

Note: Some roadside inspections are performed following a traffic enforcement stop for a moving violation. Violations reported during such stops do not always result in the issuance of a citation to the driver, but are used in the DSMS whether or not a citation is issued.

- State-Reported Commercial Vehicle Crash Data are taken from the MCMIS and provide information on crashes as reported by State and local police officials. The reporting of these crashes follows National Governors Association standards.

1.2 Unsafe Driving BASIC and Controlled Substances/Alcohol BASIC Assessment

This section describes the measurement of the Unsafe Driving BASIC and the Controlled Substances/Alcohol BASIC. The definition of each BASIC is as follows:

- Unsafe Driving BASIC—Operation of CMVs in a dangerous or careless manner. Example violations: speeding, reckless driving, improper lane change, and inattention.
- Controlled Substances/Alcohol BASIC—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 or alcohol.

The DSMS assesses both the Unsafe Driving BASIC and Controlled Substances/Alcohol BASIC by using applicable violations recorded during roadside inspections to calculate a measure in each BASIC for individual drivers. These measures are used to generate percentile ranks that reflect drivers' safety postures relative to drivers with applicable violations.

1.2.1 Calculation of BASIC Measure

The BASIC measures for the Unsafe Driving and Controlled Substances/Alcohol BASICs are calculated as the sum of severity and time weighted applicable violations as follows:

$$\text{BASIC Measure} = \text{Total of time and severity weighted applicable violations}$$

Equation 4-1

In this equation, the terms are defined as follows:

An Applicable Violation is defined as any violation recorded in any level roadside inspection that matches the FMCSR and HMR cites listed for Unsafe Driving ([Table 1, Appendix A](#)) and Controlled Substances/Alcohol ([Table 4, Appendix A](#)) during the past 36 months, and for which the CMV driver can be held responsible (see 'Violation in the DSMS (Y/N)' column). In cases of multiple counts of the same violation, the DSMS only uses each violation cite once per inspection.

Note: Some roadside inspections are performed following a traffic enforcement stop for a moving violation. Violations reported during such stops do not always

result in the issuance of a citation/ticket to the driver, but are used in the DSMS whether or not a citation/ticket is issued.

A Severity Weight from 1 (less severe) to 10 (most severe) is assigned to each applicable violation. See the Unsafe Driving Table ([Table 1, Appendix A](#)) and the Controlled Substance and Alcohol Table ([Table 4, Appendix A](#)) for the corresponding severity weights of each violation cite. The severity weighting of each violation cite accounts for the level of crash risk relative to the other violation cites used in the BASIC measurement. The sum of all violation severity weights for any one inspection in any one BASIC is capped at a maximum of 30. This cap of 30 is applied *before* the severity weights are multiplied by the time weight.

Note: The severity weights of violations outside of the BASIC being calculated **do not** count towards the violation cap.

A Time Weight of 1, 2, or 3 is assigned to each applicable violation based on how long ago a violation on the inspection was recorded. Violations recorded in the past 12 months receive a time weight of 3. Violations recorded between 12 and 24 months ago receive a time weight of 2. All violations recorded earlier (older than 24 months but within the past 36 months) receive a time weight of 1. This time weighting places more emphasis on recent violations relative to older violations.

A Time and Severity Weighted Violation is a violation's severity weight multiplied by its time weight.

1.2.2 Calculation of BASIC Percentile Rank

Based on the BASIC measures, the DSMS applies data sufficiency standards to assign a percentile rank to drivers who can then potentially be subjected to a CSA intervention. The calculation is as follows:

- A. Determine the total number of inspections with at least one BASIC violation. Remove drivers with no BASIC violations.
- B. Rank all the drivers' BASIC measures in ascending order. Transform the ranked values into percentiles from 0 (representing the lowest BASIC measure) to 100 (representing the highest BASIC measure). Then, assign the percentile values for that BASIC to each driver.

1.3 HOS Compliance BASIC and Driver Fitness BASIC Assessment

This section describes the measurement of the HOS Compliance BASIC and the Driver Fitness BASIC. The definition of each BASIC is as follows:

- HOS Compliance BASIC—Operation of CMVs by drivers who are ill, fatigued, or in noncompliance with the Hours-of-Service (HOS) regulations. This BASIC includes violations of regulations surrounding the complete and accurate recording of logbooks as they relate to HOS requirements and the management of CMV driver fatigue. Instances related to the HOS Compliance BASIC are distinguished from incidents where unconsciousness or an inability to react is brought about by the use of alcohol, drugs, or other controlled substances. Example violations include: HOS, logbook, and operating a CMV while ill or fatigued.
- Driver Fitness BASIC—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 CDL and being medically unqualified to operate a CMV.

The DSMS assesses both the HOS Compliance BASIC and Driver Fitness BASIC using applicable violations recorded during roadside inspections to calculate a measure in each BASIC for individual drivers. These measures are used to generate percentile ranks that reflect drivers’ relative safety posture.

1.3.1 Calculation of BASIC Measure

The equation used for calculating the BASIC measure for Hours of Service and Driver Fitness is as follows:

$$BASIC\ Measure = \frac{Total\ of\ time\ and\ severity\ weighted\ applicable\ violations}{Total\ time\ weight\ of\ relevant\ inspections}$$

Equation 4-2

In this equation, the terms are defined as follows:

An Applicable Violation is defined as any violation recorded in any level roadside inspection that matches the FMCSR and HMR cites listed for Hours of Service ([Table 2, Appendix A](#)) and Driver Fitness ([Table 3, Appendix A](#)) during the past 36 months, and for which the CMV driver can be held responsible (see ‘Violation in the DSMS (Y/N)’ column). In cases of multiple counts of the same violation, the DSMS only uses each violation cite once per inspection.

A Relevant Inspection is any Driver Inspection (Level 1, 2, 3, or 6), including those that do **not** result in a violation in the BASIC.

A Severity Weight is assigned to each applicable violation, with a value dependent on two parts: (i) the level of crash risk relative to the other violation cites used in the BASIC measurement, and (ii) whether or not the violation resulted in an OOS condition.

- (i) The level of crash risk is assigned to each applicable violation ranging from 1 (less severe) to 10 (most severe); see the Hours of Service Table

([Table 2, Appendix A](#)) and the Driver Fitness Table ([Table 3, Appendix A](#)) for the corresponding severity weights of each violation cite.

- (ii) An OOS weight of 2 is then added to the severity weight of OOS violations. In cases of multiple counts of the same violation, if any of the counts of the violation are OOS then the OOS weight of 2 applies.

The sum of all violation severity weights for any one inspection in any one BASIC is capped at a maximum of 30. This cap of 30 is applied *before* the severity weights are multiplied by the time weight.

Note: The severity weights of violations outside of the BASIC being calculated **do not** count towards the violation cap.

A Time Weight of 1, 2, or 3 is assigned to each applicable violation and each relevant inspection based on its age. Violations/inspections recorded in the past 12 months receive a time weight of 3. Violations/inspections recorded between 12 and 24 months ago receive a time weight of 2. All violations/inspections recorded earlier (older than 24 months but within the past 36 months) receive a time weight of 1. This time weighting places more emphasis on results of recent inspections relative to older inspections.

Note: The time weight is applied to all relevant inspections, including those that **do not** result in a violation in the BASIC.

A Time and Severity Weighted Violation is a violation's severity weight multiplied by its time weight.

1.3.2 Calculation of BASIC Percentile Rank

Based on the BASIC measures, the DSMS applies data sufficiency standards to assign a percentile rank to drivers that can then potentially be subjected to a CSA intervention. The calculation is as follows:

- A. Determine the total number of relevant inspections and number of inspections with at least one BASIC violation. Remove drivers with (1) less than three relevant inspections or (2) no inspections resulting in at least one BASIC violation. For the remaining drivers, place each driver into one of three groups based on the number of relevant inspections:

| Safety Event Group | Number of Relevant Inspections |
|--------------------|--------------------------------|
| 1 | 3 |
| 2 | 4-6 |
| 3 | 7+ |

Table 1-1. Safety Event Groups Categories for Hours of Service and Driver Fitness BASICS

- B. Within each group, rank all the drivers' BASIC measures in ascending order. Transform the ranked values into percentiles from 0 (representing the lowest BASIC measure) to 100 (representing the highest BASIC measure).

1.4 Vehicle Maintenance BASIC and HM Compliance BASIC Assessment

This section describes the measurement of the Vehicle Maintenance BASIC and the HM Compliance BASIC. The definition of each BASIC is as follows:

- Vehicle Maintenance BASIC—Failure to properly maintain a CMV. Example violations: brakes, lights, and other mechanical defects, and failure to make required repairs that would be found in a pre-trip inspection.
- HM Compliance BASIC— Unsafe handling of hazardous materials (HM) on a CMV. Example violations: leaking containers, improper placarding, improperly packaged HM.
- The DSMS assesses both the Vehicle Maintenance BASIC and the HM Compliance BASIC using relevant violations recorded during roadside inspections to calculate a measure in each BASIC for individual drivers. These measures are used to generate percentile ranks that reflect drivers' relative safety posture.

1.4.1 Calculation of BASIC Measure

The equation used for calculating the Vehicle Maintenance and HM Compliance BASIC measures is as follows:

$$BASIC\ Measure = \frac{Total\ of\ time\ and\ severity\ weighted\ applicable\ violations}{Total\ time\ weight\ of\ relevant\ inspections}$$

Equation 4-3

In this equation, the terms are defined as follows:

An Applicable Violation is any violation recorded in any level roadside inspection that matches the FMCSR and HMR cites listed for Vehicle Maintenance ([Table 5, Appendix A](#)) and HM Compliance ([Table 6, Appendix A](#)) BASICS during the past 36 months, and for which the CMV driver can be held responsible ('see 'Violation in the DSMS (Y/N)' column). In cases of multiple counts of the same violation, the DSMS only uses each violation cite once per inspection.

A Relevant Inspection for Vehicle Maintenance BASIC is any Vehicle Inspection (Level 1, 2, 5, or 6), including those that do **not** result in a violation in the BASIC.

A Relevant Inspection for HM Compliance BASIC is any Vehicle Inspection (Level 1, 2, 5, or 6), **where placardable quantities of HM are being transported**. This includes inspections that do **not** result in a violation in the BASIC.

A Severity Weight is assigned to each applicable violation with a value dependent on two parts: (i) the level of crash risk relative to the other violation cites used in the BASIC measurement, and (ii) whether or not the violation resulted in an OOS condition.

- (i) The level of crash risk is assigned to each applicable violation ranging from 1 (less severe) to 10 (most severe); see the Vehicle Maintenance Table ([Table 5, Appendix A](#)) and the HM Compliance ([Table 6, Appendix A](#)) BASICS for the corresponding severity weights of each violation cite.
- (ii) An OOS weight of 2 is then added to the severity weight of OOS violations. In cases of multiple counts of the same violation, if any of the counts of the violation are OOS then the OOS weight of 2 applies.

The sum of all violation severity weights for any one inspection in any one BASIC is capped at a maximum of 30. This cap of 30 is applied *before* the severity weights are multiplied by the time weight.

Note: The severity weights of violations outside of the BASIC being calculated **do not** count towards the violation cap.

A Time Weight of 1, 2, or 3 is assigned to each applicable violation and each relevant inspection based on its age. Violations/inspections recorded in the past 12 months receive a time weight of 3. Violations/inspections recorded between 12 and 24 months ago receive a time weight of 2. All violations/inspections recorded earlier (older than 24 months but within the past 36 months) receive a time weight of 1. This time weighting places more emphasis on results of recent inspections relative to older inspections.

Note: The time weight is applied to all relevant inspections, including those that do **not** result in a violation in the BASIC.

A Time and Severity Weighted Violation is a violation's severity weight multiplied by its time weight.

1.4.2 Calculation of BASIC Percentile Rank

Based on the BASIC measures, the DSMS applies data sufficiency standards to assign a percentile rank to drivers that can then potentially be subjected to a CSA intervention. The calculation is as follows:

- A. Determine the total number of relevant vehicle inspections and the number of inspections with at least one BASIC violation. Remove drivers with (1) less than three relevant inspections or (2) no inspections resulting in at least one BASIC violation. For the remaining drivers, place each driver into one of three groups based on the number of relevant inspections:

| Safety Event Group | Number of Relevant Inspections |
|--------------------|--------------------------------|
| 1 | 3 |
| 2 | 4-6 |
| 3 | 7+ |

Table 1-2. Safety Event Groups for Vehicle Maintenance and HM Compliance BASICS

- B. Within each group, rank all the drivers' BASIC measures in ascending order. Transform the ranked values into percentiles from 0 (representing the lowest BASIC measure) to 100 (representing the highest BASIC measure).

1.5 Crash Indicator Assessment

This section describes the measurement of the Crash Indicator. The definition of the Crash Indicator is as follows:

- Crash Indicator—Histories or patterns of high crash involvement, including frequency and severity, based on information from state-reported crash reports.

The crash history used by the Crash Indicator is not specifically a behavior; rather, it is the consequence of behavior and may indicate a problem that warrants attention.

The DSMS assesses the Crash Indicator using relevant state-reported crash data to calculate a measure of the indicator for individual drivers. This measure is used to generate percentile ranks that reflect drivers' relative crash posture.

1.5.1 Calculation of Crash Indicator Measure

The equation used for calculating the Crash Indicator measure is as follows:

Crash Indicator Measure = Total of time and severity weighted applicable crashes

Equation 4-4

In this equation, the terms are defined as follows:

An Applicable Crash is based on crash reports provided by the states for each crash that meets the reportable crash standard during the past 36 months. A reportable crash is one that results in at least one fatality; one injury where the injured person is taken to a medical facility for immediate medical attention; or, one vehicle having been towed from the scene as a result of disabling damage caused by the crash (i.e., tow-away).

Crash Severity Weight places more weight on crashes with more severe consequences. For example, a crash involving an injury or fatality is weighted more heavily than a crash where only a tow-away occurred. A hazmat release also increases the weighting of a crash, as shown in Table 4-3.

| Crash Type | Crash Severity Weight |
|---|--|
| Involves tow-away but no injury or fatality | 1 |
| Involves injury or fatality | 2 |
| Involves a hazmat release | Crash Severity Weight (from above) + 1 |

Table 1-3. Crash Severity Weights for Crash Indicator

A Time Weight of 1, 2, or 3 is assigned to each applicable crash based on the time elapsed since it occurred. Crashes that occurred in the past 12 months receive a time weight of 3. Crashes that occurred between 12 and 24 months ago receive a time weight of 2. All crashes that happened later (older than 24 months but within the past 36 months) receive a time weight of 1. This time weighting places more emphasis on recent crashes relative to older crashes.

A Time and Severity Weighted Crash is a crash's severity weight multiplied by its time weight.

1.5.2 Calculation of Crash Indicator Percentile Rank

Based on the Crash Indicator measures, the DSMS applies data sufficiency standards and assigns a percentile rank to drivers who then can potentially receive a CSA intervention. The calculation is as follows:

- A. Identify drivers with at least one applicable crash.

- B. Rank all the drivers' Crash Indicator measures in ascending order. Transform the ranked values into percentiles from 0 (representing the lowest indicator measure) to 100 (representing the highest indicator measure). Then, assign the percentile values to each driver.

2. SMS Report – Summary/Next Steps

The SMS methodology is part of a continuous improvement process in support of CSA and the implementation of the new FMCSA Operational Model. Several major enhancements were made to the SMS as part of lessons learned from the CSA Op-Model Test and public listening session feedback. Future improvements to the SMS will be also based on feedback from stakeholders such as enforcement personnel, industry, and the public, as well as on additional findings as FMCSA implements the CSA Operational Model nationally. In addition, as new data sources become available, these may be incorporated into the SMS methodology. Finally, the SMS will be enhanced periodically as future research reveals new and useful knowledge about crash causation and about the relationship between crash risk and regulatory compliance.

Appendix A

Violation Severity by BASIC

Overview

The tables in this Appendix contain all violations used in the Carrier Safety Measurement System (CSMS) and the subset of these violations (denoted with “Y” in the last column) used in the Driver Safety Measurement System (DSMS). The tables provide the corresponding Federal Motor Carrier Safety Regulation (FMCSR) or Hazardous Material Regulation (HMR) section for each violation. The tables in this document are the same in Appendix A of the CSMS methodology document.

Each table represents a unique Behavior Analysis and Safety Improvement Category (BASIC). Each violation is assigned a severity weight that reflects its relevance to crash risk. Crash risk is defined as the risk of crashes occurring and the consequences of the crash after it occurs. Within each BASIC, the violations are grouped based on their attributes, so that similar violations can be assigned the same severity weights. Severity weights, discussed in more detail below, only reflect relative crash risk *within* a BASIC, and are not comparable across the BASICs.

Interpretation of the Severity Weights

The violation severity weights in the tables that follow have been converted into a scale from 1 to 10, where 1 represents the lowest crash risk and 10 represents the highest crash risk relative to the other violations in the BASIC. Because the weights reflect the relative importance of each violation only within each particular BASIC, they cannot be compared meaningfully across the various BASICs. Therefore, a ‘5’ in one BASIC is not equivalent to a ‘5’ in another BASIC, but the ‘5’ does represent the approximate midpoint between a crash risk of 1 and 10 within the same BASIC. The “Violation Group” column in each table identifies the group to which each violation has been assigned. Each violation within a violation group is assigned the same severity weight.

Derivation of the Severity Weights

In order to determine the severity weights crash involvement and crash consequence the following five-step process was invoked:

1. **BASIC Mapping**—All roadside safety-related violations were mapped to an appropriate BASIC so that the severity weight analysis could be conducted on each individual BASIC.
2. **Violation Grouping**—All violations in each BASIC were placed into groups of similar violations based on the judgment of enforcement subject matter experts. These groups, listed in the “Violation Group” column in each table, make it

possible to incorporate otherwise rarely cited violations into the robust statistical analysis used to derive the severity weights. The violation grouping also ensured that similar types of violations received the same severity weight.

3. **Crash Occurrence Analysis**—Statistical analysis was performed to quantify the extent of the relationship between crash involvement on the one hand and violation rates in each violation group, within each BASIC, on the other hand. A driver approach was used in this analysis. This approach was taken due to strong demonstrable relationships between driver crashes and violations documented in prior Volpe Center research. The earlier research was conducted in support of FMCSA’s Compliance Review Work Group (CRWG), the CSA Initiative’s predecessor.
Based on the conclusions from the earlier research, the Volpe Center developed a Driver Information Resource (DIR) for FMCSA. The DIR uses individual crash and inspection reports from all states to construct multi-year driver safety histories for individual commercial drivers. Multivariate negative binomial regression models were used to quantify the strength of relationships between driver violation rates in individual violation groups and crash involvement.
4. **Crash Consequences Analysis**—While the statistical modeling described in step 3 provides an empirical basis for associating violations and crash occurrence it does not address the violations relationship to crash consequence. To factor in the risk associated with crash consequence enforcement subject matter experts representing State and Federal Field Staff provided input for modifying preliminary severity weight defined in step 3. This approach helped balance the violation risk associated with crash involvement (occurrence) and crash consequence.
5. **CSMS Effectiveness Test**—Various severity weighting schemes developed in Steps 1 through 4 were applied to the Carrier Safety Measurement System (CSMS) to provide an empirical evaluation of the weighting schemes. This empirical evaluation, or “CSMS Effectiveness Test,” was modeled after the SafeStat Effectiveness Test.³ The CSMS Effectiveness Test was accomplished through the following steps: (1) performing a simulated CSMS run that calculates carrier percentile ranks for each BASIC using historical data; (2) examining each carrier’s crash involvement over the immediate 18 months after the simulated CSMS timeframe, and (3) observing the relationship between the percentile ranks in each BASIC and the subsequent post-CSMS carrier crash rates. The CSMS Effectiveness Test provides an environment to evaluate various severity weighting schemes in terms of their impact in identifying high-risk carriers. It also provides a means of testing other weight schemes, such as the Out-of-Service (OOS) weight, to help optimize CSMS’s effectiveness.

³ SafeStat Motor Carrier Safety Status Measurement System Methodology: Version 8.6 (January 2004). Prepared for FMCSA by John A. Volpe National Transportation Systems Center. Chapter 7: SafeStat Evaluation.

Severity Weight Tables 1 through 6 list all of the violations in the DSMS, with the first two columns of each table identifying each violation by regulatory part and its associated definition. The third column in each table identifies the violation group to which each violation is assigned, followed by the violation groups' severity weights in the fourth column. The fifth column "Violation in the DSMS (Y/N)" indicates whether or not the violation uses in the DSMS.

| Table 1. CSMS Unsafe Driving BASIC Violations⁴ | | | | |
|--|---|------------------------------------|----------------------------------|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight | Violation in the DSMS (Y/N) |
| 177.800(d) | Unnecessary delay in HM transportation to destination | HM Related | 1 | Y |
| 177.804B | Failure to comply with 49 CFR 392.80 - Texting while Oper a CMV - Placardable HM | Texting | 10 | Y |
| 177.804C | Fail to comply with 392.82 - Using Mobile Phone while Oper a CMV - HM | Phone Call | 10 | Y |
| 390.17DT | Operating a CMV while texting | Texting | 10 | Y |
| 390.20 | Failing to properly secure parked vehicle | Other Driver Violations | 1 | Y |
| 392.2C | Failure to obey traffic control device | Dangerous Driving | 5 | Y |
| 392.2DH | Headlamps - Failing to dim when required | Misc Violations | 3 | Y |
| 392.2FC | Following too close | Dangerous Driving | 5 | Y |
| 392.2LC | Improper lane change | Dangerous Driving | 5 | Y |
| 392.2LV | Lane Restriction violation | Misc Violations | 3 | Y |
| 392.2P | Improper passing | Dangerous Driving | 5 | Y |
| 392.2PK | Unlawfully parking and/or leaving vehicle in the roadway | Other Driver Violations | 1 | Y |
| 392.2R | Reckless driving | Reckless Driving | 10 | Y |
| 392.2RR | Railroad Grade Crossing violation | Dangerous Driving | 5 | Y |
| 392.2S | Speeding | Speeding Related | 1* | Y |
| 392.2-SLLS2 | State/Local Laws - Speeding 6-10 miles per hour over the speed limit | Speeding 2 | 4 | Y |
| 392.2-SLLS3 | State/Local Laws - Speeding 11-14 miles per hour over the speed limit | Speeding 3 | 7 | Y |
| 392.2-SLLS4 | State/Local Laws - Speeding 15 or more miles per hour over the speed limit | Speeding 4 | 10 | Y |
| 392.2-SLLSWZ | State/Local Laws - Speeding work/construction zone | Speeding 4 | 10 | Y |
| 392.2-SLLT | State/Local Laws - Operating a CMV while texting | Texting | 10 | Y |
| 392.2T | Improper turns | Dangerous Driving | 5 | Y |
| 392.2Y | Failure to yield right of way | Dangerous Driving | 5 | Y |
| 392.6 | Scheduling run to necessitate speeding | Speeding Related | 5 | N |

⁴ Violation severity weights reflect the relative importance of each violation within each BASIC. These weights *cannot* be compared or added meaningfully across the BASICs.

* 392.2S violations from January 1, 2011 or later will be weighted at 1. The rest are weighted 5.

| Table 1. CSMS Unsafe Driving BASIC Violations⁴ | | | | |
|--|---|------------------------------------|----------------------------------|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight | Violation in the DSMS (Y/N) |
| 392.10(a)(1) | Failing to stop at railroad crossing—bus | Dangerous Driving | 5 | Y |
| 392.10(a)(2) | Failing to stop at railroad crossing—chlorine | Dangerous Driving | 5 | Y |
| 392.10(a)(3) | Failing to stop at railroad crossing—placard | Dangerous Driving | 5 | Y |
| 392.10(a)(4) | Failing to stop at railroad crossing—HM cargo | Dangerous Driving | 5 | Y |
| 392.14 | Failed to use caution for hazardous condition | Dangerous Driving | 5 | Y |
| 392.16 | Failing to use seat belt while operating CMV | Seat Belt | 7 | Y |
| 392.22(a) | Failing to use hazard warning flashers | Other Driver Violations | 1 | Y |
| 392.60(a) | Unauthorized passenger on board CMV | Other Driver Violations | 1 | Y |
| 392.62 | Unsafe bus operations | Other Driver Violations | 1 | Y |
| 392.62(a) | Bus—Standeers forward of the standee line | Other Driver Violations | 1 | Y |
| 392.71(a) | Using or equipping a CMV with radar detector | Speeding Related | 5 | Y |
| 392.80(a) | Driving a commercial motor vehicle while Texting | Texting | 10 | Y |
| 392.82(a)(1) | Using a hand-held mobile telephone while operating a CMV | Phone Call | 10 | Y |
| 392.82(a)(2) | Allowing or requiring driver to use a hand-held mobile tel while operating a CMV | Phone Call | 10 | Y |
| 397.3 | State/local laws ordinances regulations | HM Related | 1 | Y |
| 397.13 | Smoking within 25 feet of HM vehicle | HM Related | 1 | Y |
| 398.4 | Driving of vehicle—migrant workers | Other Driver Violations | 1 | Y |

| Table 2. HOS Compliance BASIC Violations⁵ | | | | |
|---|---|------------------------------------|----------------------------------|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight | Violation in the DSMS (Y/N) |
| 392.2H | State/Local Hours-of-Service | Hours | 7 | Y |
| 392.3 | Operating a CMV while ill/fatigued | Jumping OOS/Driving Fatigued | 10 | Y |
| 392.3-FPASS | Fatigue - Operate a passenger-carrying CMV while impaired by fatigue. | Jumping OOS/Driving Fatigued | 10 | Y |
| 392.3-FPROP | Fatigue - Operate a property-carrying CMV while impaired by fatigue. | Jumping OOS/Driving Fatigued | 10 | Y |
| 392.3-I | Illness - Operate a CMV while impaired by illness or other cause. | Jumping OOS/Driving Fatigued | 10 | Y |
| 395.1(h)(1) | 15, 20, 70/80 HOS violations (Alaska-Property) | Hours | 7 | Y |
| 395.1(h)(2) | 15, 20, 70/80 HOS violations (Alaska-Passenger) | Hours | 7 | Y |
| 395.1(h)(3) | Adverse driving conditions violations (Alaska) | Hours | 7 | Y |
| 395.1(o) | 16 hour rule violation (Property) | Hours | 7 | Y |
| 395.3(a)(1) | Requiring or permitting driver to drive more than 11 hours | Hours | 7 | Y |
| 395.3A1R | 11 hour rule violation (Property) | Hours | 7 | Y |
| 395.3(a)(2) | Requiring or permitting driver to drive after 14 hours on duty | Hours | 7 | Y |
| 395.3A2R | 14 hour rule violation (Property) | Hours | 7 | Y |
| 395.3A2-PROP | Driving beyond 14 hour duty period (Property carrying vehicle) | Hours | 7 | Y |
| 395.3A3-PROP | Driving beyond 11 hour driving limit in a 14 hour period. (Property Carrying Vehicle) | Hours | 7 | Y |
| 395.3(b) | 60/70 - hour rule violation | Hours | 7 | Y |
| 395.3B1-PROP | Driving after 60 hours on duty in a 7 day period. (Property carrying vehicle) | Hours | 7 | Y |
| 395.3B2 | Driving after 70 hours on duty in a 8 day period. (Property carrying vehicle) | Hours | 7 | Y |
| 395.3BR | 60/70 - hour rule violation (Property) | Hours | 7 | Y |

⁵ Violation severity weights reflect the relative importance of each violation within each BASIC. These weights *cannot* be compared or added meaningfully across the BASICs.

| Table 3. CSMS Driver Fitness BASIC Violations ⁶ | | | | |
|---|---|------------------------------------|----------------------------------|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight | Violation in the DSMS (Y/N) |
| 177.816 | Driver training requirements | General Driver Qualification | 4 | N |
| 383.21 | Operating a CMV with more than one driver's license | License-related: High | 8 | Y |
| 383.21(a) | Operating a CMV with more than one driver's license | License-related: High | 8 | Y |
| 383.23(a)(2) | Operating a CMV without a CDL | License-related: High | 8 | Y |
| 383.23(c) | Operating on learner's permit without CDL holder | License-related: High | 8 | Y |
| 383.23(c)(1) | Operating on learner's permit without CDL holder | License-related: High | 8 | Y |
| 383.23(c)(2) | Operating on learner's permit without valid driver's license | License-related: High | 8 | Y |
| 383.51(a) | Driving a CMV (CDL) while disqualified | License-related: High | 8 | Y |
| 383.51A-NSIN | Driving a CMV while CDL is suspended for a non-safety-related reason and in the state of driver's license issuance. | License-related: Medium | 5 | Y |
| 383.51A-NSOUT | Driving a CMV while CDL is suspended for a non-safety-related reason and outside the state of driver's license issuance. | License-related: Low | 1 | Y |
| 383.51A-SIN | Driving a CMV while CDL is suspended for a safety-related or unknown reason and in the state of driver's license issuance. | License-related: High | 8 | Y |
| 383.51A-SOUT | Driving a CMV while CDL is suspended for safety-related or unknown reason and outside the driver's license state of issuance. | License-related: Medium | 5 | Y |

⁶ Violation severity weights reflect the relative importance of each violation within each BASIC. These weights *cannot* be compared or added meaningfully across the BASICs.

| Table 3. CSMS Driver Fitness BASIC Violations⁶ | | | | |
|--|---|------------------------------------|----------------------------------|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight | Violation in the DSMS (Y/N) |
| 391.45(b) | Expired medical examiner's certificate | Medical Certificate | 1 | Y |
| 391.49(j) | No valid medical waiver in driver's possession | Medical Certificate | 1 | Y |
| 398.3(b) | Driver not physically qualified | Physical | 2 | Y |
| 398.3(b)(8) | No doctor's certificate in possession | Medical Certificate | 1 | Y |

| Table 4. CSMS Controlled Substances/Alcohol BASIC Violations⁷ | | | | |
|---|---|------------------------------------|----------------------------------|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight | Violation in the DSMS (Y/N) |
| 392.4(a) | Driver uses or is in possession of drugs | Drugs | 10 | Y |
| 392.5(a) | Possession/use/under influence alcohol-4hrs prior to duty | Alcohol | 5 | Y |
| 392.5(c)(2) | Violating OOS order pursuant to 392.5(a)/(b) | Alcohol Jumping OOS | 10 | Y |

| Table 5. CSMS Vehicle Maintenance BASIC Violations⁸ | | | | |
|---|---|------------------------------------|--|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight⁹ | Violation in the DSMS (Y/N) |
| 385.103(c) | Fail to display current CVSA decal - Provisional Authority | Inspection Reports | 4 | N |
| 392.2WC | Wheel (Mud) Flaps missing or defective | Windshield/ Glass/ Markings | 1 | Y |

⁷ Violation severity weights reflect the relative importance of each violation within each BASIC. These weights *cannot* be compared or added meaningfully across the BASICS.

⁸ Violation severity weights reflect the relative importance of each violation within each BASIC. These weights *cannot* be compared or added meaningfully across the BASICS.

⁹ In cases where a violation results in an Out-of-Service Order as defined in 49 CFR 390.5, an additional weight of 2 is added to arrive at a total severity weight for the violation.

| Table 5. CSMS Vehicle Maintenance BASIC Violations ⁸ | | | | |
|--|---|------------------------------------|--|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight⁹ | Violation in the DSMS (Y/N) |
| 396.17(c) | Operating a CMV without periodic inspection | Inspection Reports | 4 | N |
| 398.5 | Parts/access - migrant workers | Other Vehicle Defect | 3 | Y |
| 398.7 | Inspect/maintain motor vehicle - migrant workers | Inspection Reports | 4 | N |
| 399.207 | Vehicle access requirements violations | Cab, Body, Frame | 2 | N |
| 399.211 | Inadequate maintenance of driver access | Cab, Body, Frame | 2 | N |

| Table 6. CSMS HM Compliance BASIC Violations¹⁰ | | | | |
|--|---|------------------------------------|---|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight¹¹ | Violation in the DSMS (Y/N) |
| 171.2(a) | Failure to comply with HM regulations | HM Other | 2 | Y |
| 171.2(b) | Failure to comply with the requirements for HM transportation (including labeling and handling) | HM Other | 2 | Y |
| 171.2(c) | Representing a package./container for HM not meeting specs | Markings - HM | 5 | N |
| 171.2(f) | Transporting HM not in accordance with this part | Package Integrity - HM | 8 | Y |
| 171.2(g) | Cargo tank does not comply with HM Regulations | Package Integrity - HM | 8 | N |
| 171.2(k) | Representing vehicle with HM, none present | Markings - HM | 5 | Y |
| 172.200(a) | No shipping paper provided by offeror | Documentation - HM | 3 | N |
| 172.201(a)(1) | Hazardous Materials not distinguished from non-Hazardous Materials | Documentation - HM | 3 | N |
| 172.201(a)(2) | Hazardous Materials description not printed legibly in English | Documentation - HM | 3 | N |
| 172.201(a)(3) | Hazardous Materials description contains abbreviation or code | Documentation - HM | 3 | N |
| 172.201(a)(4) | Additional information not after Hazardous Materials basic description | Documentation - HM | 3 | N |
| 172.201(c) | Failure to list page number of pages | Documentation - HM | 3 | N |
| 172.201(d) | ER phone number not listed | Documentation - HM | 3 | N |

¹⁰ Violation severity weights reflect the relative importance of each violation within each BASIC. These weights *cannot* be compared or added meaningfully across the BASICS.

¹¹ In cases where a violation results in an out-of-service order as defined in 49 CFR 390.5, an additional weight of 2 is added to arrive at a total severity weight for the violation.

| Table 6. CSMS HM Compliance BASIC Violations¹⁰ | | | | |
|--|---|------------------------------------|---|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight¹¹ | Violation in the DSMS (Y/N) |
| 172.202(a)(1) | Improper shipping name | Documentation - HM | 3 | N |
| 172.202(a)(2) | Improper hazard class | Documentation - HM | 3 | N |
| 172.202(a)(3) | Wrong or no ID number | Documentation - HM | 3 | N |
| 172.202(a)(4) | No packing group listed | Documentation - HM | 3 | N |
| 172.202(a)(5) | Total quantity not listed | Documentation - HM | 3 | N |
| 172.202(b) | Basic description not in proper sequence | Documentation - HM | 3 | N |
| 172.202(c) | Total quantity improper location | Documentation - HM | 3 | N |
| 172.202(e) | Non Hazardous Material entered with class or ID# | Documentation - HM | 3 | N |
| 172.203(a) | Exemption number not listed | Documentation - HM | 3 | N |
| 172.203(b) | Limited quantity not shown | Documentation - HM | 3 | N |
| 172.203(c)(1) | Hazardous substance entry missing | Documentation - HM | 3 | N |
| 172.203(c)(2) | RQ not on shipping paper | Documentation - HM | 3 | N |
| 172.203(d)(1) | Radionuclide name not on shipping paper | Documentation - HM | 3 | N |
| 172.203(d)(10) | No indication for Highway Route Controlled Quantity of Class 7 "HRCQ" on shipping paper | Documentation - HM | 3 | N |
| 172.203(d)(2) | No RAM physical or chemical form | Documentation - HM | 3 | N |
| 172.203(d)(3) | No RAM activity | Documentation - HM | 3 | N |
| 172.203(d)(4) | No RAM label category | Documentation - HM | 3 | N |
| 172.203(d)(5) | No RAM transport index | Documentation - HM | 3 | N |
| 172.203(d)(6) | No fissile radioactive entry | Documentation - HM | 3 | N |
| 172.203(d)(7) | No DOE/NRC package approval notation | Documentation - HM | 3 | N |
| 172.203(d)(8) | Export package or foreign made package not marked with IAEA Certificate | Documentation - HM | 3 | N |
| 172.203(d)(9) | No Exclusive Use notation | Documentation - HM | 3 | N |

| Table 6. CSMS HM Compliance BASIC Violations¹⁰ | | | | |
|--|---|------------------------------------|---|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight¹¹ | Violation in the DSMS (Y/N) |
| 172.203(e) | No empty packaging noted | Documentation - HM | 3 | N |
| 172.203(h)(1) | No qt/nqt for anhydrous ammonia | Documentation - HM | 3 | N |
| 172.203(h)(2) | No notation for QT / NQT for Liquefied Petroleum Gas | Documentation - HM | 3 | N |
| 172.203(k) | No technical name for nos entry | Documentation - HM | 3 | N |
| 172.203(m) | No Poison Inhalation Hazard and / or Hazard Zone | Documentation - HM | 3 | N |
| 172.203(n) | No "hot" on shipping paper | Documentation - HM | 3 | N |
| 172.203(o) | No temperature controls noted for Class 4.1 or Class 5.2 | Documentation - HM | 3 | N |
| 172.205 | Hazardous waste manifest not as required | Documentation - HM | 3 | N |
| 172.300 | Failing to comply with marking requirements | Markings - HM | 5 | N |
| 172.301 | Non-bulk package marking - general | Markings - HM | 5 | N |
| 172.301(a) | No ID number on side/ends of non-bulk package - large quantity of single HM | Markings - HM | 5 | N |
| 172.301(a)(1) | No proper shipping name and/or ID# marking on non-bulk | Markings - HM | 5 | N |
| 172.301(b) | No technical name on non-bulk | Documentation - HM | 3 | N |
| 172.301(c) | No special permit number on non-bulk package | Documentation - HM | 3 | N |
| 172.301(d) | No consignee/consignor on non-bulk | Documentation - HM | 3 | N |
| 172.302 | Marking requirements bulk packagings | Markings - HM | 5 | N |
| 172.302(a) | No ID number (portable and cargo tank) | Markings - HM | 5 | Y |
| 172.302(b) | Bulk package marking incorrect size | Markings - HM | 5 | N |

| Table 6. CSMS HM Compliance BASIC Violations¹⁰ | | | | |
|--|---|------------------------------------|---|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight¹¹ | Violation in the DSMS (Y/N) |
| 172.302(c) | No special permit number on bulk package | Documentation - HM | 3 | N |
| 172.303(a) | Prohibited HM marking on package | Markings - HM | 5 | N |
| 172.304(a)(1) | Package marking not durable, English, or print | Markings - HM | 5 | N |
| 172.304(a)(2) | Marking not on sharply contrasting color | Markings - HM | 5 | N |
| 172.304(a)(3) | Marking obscured by label or attachments | Markings - HM | 5 | N |
| 172.304(a)(4) | Marking not away from other marking | Markings - HM | 5 | N |
| 172.308(a) | Package marked with unauthorized abbreviation | Markings - HM | 5 | N |
| 172.310(a) | No gross weight on radioactive materials package greater than 50 KG | Markings - HM | 5 | N |
| 172.310(b) | Radioactive materials package not marked "Type A or B" | Markings - HM | 5 | N |
| 172.312(a) | No package orientation arrows | Cargo Protection - HM | 4 | N |
| 172.312(a)(2) | No package orientation arrows | Cargo Protection - HM | 4 | N |
| 172.312(b) | Prohibited use of orientation arrows | Cargo Protection - HM | 4 | N |
| 172.313(a) | No "inhalation hazard" on package | Markings - HM | 5 | N |
| 172.313(b) | No "poison" on non-bulk plastic package | Markings - HM | 5 | N |
| 172.316(a) | Other regulated material non-bulk package not marked | Markings - HM | 5 | N |
| 172.320(a) | Class 1 package not marked with ex-number | Markings - HM | 5 | N |
| 172.322(b) | No marine pollutant marking on bulk packaging | Markings - HM | 5 | N |

| Table 6. CSMS HM Compliance BASIC Violations¹⁰ | | | | |
|--|---|------------------------------------|---|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight¹¹ | Violation in the DSMS (Y/N) |
| 172.324 | Non-bulk hazardous substance not marked | Markings - HM | 5 | N |
| 172.325 | No "hot" marking for bulk elevated temperature | Markings - HM | 5 | N |
| 172.325(a) | Elevated temperature not marked "Hot" | Markings - HM | 5 | N |
| 172.325(b) | Improperly marked molten aluminum/sulphur | Markings - HM | 5 | N |
| 172.326(a) | Portable tank not marked with proper shipping name or ID# | Markings - HM | 5 | N |
| 172.326(b) | No portable tank owner or lessee marking | Markings - HM | 5 | N |
| 172.326(c)(1) | No ID number marking on vehicle carrying portable tank | Markings - HM | 5 | N |
| 172.326(c)(2) | Shipper failed to provide ID number to carrier | Markings - HM | 5 | N |
| 172.328 | No ID number displayed on a cargo tank | Markings - HM | 5 | N |
| 172.328(a) | Shipper failed to provide or affix ID number for cargo tank | Markings - HM | 5 | N |
| 172.328(b) | Cargo tank not marked for class 2 | Markings - HM | 5 | N |
| 172.328(c) | No quenched and tempered steel (QT)/other than quenched and tempered steel (NQT) marked on cargo tank (MC 330/331) | Markings - HM | 5 | N |
| 172.328(d) | Fail to mark manual remote shutoff device | Markings - HM | 5 | N |
| 172.330(a)(2) | Tank car tank (non cylinder) not marked as required | Markings - HM | 5 | N |
| 172.330(b) | Motor vehicle with tank not marked | Markings - HM | 5 | N |
| 172.331 | Markings for other bulk packages | Markings - HM | 5 | N |
| 172.332 | Required ID markings displayed | Markings - HM | 5 | N |
| 172.334 | Prohibited ID number marking | Markings - HM | 5 | N |

| Table 6. CSMS HM Compliance BASIC Violations¹⁰ | | | | |
|--|---|------------------------------------|---|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight¹¹ | Violation in the DSMS (Y/N) |
| 172.334(a) | ID # displayed on Class 7/Class 1/Dangerous or Subsidiary placard | Markings - HM | 5 | N |
| 172.336(b) | ID numbers not properly displayed | Markings - HM | 5 | N |
| 172.336(c)(1) | Failing to display ID numbers on compartment cargo tank in sequence | Markings - HM | 5 | N |
| 172.338 | Carrier failed to replace missing ID number | Markings - HM | 5 | N |
| 172.400 | Labeling requirements | Markings - HM | 5 | N |
| 172.400(a) | Package/containment not labeled as required | Markings - HM | 5 | Y |
| 172.401 | Prohibited labeling | Markings - HM | 5 | N |
| 172.402 | Failing to affix additional labels when required | Markings - HM | 5 | N |
| 172.402(a) | No label for subsidiary hazard | Markings - HM | 5 | N |
| 172.402(b) | Display of class number on label | Markings - HM | 5 | N |
| 172.402(d) | Subsidiary labeling for radioactive materials | Markings - HM | 5 | N |
| 172.402(e) | Subsidiary labeling for class 1 (explosive) materials | Markings - HM | 5 | N |
| 172.403(a) | Radioactive material label requirement | Markings - HM | 5 | N |
| 172.403(f) | Radioactive material package-2 labels on opposite sides | Markings - HM | 5 | N |
| 172.403(g) | Failed to label radioactive material properly | Markings - HM | 5 | N |
| 172.403(g)(2) | Class 7 label - no activity/activity not in SI units | Markings - HM | 5 | N |
| 172.404(a) | Mixed package not properly labeled | Markings - HM | 5 | N |
| 172.404(b) | Failed to properly label consolidated package | Markings - HM | 5 | N |
| 172.406(a)(1) | Label placement not as required | Markings - HM | 5 | N |

| Table 6. CSMS HM Compliance BASIC Violations¹⁰ | | | | |
|--|---|------------------------------------|---|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight¹¹ | Violation in the DSMS (Y/N) |
| 172.406(c) | Multiple label placement not as required | Markings - HM | 5 | N |
| 172.406(d) | Label not on contrasting background or no border | Markings - HM | 5 | N |
| 172.406(e) | Failed to display duplicate label as required | Markings - HM | 5 | N |
| 172.406(f) | Label obscured by marking or attachment | Markings - HM | 5 | N |
| 172.502(a)(1) | Prohibited placarding | Markings - HM | 5 | N |
| 172.502(a)(2) | Sign or device could be confused with HM placard | Markings - HM | 5 | N |
| 172.504 | Placards not in table 1 or 2 | Markings - HM | 5 | N |
| 172.504(a) | Vehicle not placarded as required | Markings - HM | 5 | Y |
| 172.504(b) | Dangerous placard violation | Markings - HM | 5 | N |
| 172.505(a) | No placard for poison inhalation hazard | Markings - HM | 5 | N |
| 172.505(b) | Not placarded for RAM and Corrosive when required | Markings - HM | 5 | N |
| 172.505(c) | Placard for subsidiary dangerous when wet | Markings - HM | 5 | N |
| 172.506(a) | Failed to provide placards shipper | Markings - HM | 5 | N |
| 172.506(a)(1) | Placards not affixed to vehicle | Markings - HM | 5 | Y |
| 172.507 | Not placarded for RAM highway route controlled quantity | Markings - HM | 5 | N |
| 172.512(a) | Freight container not placarded | Markings - HM | 5 | N |
| 172.514 | Cargo tank placards | Markings - HM | 5 | N |
| 172.514(a) | Bulk package offered without placard | Markings - HM | 5 | N |
| 172.514(b) | Bulk package with residue of HM not properly placarded | Markings - HM | 5 | N |
| 172.516(a) | Placard not visible from direction it faces | Markings - HM | 5 | Y |

| Table 6. CSMS HM Compliance BASIC Violations¹⁰ | | | | |
|--|---|------------------------------------|---|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight¹¹ | Violation in the DSMS (Y/N) |
| 172.516(c)(1) | Placard not securely affixed or attached | Markings - HM | 5 | Y |
| 172.516(c)(2) | Placard not clear of appurtenance | Markings - HM | 5 | Y |
| 172.516(c)(4) | Placard improper location | Markings - HM | 5 | Y |
| 172.516(c)(5) | Placard not reading horizontally | Markings - HM | 5 | Y |
| 172.516(c)(6) | Placard damaged, deteriorated, or obscured | Markings - HM | 5 | Y |
| 172.516(c)(7) | Placard not on contrasting background or border | Markings - HM | 5 | Y |
| 172.519 | Placard does not meet specifications | Markings - HM | 5 | N |
| 172.600(c) | Emergency Response (ER) information not available | Documentation - HM | 3 | Y |
| 172.602(a) | Emergency response information missing | Documentation - HM | 3 | Y |
| 172.602(b) | Form and manner of emergency response information | Documentation - HM | 3 | Y |
| 172.602(c)(1) | Maintenance/accessibility of emergency response information | Documentation - HM | 3 | Y |
| 172.604(a) | Failing to provide an emergency response phone number | Documentation - HM | 3 | N |
| 173.24(a)(c) | Non-bulk package mixed contents requirements | Cargo Protection - HM | 4 | N |
| 173.24(b) | Failed to meet general package requirements | Load Securement - HM | 10 | N |
| 173.24((b))(1) | Release of HM from package | Load Securement - HM | 10 | N |
| 173.24(b)(a) | Bulk package outage or filling limit requirements | Load Securement - HM | 10 | N |
| 173.24(b)(d)(2) | Exceed max weight of rating on spec plate | Load Securement - HM | 10 | N |
| 173.24(c) | Unauthorized packaging | Load Securement - HM | 10 | N |

| Table 6. CSMS HM Compliance BASIC Violations ¹⁰ | | | | |
|---|---|------------------------------------|---|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight¹¹ | Violation in the DSMS (Y/N) |
| 173.24(f)(1) | Closures for packagings must not be open or leaking | Load Securement - HM | 10 | N |
| 173.25(a) | Failed to meet overpack conditions | Markings - HM | 5 | N |
| 173.25(c) | Failure to label and package poison properly, when transported with edible material | Markings - HM | 5 | Y |
| 173.29(a) | Empty package improper transportation | Cargo Protection - HM | 4 | N |
| 173.30 | Loading/unloading transport vehicles | Cargo Protection - HM | 4 | Y |
| 173.32(h)(3) | IM101/102 bottom outlets prohibited | Fire Hazard - HM | 6 | N |
| 173.32(h)(3)(i) | IM101/102 bottom outlets authorized | Fire Hazard - HM | 6 | N |
| 173.33 | Cargo tanks (general) | Load Securement - HM | 10 | N |
| 173.33(a) | Cargo tank general requirements | Cargo Protection - HM | 4 | Y |
| 173.33(b) | HM in cargo tank which had dangerous reaction with cargo tank | Cargo Protection - HM | 4 | Y |
| 173.33(c)(2) | Cargo tank not marked with design or maximum allowable working pressure (MAWP) | Cargo Protection - HM | 4 | N |
| 173.35(a) | Intermediate bulk container requirements | Package Integrity - HM | 8 | Y |
| 173.35(d) | Liquid filled IBC with Ullage over 98% | Load Securement - HM | 10 | N |
| 173.35(f)(2) | Intermediate bulk container (IBC) not secured to or within vehicle | Load Securement - HM | 10 | Y |
| 173.40 | Small quantities for highway and rail | HM Other | 2 | N |
| 173.54 | Forbidden explosives, offering or transporting | Fire Hazard - HM | 6 | N |

| Table 6. CSMS HM Compliance BASIC Violations¹⁰ | | | | |
|--|---|------------------------------------|---|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight¹¹ | Violation in the DSMS (Y/N) |
| 173.60 | Materials of trade exemption | HM Other | 2 | N |
| 173.315(a) | Cargo or portable tank class 2 exceeds maximum filling density | Load Securement - HM | 10 | N |
| 173.315(j)(3) | Residential gas tank not secure in transport | Fire Hazard - HM | 6 | Y |
| 173.315(j)(4) | Liquefied Petroleum Gas (LPG) storage tank overfilled for transport | Fire Hazard - HM | 6 | N |
| 173.318(b)(10) | Fail to mark inlet, outlet, pressure relief device, or pressure control valve of cryogenic tanks | Package Integrity - HM | 8 | N |
| 173.318(g) | No or Improper One Way Travel Time (OWTT) marking on cryogenic cargo tank | Markings - HM | 5 | N |
| 173.412 | General Type A package failing to meet additional design requirements | Package Integrity - HM | 8 | N |
| 173.421(a) | Transporting limited quantity-radioactive material exceeds 0.5 millirem/hour | Cargo Protection - HM | 4 | N |
| 173.427(a)(6)(iv) | No instructions for exclusive use packaging-low specific activity | Cargo Protection - HM | 4 | Y |
| 173.427(a)(6)(vi) | Exclusive use low specific activity (LSA) radioactive material not marked "Radioactive-LSA" | Markings - HM | 5 | Y |
| 173.427(a)(iv) | No instructions for exclusive use packaging-low specific activity | Cargo Protection - HM | 4 | Y |
| 173.427(a)(vi) | Exclusive use low specific activity (LSA) radioactive material not marked "Radioactive-LSA" | Markings - HM | 5 | Y |
| 173.431 | Exceeded activity limits Type A or Type B package | Load Securement - HM | 10 | N |
| 173.441(a) | Exceeding radiation level limitations allowed for transport | Cargo Protection - HM | 4 | N |

| Table 6. CSMS HM Compliance BASIC Violations¹⁰ | | | | |
|--|---|------------------------------------|---|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight¹¹ | Violation in the DSMS (Y/N) |
| 173.441(b) | Exceeding radiation level allowed for transport of RAM under exclusive use provisions | Load Securement - HM | 10 | N |
| 173.442(b)(1) | External temperature of package exceeds 50 degrees Celcius (122 degrees F) | Cargo Protection - HM | 4 | N |
| 173.442(b)(2) | External temperature of package exceeds 85 degrees Celcius (185 degrees F) | Cargo Protection - HM | 4 | N |
| 173.443(a) | Radioactive contamination exceeds limits | Load Securement - HM | 10 | N |
| 173.447 | RAM transport storage violation | Cargo Protection - HM | 4 | N |
| 173.448 | General RAM transport requirements | Cargo Protection - HM | 4 | N |
| 177.801 | Accepting/transporting HM not prepared properly | HM Other | 2 | N |
| 177.804 | Failure to comply with FMCSR 49 CFR part 383 and 49 CFR parts 390 through 397 | HM Other | 2 | Y |
| 177.817 | Shipping papers required | Documentation - HM | 3 | N |
| 177.817(a) | No shipping papers (carrier) | Documentation - HM | 3 | Y |
| 177.817(b) | Shipper certification missing (when required) | Documentation - HM | 3 | N |
| 177.817(e) | Shipping paper accessibility | Documentation - HM | 3 | Y |
| 177.823(a) | No placards/markings when required | Markings - HM | 5 | N |
| 177.834 | Load securement of different HM packages | Fire Hazard - HM | 6 | N |
| 177.834(a) | Package not secure in vehicle | Load Securement - HM | 10 | Y |
| 177.834(b) | Package not loaded according to orientation marks | Cargo Protection - HM | 4 | N |
| 177.834(c) | Smoking while loading or unloading | Fire Hazard - HM | 6 | Y |

| Table 6. CSMS HM Compliance BASIC Violations¹⁰ | | | | |
|--|---|------------------------------------|---|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight¹¹ | Violation in the DSMS (Y/N) |
| 177.834(f) | Using a tool likely to cause damage to the closure of any package or container | Load Securement - HM | 10 | Y |
| 177.834(i) | Attendance of cargo tank- (load or unload) | Cargo Protection - HM | 4 | Y |
| 177.834(j) | Manholes and valves not closed or leak free | Cargo Protection - HM | 4 | Y |
| 177.834(m)(1) | Securing specification 106a or 110a tanks | Cargo Protection - HM | 4 | N |
| 177.834(n) | Improper loading-specification 56, 57, IM101 and IM102 | Fire Hazard - HM | 6 | N |
| 177.835 | Improper transportation of explosives (Class 1) | Fire Hazard - HM | 6 | Y |
| 177.835(a) | Loading/Unloading Class 1 with engine running | Fire Hazard - HM | 6 | Y |
| 177.835(c) | Transporting Class 1 in combination vehicles | Fire Hazard - HM | 6 | N |
| 177.835(j) | Transfer of Class 1 materials en route | Fire Hazard - HM | 6 | Y |
| 177.837 | Improper transporting of Class 3 hazardous materials | Fire Hazard - HM | 6 | Y |
| 177.837(c) | Cargo tanks not properly bonded/grounded | Cargo Protection - HM | 4 | N |
| 177.837(d) | Improper unloading of combustible liquids | Cargo Protection - HM | 4 | N |
| 177.838 | Improper transport of class 4, 5 or division 4.2 | Fire Hazard - HM | 6 | N |
| 177.839 | Improper transportation of Class 8 hazardous materials | Cargo Protection - HM | 4 | Y |
| 177.840 | Improper transportation of Class 2 hazardous materials | Fire Hazard - HM | 6 | N |
| 177.840(g) | Discharge valve not closed in transit class 2 | Cargo Protection - HM | 4 | Y |

| Table 6. CSMS HM Compliance BASIC Violations¹⁰ | | | | |
|--|---|------------------------------------|---|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight¹¹ | Violation in the DSMS (Y/N) |
| 177.840(o) | Fail to test off-truck remote shutoff device | Cargo Protection - HM | 4 | Y |
| 177.840(s) | Fail to possess remote shutoff when unloading | Cargo Protection - HM | 4 | Y |
| 177.841 | Improper transportation of Division 6.1 or Division 2.3 hazardous materials | Fire Hazard - HM | 6 | Y |
| 177.841(e) | Poison label loaded with foodstuffs | HM Other | 2 | Y |
| 177.842(a) | Total transport index exceeds 50-non-exclusive use | HM Other | 2 | N |
| 177.842(b) | Distance from package to person-radioactive material | HM Other | 2 | N |
| 177.842(d) | Blocking and bracing of radioactive material packages | HM Other | 2 | Y |
| 177.848(d) | Prohibited load/transport/storage combination | Fire Hazard - HM | 6 | N |
| 177.848(f) | Class 1 load separation or segregation | HM Other | 2 | N |
| 177.870(b) | Transporting unauthorized HM in a passenger-carrying vehicle | Load Securement - HM | 10 | Y |
| 177.870(c) | Prohibited Hazardous Materials on passenger carrying vehicle | Load Securement - HM | 10 | Y |
| 178.245-4 | DOT51 integrity and securement | Package Integrity - HM | 8 | N |
| 178.245-5 | DOT51 valve protection | Package Integrity - HM | 8 | N |
| 178.245-6(a) | DOT51 name plate Markings - HM | Package Integrity - HM | 8 | N |
| 178.245-6(b) | Tank outlets not marked | Package Integrity - HM | 8 | N |
| 178.251-4 | DOT 56/57 integrity and securement | Package Integrity - HM | 8 | N |
| 178.251-7(b) | DOT 56/57 spec Markings - HM | Package Integrity - HM | 8 | N |
| 178.255-14 | DOT 60 ID plate | Package Integrity - HM | 8 | N |
| 178.255-4 | DOT 60 manhole | Package Integrity - HM | 8 | N |
| 178.255-7 | DOT 60 valve protection | Package Integrity - HM | 8 | N |

| Table 6. CSMS HM Compliance BASIC Violations¹⁰ | | | | |
|--|---|------------------------------------|---|------------------------------------|
| Section | Violation Description Shown on Driver/Vehicle Examination Report Given to CMV Driver after Roadside Inspection | Violation Group Description | Violation Severity Weight¹¹ | Violation in the DSMS (Y/N) |
| 397.17 | No tire examination on HM vehicle | HM Other | 2 | Y |
| 397.19 | No instructions/documents when transporting Division 1.1/1.2/1.3 (explosive) materials | Documentation - HM | 3 | Y |
| 397.19(c) | Required documents not in possession-explosive materials | Documentation - HM | 3 | Y |
| 397.67 | HM vehicle routing violation (non-radioactive materials) | HM Route | 1 | N |
| 397.101(b) | Radioactive materials vehicle not on preferred route | HM Route | 1 | Y |
| 397.101(d) | No or incomplete route plan-radioactive materials | HM Route | 1 | Y |
| 397.101(e)(2) | Driver not in possession of training certificate | HM Route | 1 | Y |
| 397.101(e)(3) | Driver not in possession of written route plan | HM Route | 1 | Y |