway Star and the crash driver. The FMCSA cited a series of driver-related violations as the reason for the OOS order. Specifically, the FMCSA stated that

HIGHWAY STAR, INC. currently permits or requires its drivers who operate commercial motor vehicles in interstate commerce to falsify their records of duty status, and fails to preserve records of duty status, which means HIGHWAY STAR, INC. is unable to monitor its drivers’ compliance with regulations pertaining to maximum hours of service and required off-duty and rest hours.<sup>21</sup>

As has been noted, however, the FMCSA had evidence long before the crash, via roadside inspection and CR information, that Highway Star had a history of HOS violations. Nevertheless, it took no significant action against the carrier for such violations before the fatal crash took place.

### **H & O Transport, Inc., Crash in Murfreesboro, Tennessee**

A second, similar NTSB investigation involved a truck-tractor in combination with a semitrailer operated by the Louisville, Kentucky, carrier H & O Transport, Inc., which collided with eight other vehicles on June 13, 2013, approximately 12:10 a.m. central daylight time, near Murfreesboro, Tennessee.<sup>22</sup> A short time earlier that night, a two-vehicle traffic collision occurred in the eastbound lanes of Interstate 24 near exit 81. Due to that collision, slow-moving traffic had formed in both eastbound lanes. According to the 40-year-old H & O Transport truck driver, he was observing traffic to his left and wanted to merge because the number of lanes was reducing from three to two. The driver said he was traveling 55–60 mph when he saw that traffic had stopped. He applied the brakes and took evasive action but struck the traffic queue in front of him. The collisions that resulted caused 2 fatalities in a 2003 Honda that overturned and was consumed in a postcrash fire; 6 of the 13 occupants of the other eight vehicles struck by the truck-tractor semitrailer were injured.<sup>23</sup>

H & O Transport began operation in 1982 with two trucks and two drivers. At the time of the crash, the carrier operated 33 truck-tractors and 80 semitrailers, and employed 32

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<sup>21</sup> See Imminent Hazard Operations Out-of-Service Order MI-2013-5001-IMH, issued March 21, 2013.

<sup>22</sup> See HWY-13-FH-015 for more information.

<sup>23</sup> The eight vehicles in order of impact were a 1999 Oldsmobile, 2003 Honda, 2003 Toyota, 2006 Kia, 2001 Chevrolet, 2007 Chevrolet, 2002 Jeep, and 2013 Freightliner.

commercially licensed drivers.<sup>24</sup> The company drivers were “leased” drivers paid by the mile.<sup>25</sup> The carrier had one full-time company-employed mechanic and one full-time contract mechanic.

The H & O Transport crash driver had departed Louisville, Kentucky, about 10:00 p.m. on June 12, 2013, en route to Tullahoma, Tennessee. A review of the driver’s logs indicated that he was in violation of the 70-hour driving rule (49 CFR 395.8) by 9.75 hours on June 11, 2013, and by 45 minutes at the time of the crash. The driver’s slowed reaction to traffic changes in the early morning hours and his excessive driving schedule indicate that he was most likely fatigued at the time of the crash. With respect to HOS behavior, this driver was far from unique in H & O Transport’s operations. The NTSB investigation reviewed the driver logbook history for the crash driver and four additional drivers in the months preceding the crash. Investigators identified 14 HOS violations and another 5 potential HOS violations.<sup>26</sup> Investigators examined 386 logbook pages for March 1 through June 11, 2013; of the 386 pages, a total of 134 (35 percent) contained false log entries, as determined by evidence from fuel receipts and driving times.

At the time of the crash, the carrier’s Inspection Selection System (ISS) score was 87, placing it in the “Inspect” category.<sup>27</sup> According to the FMCSA Safety and Fitness Electronic Records (SAFER) data,<sup>28</sup> the carrier had 117 roadside inspections in the 24 months prior to July 3, 2013. From April 2012 through May 2013, the carrier was the subject of 19 roadside inspections in which drivers were cited for logbook violations. Those roadside inspections resulted in 24 violations and 9 driver OOS orders. From November 2010 to May 2013, H & O Transport had HOS BASIC SMS alerts in effect more than half the time (for 18 of 30 months).

Prior to the 2013 crash, the carrier underwent four full CRs and one focused CR on the following dates, resulting in the following ratings: 1991, Conditional; 1996, Conditional; 2001, Satisfactory; 2009, Satisfactory; and 2011 (focused CR on the Unsafe Driving BASIC), Non-Rated. The carrier was subject to a postcrash CR on June 17, 2013, that was completed on June 26, 2013; the CR rating was Conditional.<sup>29</sup> The 2011 focused CR had been initiated due to the carrier’s alerts in the Unsafe Driving BASIC. The NTSB considers that the fact that H & O

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<sup>24</sup> The majority of those commercial drivers (23 of 32) operated on routes that required them to complete logbooks. Per 49 CFR 395.1(e), drivers operating within a 100-air-mile radius of the home terminal (“short haul” or “local”) are not required to complete a record of duty status (logbook). Instead they must meet specific work time and pay record requirements.

<sup>25</sup> The carrier contracted with a private screening company that processed and hired its job applicants. Newly hired drivers were assigned to work full time for the carrier, which paid the screening company a fee to continue to monitor the drivers’ activities for compliance with the FMCSRs. The drivers were paid directly by the carrier by the mile.

<sup>26</sup> Characterization of “potential” HOS violations is necessary due to insufficient information to calculate exact driving time, but corroborating evidence indicated that the driver probably exceeded HOS limits.

<sup>27</sup> ISS is the primary software tool supported by the FMCSA for use at the roadside to screen commercial motor vehicles for inspection. It provides carrier identification data and an overall inspection value from 1 to 100, with 1 being best and 100 being worst. In the ISS, carriers are rated “Inspect,” “Optional,” and “Pass.”

<sup>28</sup> See <http://safer.fmcsa.dot.gov/>, accessed July 4, 2013.

<sup>29</sup> The rating was based on HOS and other violations of Part 395, resulting in an Unsatisfactory rating in factor 3—Operational, and based on violations in operations and maintenance, Parts 393 and 396, resulting in a Conditional rating in factor 4.

Transport's history of HOS violations was not also considered during the 2011 focused CR constituted a missed opportunity to improve carrier safety.

### Concerns About Focused CRs

The NTSB is aware that with the advent of the CSA program, the FMCSA has an expanded set of interventions, including focused reviews that evaluate only an identified area of the carrier's operation based on a data-driven analysis. The FMCSA's oversight of Highway Star and H & O Transport illustrates one of the shortcomings of focused investigations: violations in business operations that are not in areas identified for oversight review are not considered. For carriers that have a history of violations in more than one BASIC area, limiting the intervention to a focused CR is an obvious shortcoming in compliance oversight. With an expanded set of oversight intervention options, the FMCSA will need to work diligently to ensure that the appropriate options are being applied to ensure the safety of selected operators.

The FMCSA is expanding its use of focused CRs. In addition to approximately 7,600 carrier reviews conducted by the states, the FMCSA conducted 11,086 CRs of all types in FY 2011; 12,366 in FY 2012; and, based on 9 months of preliminary data, an estimated 10,130 in FY 2013.<sup>30</sup> The proportion of those CRs that were focused CRs—limited to identified BASIC areas of deficiency—for those same periods was 4,252 in FY 2011 (38 percent); 7,191 in FY 2012 (58 percent); and an estimated 6,344 in FY 2013 (63 percent). Thus, nearly two-thirds of CRs are now limited to a designated BASIC compliance area. Although a focused CR may be an appropriate intervention when operational deficiencies show up in one BASIC area, use of this restricted intervention for carriers with a history of violations in several BASIC areas seems inappropriate.

As the FMCSA intervention process changes to include limited investigations that focus solely on a specific SMS area, the NTSB is concerned with how the agency ensures that these reviews have sufficient scope. In fact, it seems likely that a carrier's noncompliance in one area might be an indicator of operational problems in other areas. The FMCSA Administrator has testified before Congress that the agency's newly implemented CSA system has changed the investigative process so that "Federal and State safety investigators are trained not just to identify violations, but also to identify the root cause of the safety deficiency and review these root causes with carrier officials."<sup>31</sup> This statement, however, is not borne out by the focused CRs the FMCSA conducted on the operations of Highway Star and H & O Transport—two carriers whose most recent interventions were focused CRs. Because their scope was limited solely to the SMS area that was flagged with an alert when the review was conducted, these focused CRs failed to consider important safety deficiencies at both carriers, which raises the practical question of whether focused reviews may constitute a missed opportunity to address safety deficiencies in a motor carrier's operations.

It appears that a focused CR may enable an unsafe operator to continue to operate while violating safety regulations despite FMCSA oversight, if it manages to address the one highlighted safety deficiency area that prompted the focused CR, while ignoring others that may

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<sup>30</sup> This information is based on the FMCSA Motor Carrier Safety Progress Report (as of June 30, 2013). See <http://www.fmcsa.dot.gov/facts-research/art-safety-progress-report.htm>.

<sup>31</sup> Statement of FMCSA Administrator Anne S. Ferro before the Subcommittee on Highways and Transit, Committee on Transportation and Infrastructure, US House of Representatives, September 13, 2012.

be equally significant. The NTSB understands that FMCSA investigators are directed to remain within the scope of the BASIC identified by the SMS when conducting a focused investigation. Although the FMCSA may allow its investigators some latitude to address violations outside of the originally assigned BASIC area, the discovery of such violations cannot be used to expand the overall scope of a focused CR. Consequently, when such safety violations are discovered during a focused CR, the range of available action against the carrier is limited.

The NTSB is aware that the DOT's Office of Inspector General (IG) currently has a project underway with a goal of assessing the effectiveness of CSA enforcement interventions. The NTSB would expect that IG audit to consider the effectiveness of focused CRs, and based on the findings, would expect the FMCSA to evaluate, and revise as necessary, CR policies that restrict investigators involved in focused CRs from identifying and taking effective action to address safety deficiencies in other BASIC areas.

Because the focused CR interventions proved to be too narrow in scope to identify and address driver problems with the carriers Highway Star and H & O Transport, the NTSB recommends that the DOT conduct an audit of the effectiveness of focused CRs and, upon the completion of the audit, require the FMCSA to take action to resolve any safety issues raised by the audit.

Therefore, the NTSB makes the following recommendations to the US Department of Transportation to address the oversight issues raised by the four highway crashes discussed in this letter:

Conduct an audit of the compliance review processes used by the Federal Motor Carrier Safety Administration (FMCSA) to determine (1) why inspectors are not identifying all violations of safety regulations by motor carriers undergoing review, and (2) why the FMCSA's quality assurance efforts are not fully effective in assessing the accuracy and completeness of compliance reviews; once these determinations have been made, require the FMCSA to revise its processes to correct these deficiencies. (H-13-039)

Conduct an audit of the effectiveness of focused compliance reviews and, upon the completion of the audit, require the Federal Motor Carrier Safety Administration to take action to resolve any safety issues raised by the audit. (H-13-040)

Chairman HERSMAN, Vice Chairman HART, and Members SUMWALT, ROSEKIND, and WEENER concurred in these recommendations.

The NTSB is vitally interested in these recommendations because they are designed to prevent crashes and save lives. We would appreciate receiving a response from you within 90 days detailing the actions you have taken or intend to take to implement them. When replying, please refer to the safety recommendations by number. We encourage you to submit your response electronically to [correspondence@ntsb.gov](mailto:correspondence@ntsb.gov).

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[Original signed]