

**Virginia Defense Force
Regulation 385–10-8**

Safety
Virginia Defense Force
Safety Program
Motor Vehicle Accident Prevention

**Headquarters
Virginia Defense Force
5001 Waller Road
Richmond, VA 23230-2915
1 September 2014**

**Headquarters
Virginia Defense Force
George Washington Division
Richmond, VA
1 September 2014**

Safety

VDF Safety Program

Summary. This document is an adaptation of the Army Regulation 385-10, Army Safety Program, for use by the units of the Virginia Defense Force (VDF). This regulation provides guidance to commanders and other personnel in regards to the safety program in the Virginia Defense Force.

Applicability. This regulation applies to units of the VDF. During mobilization for state active duty, procedures in this publication can be modified to support policy changes as necessary.

Suggested Improvements. Users are invited to send comments and suggested improvements directly to Headquarters, Virginia Defense Force, George Washington Division, Division Safety Office, 5001 Waller Road, Richmond, Virginia 23230-2915.

Distribution. Distribution is intended for all VDF units down to, and including, company-level.

JOHN D. TAYLOR
Major General, Virginia Defense Force

Contents (Listed by paragraph and page number)

Chapter 1

Motor Vehicle Accident Prevention Policy, page 1

Introduction • 1-1, *page 1*

Motor vehicle accident prevention policy • 1-2, *page 1*

Motor vehicle safety standards • 1-3, *page 3*

Safe motor vehicles operations • 1-4, *page 4*

Safe movement of personnel • 1-5, *page 6*

Driver education • 1-6, *page 6*

Privately-owned vehicle (POV) safety inspections • 1-7, *page 7*

Motorcycle safety • 1-8, *page 7*

Pedestrian and bicycle safety • 1-9, *page 8*

Attachments

Appendix A – References, page 9

Section 1 – Publications, *pages 9*

Section 2 – Forms, *page 10*

Glossary, page 11

Section 1 – Abbreviations, *page 11*

Section 2 – Terms, *page 15*

Chapter 1

Motor Vehicle Accident Prevention

1-1. Introduction

- a. This chapter establishes requirements for traffic safety and loss prevention to reduce the risk of death or injury to VDF personnel from POV or GOV accidents. It also establishes requirements for motor vehicle accident prevention on VDF facilities and supplements public traffic safety law.
- b. This chapter applies to VDF personnel in an on-duty status only (i.e., attending VDF drills and state active duty orders). Regulations on a DoD facility may over-ride requirements in this chapter.

1-2. Motor Vehicle Accident Prevention Policy

To facilitate accident prevention efforts, VDF personnel listed below will accomplish the following listed tasks:

- a. Commanders at all levels. Commanders at all levels will:
 - (1) Brief all fatal and other Class A vehicle-related accidents to the first general officer in the chain of command.
 - (2) Ensure that VDF vehicle maintenance required before, during, and after operation checks are carried out according to technical or operators manuals.
 - (3) Collect, analyze, and evaluate motor vehicle operator behavior and accident data to identify where accident prevention efforts must be focused.
 - (4) Ensure that GOV operators are selected, trained, tested, and licensed in accordance with the applicable regulations.
 - (5) Ensure GOV driver candidates meet state driver licensing requirements.
 - (6) Ensure that senior occupants are familiar with their authority and responsibilities according to paragraph c. below.
 - (7) Provide training, education, and motivation programs to prevent motor vehicle accidents.
 - (8) Develop procedures to respond to traffic accidents to include: first aid, evacuation of injured, and the safe removal of disabled vehicles.
 - (9) Ensure formal recognition of vehicle operators and organizations with outstanding safe driving records.
- b. Supervisors of VDF motor vehicles. Supervisors of VDF motor vehicle operations will:
 - (1) Enforce standards of performance to ensure safety and consistency of VDF vehicle operations.
 - (2) Ensure that an assistant driver is assigned when required by paragraph 11-4.c. below.
 - (3) Verify that VDF vehicle drivers meet rest, duty time, and the alcohol restriction requirements.
 - (4) Verify whether VDF drivers are taking prescription or nonprescription medication that may impair driving or alertness.
 - (5) Assess driver performance periodically and use incentives to reward drivers with good driving records.

- (6) Incorporate the principles of mishap risk management component of CRM process into all motor vehicle-related duties and responsibilities.
- (7) Report hazardous operating conditions to the vehicle dispatcher.
- c. Senior occupant. The senior occupant is the senior ranking individual present and is responsible for the overall safety of the occupants. The senior occupant will:
 - (1) Ensure that the requirements of this regulation are met.
 - (2) Ensure that the vehicle is operated in a safe manner and in accordance with traffic safety laws.
 - (3) Ensure that the driver is licensed on the vehicle to be operated.
 - (4) Prevent drivers who appear fatigued or who are physically, mentally, or emotionally impaired from operating a vehicle.
 - (5) Ensure that drivers obey headphone and listening devices, operator distraction, and alcohol consumption restrictions.
 - (6) Ensure vehicle occupants use occupant restraint devices at all times. If the senior occupant cannot be ascertained, the driver shall be responsible for enforcement.
 - (7) Ensure that the authorized seating capacity of the vehicle is not exceeded.
 - (8) Assist the driver in identifying unsafe mechanical conditions of the vehicle.
 - (9) Report hazardous operating conditions of vehicles in accordance with the organization's SOPs.
 - (10) Identify road and/or other driving hazards.
- d. Motor vehicle operators. Motor vehicle operators will:
 - (1) Operate vehicles in a safe and prudent manner. This includes complying with local speed limits, vehicle speed limits, and municipal and state laws.
 - (2) Report use of prescription or nonprescription medication that could reasonably impair driving or alertness to the immediate supervisor.
 - (3) Report hazardous operating conditions of the vehicles to the vehicle dispatcher.
 - (4) After seeking emergency aid, report accidents immediately to their supervisor and the vehicle dispatcher.
 - (5) Ensure that cargo has been properly loaded and secured prior to and during transport.
 - (6) Wear installed restraint systems and enforce the requirement for passengers to wear occupant restraint devices at all times. Personnel involved in emergency medical care are exempt from the restraint use requirement.
 - (7) Ensure that vehicles and their contents are properly secured when left unattended, to include setting the emergency brake and adequately blocking and chocking the wheels.
 - (8) Safely ensure that highway warning devices are properly displayed when the vehicle stops on or beside the traveled portion of the roadway.
 - (9) Post personnel and warning triangles to warn approaching traffic when the vehicle is disabled or halted in a location that obstructs traffic.
 - (10) Use ground guide in accordance with the provisions of this regulation.

NOTE: VDF personnel will report to the commander any traffic violations received from traffic authorities received while operating VDF / GOV vehicles.

1-3. Motor vehicle safety standards

- a. General VDF motor vehicle safety standards.
 - (1) VDF motor vehicles will be maintained in a safe and serviceable condition in accordance to the vehicle's operators manual and this regulation.
 - (2) Before, during, and after vehicle operation, commanders of their representatives will ensure that drivers perform the appropriate safety checks, in addition to required preventive maintenance checks and services, to correct or prevent the following conditions:
 - (a) Improper functioning of steering, lights, windshield wipers, horn, warning signals, side or rearview mirrors, occupant restraint devices, and other safety devices. The drives and all passengers will use restraint systems. Personnel performing emergency medical care are exempt from the restraint use requirement.
 - (b) Improper condition of windshield, windows, mirrors, lights, reflectors, or other safety devices that are broken, cracked, discolored, or covered with frost, ice, snow, dirt, mud, or grime. Glass will not have posters, placards, stickers, or nontransparent materials that impair operator vision or create a hazard.
 - (c) Defective, inoperable, or out-of-adjustment service or parking brakes. (NOTE: Vehicles with inoperative service brakes will be towed using an appropriate recovery vehicle or tow bar.)
 - (d) Fluid leaks. Service leaks in accordance with the vehicle's operators manual.
 - (e) Tires that are excessively worn, deeply cut, or have exposed cords.
 - (f) Any condition likely to cause injury to personnel or failure of a component. Examples are cracked wheel hubs, worn or frayed tiedown straps, torn sheet metal with exposed sharp edges, damaged or missing exhaust pipe shields, and leaks from exhaust systems.
 - (g) Improperly secured loads.
 - (h) Vehicle loaded beyond design load limits.
 - (i) Unsafe transport of personnel.
 - (3) Operators are responsible for bringing any vehicle deficiency to the supervisor's attention
 - (4) Operators will ensure that all required safety equipment is present, current, and functional, in accordance with the standards outlined in the vehicle operator's manual.
 - (5) Supervisors will report defects for repairs as needed. Unserviceable vehicles will not be used until repaired.
- b. Periodic motor vehicle inspection requirement. All VDF vehicles shall be required to pass a safety inspection at least annually. In addition to the normal dispatch inspections, the annual inspection will:
 - (1) The inspection will evaluate systems and components for vehicle performance, such as occupant restraint devices, lighting, glazing, exhaust system, wipers, horn, brake systems, suspension, tires, and wheel assemblies.
 - (2) In areas of the Commonwealth of Virginia that requires it, the vehicle inspection will ensure that exhaust emissions do not exceed any applicable federal, state, or local requirements.

1-4. Safe motor vehicle operations

- a. Occupant protection.
 - (1) Occupant protective devices will be worn by all persons in or on a VDF-owned motor vehicle.
 - (2) All personnel will wear occupant protective devices at any time on a DoD facility.
 - (3) Occupant protective devices will be worn by all VDF personnel driving or riding in a POV while on a DoD facility and when in an on-duty status (on or off of a DoD facility).
 - (4) Individuals will not ride in seats from which manufacturer-installed occupant restraints, including airbags, have been removed or rendered inoperative.
 - (5) The vehicle operator is responsible for informing all passengers of the occupant protection device requirement and the senior occupant is responsible for ensuring enforcement. If the senior occupant cannot be ascertained, the driver is responsible for ensuring enforcement.
 - (6) All personnel will consider failure to use occupant protection devices, failure to wear required protective equipment, or failure to comply with licensing or operator training requirements in making line-of-duty determinations for death of injuries resulting from nonuse of equipment or noncompliance with requirements.
- b. Driver fatigue management. To reduce the potential for traffic accidents caused by operator fatigue, commanders will establish and enforce specific rest and duty hours for VDF vehicle operators.
 - (1) Operators will be provided with at least 8 consecutive hours of rest during any 24 hour period.
 - (2) An operator will not drive more than 10 hours in a duty period (including rest and meal breaks).
- c. Assistant driver scheduling guidance.
 - (1) If more than 10 hours are needed to complete operations, commanders will assign to each vehicle an assistant driver who is qualified to operate the vehicle.
 - (2) Assistant drivers for other operations will at a minimum, be familiar with the vehicle operations and trained for ground guide duties. Other operations that require assistant drivers include:
 - (a) More than 4 hours of the mission are expected to be during darkness.
 - (b) Travel over unfamiliar terrain will require detailed enroute navigation.
 - (c) Use of a ground guide is anticipated and required.
 - (d) Deteriorating weather or road conditions are expected.
 - (e) High-value or mission-critical systems or equipment is being transported.
 - (f) Other unusually difficult mission conditions are expected.
- d. Headphones, earphones, and listening devices.
 - (1) Wearing portable headphones, earphones, or other listening devices (except for hands-free cellular phones) while operating a motor vehicle (VDF-owned or POV) is prohibited.
 - (2) Communications headset devices that do not cover both ears (i.e., single earpiece communications headset) are allowed if authorized under current state traffic laws.

- (3) Motorcycle operators may wear motorcycle helmets equipped with operator-passenger intercom systems.
- e. Cellular phone use. Vehicle operators on DoD facilities and/or operating VDF-owned vehicles shall not use cellular phones unless the vehicle is safely parked or unless they are using a hands-free device. The only exception to this prohibition are emergency responders on an emergency call.
- f. Operator Alcohol Consumption. VDF vehicle operators will not operate a vehicle for 8 hours after consuming intoxicating beverages, or longer if residual effects remain.
- g. Safety equipment.
 - (1) All trailers will be equipped with safety chains or similar devices and properly connected to the prime mover to prevent breakaway trailer accidents.
 - (2) Trailer brake lights, taillights, and turn signals will be in operating condition.
 - (3) All VDF vehicles operating over public roads will be equipped with highway warning triangles. Vehicles carrying flammable or explosive materials will not use or carry flares.
- h. Ground guides. Ground guides are required when vehicles are backed, or when moved within an assembly area or motor pool.
 - (1) References for training ground guides may be found in (Army) FM 21-60, FM 21-305, and Training Circular 21-306.
 - (2) When backing or maneuvering in confined or congested areas, a ground guide shall be provided when the point of operation is not in full view of the vehicle operator; when vehicles are backed more than 100 feet; when terrain is hazardous; or when two or more vehicles are backing in the same area.
 - (3) When operating a vehicle in an area and the point of operation is in full view of the vehicle operator, the operator may back without the assistance of a ground guide or spotter provided:
 - (a) The operator walks behind the vehicle to view the area for possible hazards.
 - (b) A reverse signal alarm is activated, which is audible above the surrounding noise level in accordance with 29 CFR 1926.602.
- i. Vehicles equipped with radio antennas.
 - (1) Operators with vehicles, or towing trailers, equipped with radio antennas should be familiar with the fire and electrocution hazards associated with antennas contacting overhead power lines.
 - (2) Whip-type antennas will be clipped under an antenna-retaining clip when vehicles are operated in areas that may have overhead power lines.
 - (3) Vehicle operators should not stop their vehicles under power lines. This could increase the risk of an electrical shock.
- j. Fire prevention.
 - (1) VDF motor vehicles will not be operated unless they are entirely free of gasoline or diesel leaks.
 - (2) Smoking is prohibited within 50 feet of vehicles loaded with flammable or combustible liquids, flammable gases, and when in the presence of flammable vapors as those present when fueling vehicles or examining or repairing vehicle engines or fuel systems.

- (3) During fueling, drivers will turn off the engine, put the transmission in low gear or park position (if automatic transmission), and use the parking brakes. When low temperatures prevent setting the parking brakes, wheels will be chocked.
 - (4) Using cellular phones is prohibited during fueling operations or when flammable vapors are present.
 - (5) Fuel cans must be offloaded from the vehicle and placed on the ground for filling to avoid static electricity buildup or discharge.
 - (6) Fire extinguishers will be mounted in vehicles responding to calls for assistance (i.e., fire, security, etc.) and vehicles carrying valuable equipment or materials on a mission requiring special protection.
- k. Carbon monoxide poisoning precautions.
- (1) Vehicle engines will not be operated inside of a structure longer than needed to move the vehicle in or out of the structure.
 - (2) Vehicles will not be allowed to idle at loading docks or near air intake areas of buildings.
 - (3) Sleeping in parked vehicles with the engine heater or externally mounted generator running is prohibited. Carbon monoxide poisoning may result from exhaust gases entering the vehicle.

1-5. Safe movement of personnel

- a. General movement of personnel.
- (1) The following safety precaution must be in place before transporting personnel in vehicles.
 - (a) Fixed seating is installed and passengers are seated wholly within the body of the vehicle.
 - (b) A truck must be equipped with stakes or sideboards and/or tailgate protection (up to a 1-ton vehicle).
 - (2) Before starting the engine, operators transporting passengers in trucks must ensure that the tailgate, safety device, or safety strap is in place and determine that all passengers are in a safe position.
 - (3) Operators will follow passenger carrying capacities for vehicles in accordance with their operator's manuals.
 - (4) Passengers may be transported without fixed seating for short distances on an installation if each passenger remains seated and wholly within the body of the vehicle. This will not be allowed off of an installation and on the public roadways.

1-6. Driver education

Vehicle operators must have equivalent civilian training and licensure as required by the Commonwealth of Virginia to operate VDF vehicles. For example, to operate a van or bus for more than 15 passengers, the vehicle operator must possess a bus operator's driver's license (e.g., a Class C). If a VDF vehicle is equivalent to a civilian vehicle that requires a commercial driver's license (CDL) to drive it, then the VDF personnel must possess an equivalent CDL for that class of vehicle.

1-7. Privately-owned vehicle (POV) safety inspections

Individuals may not operate POVs on DoD facilities or on VDF property without a current and valid state inspection sticker that has been issued by the state that the vehicle is registered in or in the state that the vehicle is being operated in.

1-8. Motorcycle safety

- a. Licensing.
 - (3) Operators of POV motorcycles on DoD installations and VDF facilities must be appropriately licensed to operate on public highways.
 - (4) Minibikes, pocket bikes, and similar vehicles that do not meet Federal highway safety standards will not be operated on DoD installation roads or VDF facilities.
- b. Motorcycle vehicle equipment.
 - (1) When operating on any DoD installation or VDF facility, all POV motorcycles must have headlights turned on at all times.
 - (2) Motorcycles shall be equipped with both a left-hand and a right-hand rearview mirror mounted on the handlebar or fairing.
- c. Motorcycle vehicle rider protection. Commanders will ensure that all individuals covered by this regulation and all persons operating a motorcycle at any time on a DoD installation or VDF facility wear the following PPE.
 - (1) Helmets.
 - (a) For personnel riding motorcycles, helmets shall be certified to meet DOT Federal Motor Vehicle Safety Standard No. 218.
 - (b) All helmets shall be properly fastened under the chin.
 - (2) Eye protection. Eye protection designed to meet or exceed ANSI Z87.1, reference (z) for impact and shatter resistance includes goggles, wraparound glasses, or a full-face shield (properly attached to a helmet). A windshield or fairing does not constitute eye protection.
 - (3) Foot protection. Foot protection includes sturdy over-the-ankle footwear that affords protection for the feet and ankles (durable leather or ballistic-type cloth athletic shoes that cover the ankles may be worn).
 - (4) Protective clothing. Protective clothing includes long-sleeved shirts or jacket, long trousers, and full-fingered gloves or mittens made from leather or other abrasion-resistant material. Motorcycle jackets and pants constructed of abrasion-resistant materials such as leather, Kevlar®, or Cordura® and containing impact-absorbing padding are strongly encouraged. Riders are encouraged to select PPE that incorporates fluorescent colors and retro-reflective material.
- d. Cam-Am Spyders and three-wheeled motorcycles.
 - (1) Powered nonenclosed three wheelers shall be considered a motorcycle unless the operator carries documentation that the vehicle is classified as a vehicle by the vehicle identification number (VIN) by the National Highway Traffic Safety Administration (NHTSA).
 - (2) All PPE requirements applicable to motorcycles remain applicable to three-wheeled variants.
 - (3) All three-wheeled operators shall familiarize themselves with and follow the manufacturer's instructions and safety precautions pertaining to their vehicles.

1-9. Pedestrian and bicycle safety

NOTE: Although these regulation attempt to mirror what is current on DoD installations, regulations pertaining to pedestrian and bicycle safety issued on specific installation have precedence over these regulation and shall be complied with as applicable.

- a. Pedestrian safety. Pedestrian safety shall be an integral part of the traffic safety program. The program shall include:
 - (1) Separating pedestrian and motor vehicle traffic to the maximum extent possible.
 - (2) Wearing reflective vests or belts during hours of limited visibility for personnel on roadways, but not in troop formations.
 - (3) Prohibiting wearing of portable headphones, earphones, or other listening devices (that cover both ears) while jogging/running or bicycling on or adjacent to roadways or roadway intersections on DoD installations or VDF facilities.
- b. Bicycle safety.
 - (1) Bicycle helmets, approved by the Consumer Product Safety Commission (CPSC) will be worn by all personnel who ride bicycles on any DoD installation or VDF facility.
 - (2) The wearing of headphones, earphones, or other listening devices (that cover both ears) while bicycling on or adjacent to roadways on DoD installations or VDF facilities is prohibited.
 - (3) When bicycling on roadways on DoD installations or VDF facilities during hours of darkness or reduced visibility, bicycles will be equipped with operable headlights and taillights, and the bicyclist will wear a reflective upper outer garment.
- c. Issued personal protective equipment
 - (1) Fluorescent or reflective PPE shall be provided to and used by all personnel who are exposed to traffic hazards as a part of their assigned duties; for example, marching/running/jogging personnel, road guards, traffic control personnel, or individuals assisting with disaster response activities.
 - (2) Troop formations, during periods of reduced visibility, will post front and rear guards 90 feet (30 meters) in front and to the rear.
 - (3) Troop formations moving on roadways during periods of darkness will be provided flashlights with wand or luminescent chemical lights.
 - (4) For personnel performing activities on public highways, high-visibility protective clothing (i.e., fluorescent colors and retro-reflective material) meeting ANSI criteria must be used. On federally funding roadways up to 25 mph speed limit, ANSI Class I clothing will be required. For roadways where the speed limit is between 25 mph but less than 45 mph, ANSI Class II clothing is required. For roadways where the speed limit is 45 mph or greater, ANSI Class III clothing is required.

Appendix A References

Section 1. Publications

ANSI (American National Standards Institute) Safety Code Z87.1, Occupational and Educational Personal Eye and Face Protection Devices.

AR 190-5, Motor Vehicle Traffic Supervision

Code of Federal Regulations (CFR) (<http://www.gogpoaccess.gov/cfr/index.html>)

49 CFR, Transportation

DA Pam 385-1, Small Unit Safety Officer / NCO Guide

DA Pam 385-10, Army Safety Program

DA Pam 385-16, System Safety Management Guide

FM 3-0, Operations (<http://www.apd.army.mil>)

FM 4-01.011, Unit Movement Operations

FM 5-0, The Operations Process

FM 5-19, Composite Risk Management (CRM)

FM 21-60, Visual Signals

FM 21-305, Manual for the Wheeled Vehicle Driver (<http://atiam.train.army.mil>)

FM 55-30, Army Motor Transport Units and Operations

HSPG (Highway Safety Program Guidelines) Number 1, 4, 8, and 20.
(<http://www.nhtsa.gov/nhtsa/whatsup/tea21/tea21programs/>)

Manual on Uniform Traffic Control Devices for Streets and Highways
(<http://mutcd.fhwa.dot.gov>)

MIL-STD-1180B(1), Safety Standards for Military Ground Vehicles
(<http://assist.daps.dla.mil/quicksearch>)

Section 2.
Forms

OSHA Form 300, Log of Work-Related Injuries and Illnesses (<http://www.osha.gov>)

OSHA Form 300A, Summary of Work-Related Injuries and Illnesses (<http://www.osha.gov>)

VDF Accident Investigation Report Form

Glossary

Section 1

Abbreviations

ADSC – Additional Duty Safety Course

ADSO – Additional Duty Safety Officer (or NCO)

ANSI – American National Standards Institute

AR – Army Regulation

ARNG – Army National Guard

ASO – Aviation Safety Officer

ATV – All-terrain vehicle

BBP – Bloodborne pathogens

BBPECP – Bloodborne Pathogen Exposure Control Program

BBPP – Bloodborne Pathogen Program

CAI – Centralized accident investigation

CBRNE – Chemical, Biological, Radiological, Nuclear, and Explosives

CFR – Code of Federal Regulations

CG – Commanding General

CHEMTREC – Chemical Transportation Emergency Center

CONOPS – Continuity of operations

CORA – Certificate of Risk Acceptance

COTS – Commercial off-the-shelf

CPR – Cardio-pulmonary resuscitation

CPSC – Consumer Product Safety Commission

CPX – Command post exercise

CRM – Composite risk management

DA – Department of the Army

DA Pam – Department of the Army Pamphlet

DoD – Department of Defense

DoDD – Department of Defense Directive

DoDI – Department of Defense Instruction

DoLI – Virginia Department of Labor and Industry (i.e., State OSHA)

DOT – Department of Transportation

DRU – Direct reporting unit

DUI – Driving under the influence

ECP – Exposure control plan

EO – Executive Order

EPA – Environmental Protection Agency

FAA – Federal Aviation Administration

FM – Field Manual

FOIA – Freedom of Information Act

GFE – Government furnished equipment

GFP – Government furnished property

GOV – Government Owned Vehicle

HAZMAT – Hazardous Materials

HBV – Hepatitis B virus

HIV – Human immunodeficiency virus

HSPG – Highway Safety Program Guidelines

IAI – Installation-level accident investigation

IATA – International Air Transport Association

IACO – International Civil Aviation Organization

IN – Initial notification

JHA – Job hazard analysis

MIL-STD – Military Standard

MP – Military Police

MSDS – Material safety data sheet (see also SDS or safety data sheet)

MTF – Medical treatment facility

NARM – Naturally occurring / accelerator produced radioactive material.

NCO – Noncommissioned Officer

NFPA – National Fire Protection Association

NRC – Nuclear Regulatory Commission

NTSB – National Transportation Safety Board

OJT – On-the-job training

OSH – Occupational Safety and Health

OSHA – Occupational Safety and Health Administration

OSH Act – Occupational Safety and Health Act

PL – Public Law

POC – Point of Contact

POV – Privately Owned Vehicle

PPE – Personal Protective Equipment

RAC – Risk Assessment Code

RSO – Radiation Safety Officer

SDS – Safety data sheet (see also MSDS – MSDS being phased out by revision of OSHA Hazard Communications Standard)

SME – Subject matter expert

SOH – Safety and occupational health

SOP – Standing Operating Procedure or Standard Operating Procedure

SSMP – Safety System Management Plan

SSP – Strategic Safety Plan

SSRA – Safety System Risk Assessment

TDY – Temporary Duty Assignment

USACHPPM – U.S. Army Center for Health Promotion and Preventive Medicine

VC – Vehicle Commander

VDF – Virginia Defense Force

Section 2

Terms

Accident – Any unplanned event or series of events that result in death, injury, or illness to personnel, or damage to or loss of equipment or property. (Within the context of this regulation, accident is synonymous with mishap.)

Accident-based risk management – A component of CRM used to identify, evaluate, manage and prevent accidents to personnel, equipment, and the environment during peacetime and contingency operations due to safety and occupational health factors and other accident-based factors.

Aircraft – Flying machines, whether manned or unmanned, weight carrying structure for navigation of the air that is supported by the dynamic action of the air against its surfaces.

Aircraft ground accident – Injury or property damage accidents involving aircraft in which no intent for flight exists and the engine(s) is/are in operation.

Annual basis or annually – Annual basis or annually should be from the month of the current year to the same month of the following year. However, the time will not exceed 13 months.

Audit – A process of collecting information about an organization's safety and occupational health management system and making judgments about its adequacy and performance, identifying both the strengths and weaknesses of the safety and health program as implemented by the organization. To ensure that all necessary safety and health program elements are operating and that procedures are in place for thorough implementation. The aims of auditing should be to establish that: appropriate management arrangements are in place; an adequate CRM control system exists which both reflect the hazard profile of the organization and is properly implemented; and appropriate workplace precautions are in place.

Barrier – A permanent or temporary impediment to foot and/or vehicular traffic that personnel are prohibited to pass without approval from range control or other appropriate authority. A barrier may be a sentinel, wire fencing, gate, sign, or other access-limiting device.

Command responsibility – Commanders down the entire chain of command are responsible for the safety of their personnel.

Commander – An individual that lawfully exercises over subordinates by virtue of rank or assignment. This includes the authority and responsibility for effectively using available resources for planning the employment or, organizing, directing, coordinating and controlling forces for the accomplishment of assigned missions. This also includes responsibility for health, welfare, morale and discipline of assigned personnel in his or her "command."

Competent authority – An individual designated in command, responsible for the direction, coordination and control of personnel. The commander alone is responsible for everything his or her unit does or fails to do. They cannot delegate their responsibility or any part of it, although

they may delegate portions of their authority to competent individuals. An individual designated by the commander to address areas of primary interest within that individual's technical expertise.

Composite risk – Blends threat-based risks with accidental, hazard-based risks.

Control – Action taken to eliminate hazards or reduce their risk.

Days away from work – The actual or estimated number of days lost that the individual could not work, excluding the day of the injury / occupational illness. Count all calendar days including weekends and holidays.

Double hearing protection – Wearing ear plugs **AND** noise attenuating headsets.

Educational – Includes classroom training, excludes field settings such as field training exercises and maneuvers. Examples: Teach/instruct/brief/counsel student/audience activities.

Emergency – An event for which an individual perceives that a response is essential to prevent or reduce injury or property damage.

Engineering controls – Regulation of facility operations using prudent engineering principles, such as facility design, operation sequencing, equipment selection, and process limitations.

Environmental factors – Environmental conditions, which had, or could have had, an adverse effect on the individual's actions or the performance of equipment.

Establishment – A single physical location where business is conducted or where services or operations are performed. Where distinctly separate activities are performed at a single physical location, each activity shall be treated as a separate establishment. Typically, an establishment refers to a field activity, regional office, area office, installation, or facility.

Evaluation – A specialized inspection designed to determine the effectiveness of a unit's safety and health program.

Exposure – The frequency and length of time personnel and equipment are subjected to a hazard.

Explosion – A chemical reaction of any chemical compound or mechanical mixture that, when initiated, undergoes a very rapid combustion or decomposition, releasing large volumes of highly heated gases that exert pressure on the surrounding medium. Depending on the rate of energy release, an explosion can be categorized as a deflagration or a detonation.

Extremely hazardous substances – The EPA uses the term extremely hazardous substance for the chemicals that must be reported to the appropriate authorities of released above the threshold reporting quantity. Each substance has a threshold reporting quantity. The list of extremely

hazardous substances is identified in Title III of Superfund Amendments and Reauthorization Act (SARA) of 1986 (40 CFR 355).

Facility – An area within a building that provides appropriate protective barriers for persons working in the facility and the environment external to the facility and outside of the building.

Federal OSHA official – Investigator or compliance officer employed by, assigned to, or under contract to OSHA.

Field operations – Operations conducted outdoors or outside of man-made enclosures or structures. Short-term operations in storage structures are also considered as field operations.

Firefighting – Activities associated with developing or using firefighting skills.

First aid – First aid is defined as using a list of procedures that are all-inclusive and is not a recordable injury. If a procedure is not on the list, it is not considered first aid for recordkeeping purposes. The following are the procedures contained in the list:

- a. Using nonprescription medication at nonprescription strength. However, if an individual is provided prescription medications or nonprescription medications at prescription strength, this is considered medical treatment.
- b. Tetanus immunizations.
- c. Cleaning, flushing, or soaking surface wounds.
- d. Wound coverings, butterfly bandages, Steri-Strips. The use of wound closure methods such as sutures, medical glues, or staples is considered medical treatment.
- e. Hot or cold therapy regardless of how many times it is used.
- f. Nonrigid means of support.
- g. Temporary immobilization device(s) used to transport accident victims.
- h. Drilling of fingernail or toenail; draining fluid from blister.
- i. Eye patches.
- j. Removing foreign bodies from eye using irrigation or cotton swab. However, use of other methods to remove materials from the eye is medical treatment.
- k. Removing splinters or foreign material(s) from areas other than the eye by irrigation, tweezers, cotton swabs, or other simple means.
- l. Finger guards.
- m. Massages. Massage therapy is first aid, but physical therapy or chiropractic treatment is considered medical treatment.
- n. Drinking fluids for relief of heat stress. (Drinking fluids for relief of heat stress is first aid, but administering an IV is medical treatment.)

Flammable – A material that has the characteristic of being easily ignited and burning readily.

Flight mission – Flight or series of flights (sorties), conducted to accomplish a specific task or series of tasks in support of the unit's approved mission statement. Each mission is assigned to a designated pilot-in-command (PC) and/or air mission commander.

Foreign object damage (FOD) – Damage to VDF vehicle/equipment/property as a result of objects alien to the vehicle/equipment damaged. Excludes aircraft turbine engines defined as a FOD incident.

Ground accident – Any accident exclusive of aviation (flight / flight-related / aircraft-ground).

Hazard – Any actual or potential condition that can cause injury, illness, or death of personnel or damage to or loss of equipment, property, or mission degradation or a condition or activity with potential to cause damage, loss, or mission degradation.

Hazard analysis – A hazard analysis is a clear, systemic, concise, well defined, orderly, consistent, closed-loop, quantitative or qualitative and objective methodology used to identify possible hazards within a mission, system, equipment, or process that can cause losses to the mission, equipment, process, personnel, or damage to the environment. Examples of hazard analyses are: What-If, Preliminary Hazard Analysis, Sneak Circuit Analysis, Hazard and Operability Study, Fault Tree Analysis, Failure Mode and Effects Analysis, and Fault Hazard Analysis.

Hazardous chemical – OSHA uses the term hazardous chemical to denote any chemical that would be a risk to individuals if exposed in the workplace. Hazardous chemicals cover a broader group of chemicals than the other chemical lists.

Hazardous wastes – The EPA uses the term hazardous wastes for chemicals that are regulated under the Resource Conservation and Recovery Act (RCRA) (42 USC 6901). Hazardous wastes in transportation is regulated by DOT (49 CFR 170 through 49 CFR 179).

Hazard class – The United Nations Organization hazardous classification system, which contains 9 hazard classes, is used by the DOT for dangerous materials to identify the hazardous characteristics of the material(s).

Hazardous materials (HAZMAT) – Definitions are:

- a. “Hazardous material” means any material that has been designated as hazardous under 49 USC 5101 to 49 USC 5127 and is required to be placarded under 49 CFR 172, Subpart F or any quantity of material listed as a select agent or toxin in 42 CFR 73.
- b. Substances that have hazardous characteristics such as flammable, corrosive, reactive, toxic, radioactive, poisonous, carcinogenic or infectious, having properties capable of producing adverse effects on the health and safety or the environment of a human being. Legal definitions are found in individual regulations.
- c. Any substance of material involved in an accident and released in sufficient quantities, poses a risk to people’s health, safety, and/or property. These substances and materials include explosives, radioactive materials, flammable liquids or solids, combustible liquids or solids, poisons, oxidizers, toxins, and corrosive materials (Federal Emergency Management Agency definition).
- d. The DOT uses the term hazardous materials which covers 8 hazard classes, some of which have subcategories called classifications and a ninth class covering other regulated materials. The DOT includes in its regulations hazardous substances and

hazardous wastes as other regulated materials-E (ORM-E), both of which are regulated by the EPA, if their inherent properties would not otherwise be covered.

Hazardous Substances – Two form of definitions:

- a. The EPA uses the term hazardous substance for the chemicals that, if released into the environment above a certain amount, must be reported and depending on the threat to the environment, Federal involvement in handling the incident can be authorized. A list of the hazardous substances is published in 40 CFR 302, Table 302.4.
- b. OSHA uses the term hazardous substance in 29 CFR 1910.120, which resulted from Title I of SARA and covers emergency response. OSHA uses the term differently than the EPA. Hazardous substances, as used by OSHA, cover every chemical regulated by both DOT and EPA.

Health hazard – An existing or likely condition, inherent to the operation, maintenance, storage or disposal or materiel or a facility, that can cause death, injury, acute or chronic illness, disability, or reduced job performance.

Health hazard assessment – The application of biomedical and psychological knowledge and principles to identify, evaluate, and control the risk to the health and effectiveness of personnel.

Hospitalization – Admission to a hospital as an in-patient for medical treatment.

Human error – Human performance that deviated from that required by the operational standards or situation. Human error in accidents can be attributed to a system inadequacy / root cause in training, standard, leader, individual, or support failure.

Human factors – Human interactions (man, machine, and/or environment) in a sequence of events that were influenced by, or the lack of human activity, which resulted or could result in an accident.

Imminent danger – Conditions or practices in any workplace that pose a danger that reasonably could be expected to cause death or severe physical hardship before the imminence of such danger could be eliminated through normal procedures.

Independent evaluation – The process used by the independent evaluators to independently determine if the system satisfies the approval requirements. It will render an assessment of data from all sources, simulation and modeling, and an engineering or operational analysis to evaluate the adequacy and capability of the system.

Individual risk – Risk to a single exposed person.

Inherent hazard – An existing or permanent hazard (i.e., high voltage).

Injury – A traumatic wound or other condition of the body caused by external force, including stress or strain. The injury is identifiable as to time and place of occurrence and member or

function of the body affected, and is caused by a specific event, incident, or series of events within a single day or work shift.

Inspection – Comprehensive survey of all or part of a workplace in order to detect safety and health hazards. Inspections are normally performed during regular work hours or the organization, except as special circumstances may require. It is also the process of determining compliance with safety and health standards through formal and informal surveys of workplaces, operations, and facilities.

Intent for flight – Intent for flight begins when power is applied or brakes released to move the aircraft under its own power, for the purpose of commencing authorized flight with an authorized crew. Intent for flight ends when the aircraft is at a full stop and power is completely reduced. Intent for flight is the physical act of applying power to move the aircraft, not the thought process of the crew member as to what is going to occur in the future.

Investigation – A systematic study of an accident, incident, injury, or occupational illness circumstance.

Job transfer – When personnel are assigned to a job other than their regular job for part of the day as a result of an injury or occupational illness.

Laser – A device capable of producing a narrow beam of intense light (LASER = light amplification by stimulated emission of radiation).

Life cycle – The life of a system from conception to disposal.

Maintenance / repair / servicing – Activities associated with the maintenance, repair or servicing of equipment or other property. Excludes janitorial, housekeeping, or grounds-keeping activities.

Medical treatment – Medical treatment is the management and care of a patient to combat disease or disorder. It does not include:

- a. Visits to a physician or licensed health care professional solely for observation or counseling.
- b. Diagnostic procedures.
- c. First aid.

Mishap risk management – A component of CRM used to identify, evaluate, and prevent accidents to personnel, equipment, and the environment during peacetime and contingency operations due to safety and occupational health factors, design and construction of equipment, and other mishap factors.

Mission – Flight or series of flights (sorties), conducted to accomplish a specific task or series of tasks in support of the unit's approved mission statement. Each mission is assigned to a designated pilot in command and/or air mission commander.

Motorcycle – Powered two- and three-wheeled vehicles, including mopeds and motorbikes.

Near miss – A potentially serious accident or incident that could have resulted in personnel injury, death, or property damage, damage to the environment and/or illness, but did not occur due to one or more factors.

Non-DoD component – Any entity (government, private, or corporate) that is not a part of DoD.

Note – Additional information provided to expand understanding of the subject and to call attention to areas of interest.

Occupational hazard – Conditions, procedures, and practices directly related to the work environment that creates a potential for producing occupational injuries or illnesses.

Occupational illness – Non-traumatic physiological harm or loss of capacity produced by systemic infection; continued or repeated stress or strain; for example, exposure to toxins, poisons, fumes; or other continued and repeated exposures to conditions of the work environment over a long period of time. Includes any abnormal physical or psychological condition or disorder resulting from an injury caused by long- or short-term exposure to chemical, biological, or physical agents associated with an occupational environment. For practical purposes, an occupational illness is any reported condition that does not meet the definition of an injury.

Occupational injury – A wound or other condition of the body caused by external force, including stress or strain. The injury is identifiable as to time and place of the occurrence and a member or function of the body affected, and is caused by a specific event, incident, or series of events or incidents within a single day or work shift.

Office – Activities associated with the performance of clerical, typing, and administrative type duties. Excludes supervisory activities. Examples: Typing / work processing, filing / posting, telephoning, operating office machines.

Off-duty – VDF personnel are off-duty when they:

- a. When they are not in an on-duty status, whether on or off a VDF facility or military installation.
- b. Have departed official duty station or temporary duty station at termination of normal work schedule. (**NOTE:** For VDF personnel, this normally includes the one-way travel period to and from the individual's home of record and the duty location. It does not include travel time for multiple-day events other than the initial travel to and the final travel from the duty location.)
- c. Are participating in voluntary and/or installation team sports.
- d. Are on lunch or other rest break engaged in activities unrelated to eating and resting.

On-duty – VDF personnel are considered on-duty, for the purposes of accidents, when they are:

- a. Physically present at any location where they are to perform their officially assigned work. (This includes those activities incident to normal work activities such as lunch,

- coffee, or rest breaks. This does not include non-work related activities (e.g., working on a personal vehicle during work hours).
- b. Being transported by VDF owned or contracted vehicles for the purpose of performing officially assigned work. This would include initial travel to and from a drill or TDY location in a POV, but not daily transportation to or from a work location.
 - c. Participating in compulsory physical training activities or other organization events.

Operational control – Operational control is the authority to perform those functions of command over subordinate forces involving organizing and employing command and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission. Operational control includes authoritative direction over all aspects of military operations and Joint training necessary to accomplish missions assigned to the command. It does not, in and of itself, include authoritative direction for logistics or matters of administration, discipline, internal organization, or unit training.

Operating vehicle – Activities associated with operating vehicle under power. Examples: Driving, convoying / road marching, towing / pushing, mowing, hauling / transporting, driver testing, flying.

Over-the-road – Operation or driving on paved roads / highways.

Permanent partial disability – Any injury or occupational illness that does not result in death or permanent total disability, but in the opinion of competent medical authority, results in the loss or permanent impairment of any part of the body, with the following exceptions:

- a. Loss of teeth.
- b. Loss of fingernails or toenails.
- c. Loss of tip of fingers or toes without bone involvement.
- d. Inguinal hernia, if it is repaired.
- e. Disfigurement or sprains or strains that do not cause permanent limitation of motion.

Permanent total disability – Any nonfatal injury or occupational illness that, in the opinion of competent medical authority, permanently and totally incapacitates a person to the extent that he or she cannot follow any gainful employment. (The loss of, or the loss of use of, both hands, feet, eyes, or any combination thereof as a result of a single accident will be considered as permanent total disability.)

Physical training – Body conditioning or confidence building activities. Examples: Confidence courses, marches, running / jogging, physical training test.

Probability – Probability is the qualitative or quantitative likelihood of a particular event or sequence of actions initiated by a hazard-related Cause resulting in a Maximum Credible Loss. The Probability can be expressed as the product of the Incident Rate and Mishap Set Likelihood.

Qualified safety and health personnel – Includes personnel who have been primarily engaged in safety and occupational health specialties in the military or civilian occupations, have

documented training within these areas (i.e., associates, bachelors, and/or masters degrees), and/or are qualified under the civil service classifications for safety, medical, occupational health, or industrial hygiene.

Recommendations – Those actions advocated to the command to correct system inadequacies that caused, contributed, could cause or contribute to a VDF accident. Also referred to in this regulation as corrective action, remedial measures and/or countermeasures.

Recordable accident – Reportable accident that meets the minimum criteria stated in the regulation for aviation and ground Class A-D accidents.

Reportable accident – All occurrences that cause injury, occupational illness, or property damage of any kind must be reported to the local safety office and to the VDF, G.W. Division Safety Office.

Residual hazards – Hazards that are not eliminated by design.

Residual significant risk – Any risk remaining in a system after corrective actions have been executed.

Residual risk – The levels of risk remaining after controls have been identified and countermeasures selected for hazards that may result in the loss of effectiveness. Risks remaining after hazard mitigation measures have been applied.

Restricted work activity – Individual's injury is such that they are unable to perform their normal duties (e.g., light duty).

Risk – Risk is directly related to the ignorance or uncertainty of the consequences of any proposed action. Risk is an expression of possible loss in terms of hazard severity and hazard probability. Risk is the expected value of loss associated with a loss caused by a hazard expressed in dollars. The risk associated with this loss is mathematically derived by multiplying the probability of the loss's likelihood by the probable dollar loss associated with the loss's severity. Note that risk has two dimensions – likelihood and magnitude, while a hazard has only one – varied magnitude.

Risk acceptability – Risk acceptability is that level of risk which has been determined as tolerable in order to fulfill mission requirements. It represents a level of risk where either the output of resources to rectify safety deficiencies does not result in a proportional increase in the level of safety to be provided; or so restricts the performance that the assigned mission cannot be executed.

Risk acceptance – Risk acceptance is a formal and documented process indicating that leadership understands the hazard, its associated cause, and the probable consequences to mission, personnel, equipment, public and/or the environment and that they have determined that the total risk is acceptable because of mission execution.

Risk acceptance level – Used to denote the level of risk a particular level of leadership may accept. These levels are based on the magnitude of the risk involved and the duration of the risk acceptance.

Risk assessment – An evaluation of a risk in terms of loss should a hazard result in an accident and against the benefits to be gained from accepting the risk.

Risk decision – The decision to accept or not accept the risk(s) associated with an action; made by the commander, leader, or individual responsible for performing the action and having the appropriate resources to control or eliminate the risk's associated hazard.

Safety – Freedom from those conditions that can cause death, injury, occupational illness, or damage to, or loss of, equipment or property.

Safety objectives – Criteria for comparing and judging measures for adequacy. Safety objectives incorporate the safest measures consistent with operational requirements.

Security / law enforcement – Activities associated with MP or other personnel performing security or law enforcement rescue duties. Examples: Traffic safety guarding / patrolling, controlling disturbances.

Severity – A qualitative or quantitative assessment of the degree of injury, occupational illness, property, facility, or environmental damage associated with a maximum credible loss. Severity is dependent only on the Maximum Credible Loss. Once established for a Maximum Credible Loss, it does not change. Only the probability of a Maximum Credible Loss can be reduced.

Significant Risk – A risk associated with a particular hazard where the hazard likelihood of occurrence and its potential impact on the mission, person, equipment, or facility is such that it can be reasonably expected to cause bodily harm, damage to equipment, or the facility, or delay in the execution of the mission unless corrected. Normally, they are assigned a RAC of 1, 2, or 3.

Single-hazard risk – Risk associated with a single hazard of the system.

Single hearing protection – Wearing either ear plugs or noise attenuating headsets.

Special hazards areas – Areas identified containing hazards which due to their nature could not be eliminated through design selection and therefore depend upon training, procedures, and PPE for control of the hazards to tolerable levels. Examples: Kitchens, machine shops, areas around conveyor belts, hazardous chemical storage areas, etc.

Standards failure – Standards / procedures not clear or practical, or do not exist.

State OSHA official – Investigator or compliance officer employed by, assigned to, or under contract to state OSHA / Commonwealth of Virginia Department of Labor and Industry.

Supervisory – Activities associated with the management of personnel.

Support failure – Inadequate equipment / facilities / services in type, design, availability, or condition, or insufficient number / type of personnel, which influenced human error, resulting in a VDF accident.

System – A composite, at any level of complexity, of trained personnel, procedures, materials, tools, equipment, facilities, and software. The elements of this composite entity are used together in the intended operational or support environment to perform a given task or achieve a specific production, support, or mission requirement.

System inadequacy – A tangible or intangible element that did not operate to standards, resulting in human error or materiel failure. Also referred to as causes, readiness shortcomings, and/or root causes.

System safety – The application of engineering and management principles, criteria, and techniques to optimize safety within the constraints of operational effectiveness, time, and cost throughout all phases of systems', equipment's, or facilities' life cycle.

System safety lesson learned – A collection of real or potential safety or health-related problems based on data analysis or experience that can be applied to future and current systems to prevent similar recurrences.

System safety management – An element of management that defines the system safety program requirements and ensures the planning, implementation, and accomplishment of system safety tasks and activities consistent with the overall program requirements.

System safety management plan (SSMP) – A management plan that defines the system safety program requirements of the VDF or Government. It ensures the planning, implementation, and accomplishment of system safety tasks and activities consistent with the overall program requirements.

Tolerable risk – The level of risk associated with a specific hazard below which a hazard does not warrant any expenditure or resources to mitigate. From a legal standpoint it would be considered as a “de minimus” risk, from the Latin phrase “de minimus noncurat lex,” meaning “the law does not concern itself with trifles.”

Training-related death – A death associated with a non-combat type exercise or training activity that is designed to develop an individual's physical ability or to maintain or increase individual / collective skills, and is due to either an accident or the result of natural causes occurring during or within one hour after any training activity where the exercise or activity could be a contributing factor. This does not apply to individuals participating in personal wellness or exercise programs.

VDF accident – A VDF accident is defined as an unplanned event, or series of events, which results in one or more of the following:

- a. Occupational illness to VDF personnel.

- b. Injury to on-duty VDF personnel.
- c. Damage to VDF property.
- d. Damage to public or private property, and/or injury or accident to non-VDF personnel caused by VDF operations (i.e., the VDF had a causal or contributing role in the accident).

VDF property – Any item of VDF property, or property leased by the VDF for which the VDF has assumed risk of loss, such as aircraft, vehicle, building, structure, system, etc.

VDF Vehicle – Any vehicle that is owned, leased, or rented by the Virginia Defense Force. A vehicle that is primarily designed for over-the-road operation. A vehicle whose general purpose is the transportation of cargo or personnel. Examples are passenger cars, station wagons, trucks, ambulances, and buses.

Workplace – A place (whether or not within or forming a part of a building, structure, or vehicle) where any person is to work, is working, for the time being works, or customarily works, for gain or reward; and in relation to an employee, includes a place, or part of a place, under the control of the employer.

Work-related injuries – Injuries or occupational illnesses incurred while performing duties in an on-duty status.