

**Virginia Defense Force Pamphlet
VDFP 385-1**

**Safety
Virginia Defense Force
Additional Duty Safety Officer / NCO**

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1 May 2014**

**Headquarters
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George Washington Division
Richmond, VA
1 May 2014**

Safety

VDF Safety Program

Summary. This document is an adaptation of the Department of the Army Pamphlet 385-1, Additional Duty Safety Officer / NCO, 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, MRG-level.

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Chapter 1 Unit Safety Management

1-1. Purpose

Unit readiness starts with safe operations. This pamphlet is written for the additional duty safety officer / noncommissioned officer (ADSO/NCO) at company level (or equivalent) ground units. The ADSO/NCO assists the commander with safety responsibilities where there is no assigned safety officer (SO) by table of organization and equipment or table of distribution and allowances. The pamphlet provides guidance in applying policies and procedures and necessary information for managing a unit safety program. Separate chapters discuss how to establish and maintain a unit safety program, apply the risk management (RM) process, conduct safety surveys, report and investigate accidents, ensure safety in contingency operations, and to promote safety at home locations and off-duty activities, including privately-owned vehicle (POV) and privately owned motorcycle (POM) accident prevention. Aviation specific safety requirements and guidance for aviation unit safety programs can be found in AR 385-10, DA Pamphlet 385-90, and Joint Publication AR 95-30 / Air Force Instruction (AFI) 91-206(I).

1-2. References

Required and related references are listed in appendix A.

1-3. Explanation of abbreviations and terms

Abbreviations and special terms used in this publication are explained in the glossary.

1-4. The Unit Safety Program

- a. Readiness depends on the ability of a unit to perform its mission-essential task list (METL) to standard. Ready units have the following:
 - (1) Self-disciplined personnel who consistently perform to standard.
 - (2) Leaders who are ready, willing, and able to enforce standards.
 - (3) Training that provides skills needed for performance to standards.
 - (4) Standards and procedures for task performance that are clear and practical.
 - (5) Support for task performance, including required equipment, maintenance, facilities, and services.
- b. Performing to standard is one of the key steps in preventing accidents. However, each leader must be aware that written standards may not exist for every task. High-risk tasks must be identified and reviewed to ensure that adequate standards exist and that unnecessary risks are eliminated. It is the leader's responsibility to ensure standards are enforced and unnecessary risks are not taken.
- c. When safety and RM is fully integrated into unit planning and operations, Human errors, equipment breakdowns, and the negative effects of the operating environment are kept to a minimum.

1-5. Safety Guidance

- a. Commanders are responsible of safety of personnel and the quality of the unit safety program.
- b. The success of the unit safety program depends on command emphasis, the recommendations of the ADSO/NCO to the commander, and application of sound risk management principles. To underscore this command emphasis, the ADSO/NCO should be a conscientious individual. A successful unit safety program depends upon a genuine and supportive collaboration between leaders and their personnel.
 - (1) The commander is the foundation of the unit safety program. The commander directly supports the safety program by verbal and written guidance, action, and example.
 - (2) The ADSO/NCO advises and assists the unit commander to develop and implement safety policy, including risk management. The ADSO/NCO also develops and assists leaders in executing an integrated and comprehensive accident prevention program within the scope of the unit's mission.
- c. The ADSO/NCO is a member of the staff and performs within guidelines set by the commander. These guidelines may specify selected activities that require the commander's personal approval regardless of controls that may mitigate risk to a lower level. The ADSO/NCO should have direct access to the commander to address safety related issues. Commanders should delegate authority to the ADSO/NCO to direct necessary action when personnel, property, or equipment are endangered. Recommendations made by the ADSO/NCO in the name of the commander will be in line with policy and guidance provided by the commander.

- d. Accident prevention programs and procedures are developed as control for hazards. However, controls only protect the force when the commander implements them at the unit-level with the help of the ADSO/NCO and other unit leaders and personnel.

1-6. Safety program elements

- a. Accident prevention and safety have no defined boundaries. Virtually every activity, whether on-duty or off-duty, contains a safety component.
- b. Based on Army guidance, most safety programs are composed of four core elements:
 - (1) Safety program management.
 - (2) Inspections / assessments.
 - (3) Accident investigation / reporting.
 - (4) Promotion and awareness.
 - (5) Hazard analysis and countermeasures (see VDFP 385-10).
- c. Additional safety elements are added based on the mission, functions, and tasks performed by the organization, such as aviation safety, radiation safety, workplace safety, chemical safety, and contingency safety.

1-7. ADSO/NCO functions

- a. The functions of the ADSO/NCO include, but are not limited to, the following:
 - (1) Conduct surveys and hazard analyses, prioritize hazards identified during the survey by accident probability and severity, recommend controls or corrective action, track abatement if the identified hazards, and advise the commander and unit leaders as appropriate.
 - (2) Participate in unit-level mission planning, preparation, execution, and recovery to ensure that hazard identification, risk assessment, and integration of controls are addressed by the commander and other mission planners (such as platoon leaders, operations officer, supply officer) prior to and during unit operations.
 - (3) Observe unit operations to detect and correct unsafe practices.
 - (4) Advise the commander on the status and adequacy of the unit safety program and adequacy of the unit safety program and the current status of the hazards control log on a regular basis, not less than semi-annually.
 - (5) Advise the commander on all safety matters which degrade or inhibit mission accomplishment and recommend effective courses of action.
 - (6) Ensure all personnel attached or assigned are trained in risk management and other safety-related subjects.
 - (7) Ensure unit accidents are reported and investigated in accordance to VDF publications (may use DA Pamphlet 385-40 as additional guidance), and coordinated with the host installation safety office (example, Ft. Pickett Range Operations / Safety). Review reports for accuracy, completeness, and timeliness.
 - (8) Assist in developing and reviewing unit Standing Operating Procedures (SOPs) to ensure safety and risk management are integrated and controls are established for identified hazards.
 - (9) Monitor tests of the unit's pre-accident plan and recommend improvements to the plan, as necessary.
 - (10) Survey the condition of unit property (equipment) and facilities, motor pools, and field training sites, including bivouac sites. When safety deficiencies are found, advise the commander and recommend corrective action. Follow up to ensure corrective action is taken.
 - (11) Acquire and maintain required references to perform assigned duties; VDFR and Pamphlet 385-10 (and reference AR/DA Pamphlet 385-40) are essential in daily operations. Appendix A contains a list of other safety references that may assist in the performance of assigned duties. Army references can be found on the Internet at one of the sites listed in Appendix A. The division safety office, or an installation safety office, can also assist with locating reference material.
 - (12) Provide safety oversight to unit operations involving the transport or storing of petroleum products and other hazardous materials.
 - (13) Monitor unit Hazard Communications (HAZCOM) Program to ensure that personnel working with or around hazardous materials are informed of the hazards and trained in the HAZCOM program.
 - (14) Manage unit Accident Prevention Awards Program. (See VDFR and VDFP 385-10.)

- (15) Consult the local or division safety office for help identifying required safety records and files and setting up a system for their maintenance.
 - (16) Participate in after action reviews (AARs) to ensure that lessons learned are captured and disseminated for use in planning and executing the next iteration of the same or similar missions.
 - (17) Perform other actions to enhance and promote the unit safety program and individual involvement in preventing accidents. For example, conduct a periodic safety awareness day. Suggested activities are found in Appendix C.
 - (18) Assist the commander in promoting POV and motorcycle safety.
 - (19) Participate in all command / installation required safety training and any necessary unique training required to support the unit safety program.
- b. The effectiveness of the ADSO/NCO depends on a positive working relationship with all unit personnel. Barriers that inhibit communication could delay identification and correction of hazards. The ADSO/NCO should establish and maintain open channels of communication with the commander, unit leaders, and unit personnel.

Chapter 2

The Unit Safety Program

2-1. Starting the Unit Safety Program

- a. This chapter provides step-by-step procedures for preventing accidents that can result in death, injury, damaged or destroyed equipment, and loss of mission capability.
- b. The key to accident prevention is compliance with standards and successful application of the risk management process to eliminate hazards or reduce their risk. To achieve this, measures must be taken to enforce standards and implement controls that eliminate hazards or reduce the risk of injury or the chance of damage to equipment.

2-2. Where to begin

- a. Request an in-brief with your commander to obtain guidance on your part in the safety program. This meeting will serve as the basis for subsequent meetings and set the tone for your role as ADSO/NCO. Items for discussion include:
 - (1) Risk management in unit operations.
 - (2) Unit safety surveys and inspections.
 - (3) Unit and ADSO/NCO safety training.
 - (4) Development of a unit pre-accident plan.
 - (5) Unit accident reporting and notification procedures.
 - (6) Promoting unit off-duty/family safety.
 - (7) Authority of the ADSO/NCO to direct necessary corrective action.
 - (8) Accident trends and analysis.
 - (9) Unit safety SOPs.
 - (10) Commander's safety philosophy.
 - (11) Pre-accident plan.
 - (12) POV/POM accident prevention plan.
 - (13) Safety awards program.
- b. Request training from the supporting safety office or the G-/S-7 and arrange for participation in an ADSO/NCO course as soon as possible. Also, ensure your role as the ADSO/NCO is documented on unit orders and is provided to the Division Safety Office. Establish a good working relationship with your supporting safety office and/or the Division Safety Office.
- c. Review your unit's overall mission and understand your unit's METL:
 - (1) What are the key elements essential for mission success?
 - (2) What personnel, items of equipment, facilities, tools, or supplies are on hand and important for mission success?
 - (3) Consider the risks in all aspects of the unit METL.
- d. Conduct an initial safety survey of your unit, using checklists to assist you in identifying hazards. If it has been more than one (1) year, schedule and request external assistance in accomplishing a safety and occupational health inspection. Then, focus on the unit activities and missions that are immediately ahead (e.g., the next field training exercise or FTX, your unit receiving new equipment, or drastically changed operational procedures). Keep individual focus on these areas as you collect needed information. References in Appendix A, appropriate regulations / pamphlets, technical publications, field manuals, operator's manuals, and SOPs will help identify standards that must be followed to ensure safe unit operations.
- e. Using the references mentioned above, evaluate how effectively safety standards and risk management have been integrated into the SOPs. Talk to key personnel in your unit and get their opinions regarding the effectiveness of the unit safety program and any potential accident areas. Your objectives are to detect the likelihood for an accident and minimize the chance that one will occur.
- f. The unit should have a detailed pre-accident plan listing actions to be taken if an accident occurs. A good plan will include emergency action to be taken in case of an accident, as well as actions to assist an investigation board to complete its task. A guide to preparing a pre-accident plan is at Appendix B.
- g. Use the information you gathered from referenced publications, checklists, survey results, talking to key personnel, and reviewing accident reports to evaluate your unit safety status. Consult with your supporting safety office or the Division Safety Office. Use this information to narrow your attention to

- the problem areas that pose the most risk to your unit, its people, equipment, and mission. Evaluate each problem area, assign priorities, develop control options, and decide how to effectively present your results to the commander. A professional, fact-based recommendation will aid the commander in determining appropriate courses of action to keep identified risks manageable. Remember, the commander makes the final decision once advised of all the facts.
- h. When you are ready to discuss the status of the safety program and make recommendations for improvement, set up a meeting with the commander and other key leaders. At this meeting:
 - (1) Direct attention to the areas where the unit is strong and also to the areas where you have detected significant hazards or problems.
 - (2) Recommend specific actions to eliminate or reduce hazards in the problem areas.
 - (3) Obtain the commanders approval and personal support for corrective action in these areas.
 - (4) Clarify ADSO/NCO authority to make or direct the corrective action. *Note: Commanders want to support the safety program, however; perceived conflicts with time, resources, readiness, and mission requirements may arise.* Your job is to make sure that your recommendations clearly protect personnel's lives and equipment and help accomplish the unit mission. The commander's job is to make a decision, balancing your recommendations against the perceived conflicts, based upon his level of authority to accept risk.
 - i. Other topics you may want to discuss with the commander and units leaders include:
 - (1) Make sure the commander's directives for controlling hazards reach the key people who must implement them. Follow up regularly to make sure that controls remain in place and are achieving the desired results. Remember, it is the responsibility of the commander and subordinate leaders to execute the safety program. Your role is to make recommendations and coordinate safety activities.
 - (2) Safety awards that recognize individual and unit safety performance are a great tool for generating enthusiasm for the unit safety program. Refer to VDFR and VDFP 385-10 for information on safety awards.
 - (3) A unit safety council provides a forum for a risk management review of unit operations. An effective council has members that represent a cross section of the unit with all sections of the unit represented. Use this forum to invite outside agencies such as Preventive Medicine, Chaplain Services, Safety, and so forth to provide assessment of your unit programs or to give insight to available services. AR 385-95 contains safety council guidance for aviation units and provides useful guidelines for the ADSO/NCO to develop an effective ground unit safety council.
 - (4) Get involved in planning unit training and integrate safety and risk management up front. Apply the risk management process outlined in Chapter 3. Seize the many opportunities to help the commander integrate safety standards in the performance of METL tasks in the unit training management cycle. The Division Safety Office or an industrial hygienist can assist with training on topics such as personal protective equipment.
 - (5) Conduct a safety-oriented briefing for new personnel in the unit. Provide specific safety information about the unit safety program. Platoon and section sergeants are responsible for briefing newly assigned personnel on specific job-related safety issues, such as wearing hearing protection, eye protection, protective clothing / equipment, and vehicle operations.
 - (6) One of your tasks as ADSO/NCO is to support unit compliance with directives and guidelines from higher headquarters. You can request various promotional materials such as posters, handouts, checklists, videos, and safety packets from your supporting safety office. You can even contact ADSO/NCOs in other VDF units for materials that they have found effective in supporting their unit safety program. This information could help prevent accidents in specific operational areas. For this material to be effective, it must be used. As the ADSO/NCO, you play a very important role in ensuring that these tools get to the organizations and personnel who need them. If you are experiencing a particular hazard / problem, get help from your supporting safety office or the Division Safety Office.

2-3. Operational Safety

- a. ADSO/NCOs assist in preventing accidents in all areas of operations. Accidents have long been recognized for their adverse impact on operations and mission accomplishment. Protecting the force regardless of whether it is during training, peacetime, or contingency operations is critical to mission success.

- b. In any operation, safety efforts should focus on applying risk management to ensure safe mission accomplishment. The effective ADSO/NCO should:
 - (1) Get involved in planning unit operations.
 - (2) Apply risk management techniques to identify unnecessary risks and recommend adequate control measures.
 - (3) Ensure controls are executed during the operation.
 - (4) Collect information on, and report, all accidents. Higher headquarters will analyze this information to help develop strategies to prevent recurrence.
 - (5) Follow up to ensure lessons learned are implemented.
- c. A strong safety program will carry over into contingency / disaster operations.

2-4. Other sources of assistance

- a. Safety and occupational health are parallel programs with several common elements. The ADSO/NCO can request assistance from personnel within the medical section with experience in occupational health or the Division Safety Office to assist in certain aspects of the safety program. Some areas where their expertise will benefit the unit are hearing conservation, vision conservation, occupational health, industrial hygiene, and monitoring for exposure to hazardous materials and/or environmental health hazards.
- b. Additional sources of assistance are listed in Appendix E.

Chapter 3 Risk Management

3-1. Introduction

Protecting the force by managing risk is the commander's responsibility. It is the responsibility of the ADSO/NCO to advise and assist the commander in ensuring risk management is an integral part of the unit's operations and training.

- a. Risk management is the Army's principal risk reduction process for protecting the force from losses and conserving resources. The purpose of risk management is to identify hazards and risks and to take reasonable measures to reduce or eliminate them. The risk management process consists of identifying and assessing hazards, developing controls and making risk decisions, implementing controls, supervising and evaluating.
- b. Risk management allows units to operate successfully in high-risk environments. Leaders at every level have the responsibility to identify hazards, to take measures to reduce or eliminate hazards, and to accept risk only to the point that the benefits outweigh the potential losses. The risk decision can then be made at the appropriate level of leadership, in accordance with published risk acceptance authority.
- c. Risk management is not an add-on feature to the decision-making process. It is a fully integrated element of planning and executing operations. The goal of integrating the process is to make risk management a routine part of planning and executing the operational missions.
- d. Figure 3-1 describes the risk management process as it is integrated into the decision-making process; Figure 3-2 shows the risk management process it is integrated into troop-leading procedures; Figure 3-3 provides guidance on determining the kinds of hazards to risk manage; and, Figure 3-4 provides a key for determining risk level. Key risk management terms and their definitions can be found in the glossary.
- e. The Army's doctrinal manuals articulate the risk management process as its principal risk reduction tool. ATP 5-19 and ADRP 5.0 provide further information and guidance on the application of the risk management process. Sample RM worksheets are in ATP 5-19. You can find other risk management tools and information at USACRC's Web site (<https://safety.army.mil>) and in the Ground Risk Assessment Tool (<https://safety.army.mil/GRAT>). NOTE: Users must be registered through Army Knowledge Online (AKO).

3-2. Risk management steps

The Army's risk management process is applied by the commander and the staff to any mission and environment. These five steps of risk management are:

- a. *Step 1 – Identify hazards.* Identify hazards that will negatively affect personnel, equipment, and mission accomplishment. Consider all aspects of METT-T (mission, enemy, terrain and weather, troops, and time) for current and future situations. Sources of information include reconnaissance, experience of the commander and staff, brainstorming, experts, publications (i.e., SOPs and technical manuals), the unit's accident history, and scenario thinking. Hazards that cannot be eliminated by the unit or its subordinate units and are the most likely to result in loss of mission effectiveness should be risk managed. One tool to determine this is to answer the questions in Figure 3-3. Another tool is the commander's guidance. A commander may set local standards that place specific activities outside the scope of risk management with his/her personal approval, such as activities where the risk might imperil his/her intent, his/her higher commander's intent, or a critical capability of the unit. For example, a commander might require his/her personal approval before any personnel who have not completed drown-proof training can participate in maritime activities / operations.
- b. *Step 2 – Assess the hazards.* Determine the risk of potential loss based on probability and severity of the hazard. In other words, what are the chances something bad is going to occur; and, if it does, what are the consequences, using a worst-case scenario. Use historical data, intuitive analysis, your judgment and that of experienced personnel, and the matrix at Figure 3-4 to estimate the probability and severity of each hazard. The intersection of the probability column and the severity row defines the level of risk.
- c. *Step 3 – Develop controls and make risk decision.*
 - (1) *Develop controls.* For each hazard, develop one or more controls that will eliminate or reduce the risk of the hazard. Specify the who, what, where, when, and how for each control. Consider the

reason for the hazard, not just the METT-T itself. (See Figure 3-3.) One way to implement effective controls is through individual and collective training that ensures performance to standard.

- (2) *Determine residual risk.*
 - (a) For each hazard, as controls are developed, revise the assessment of the level of risk remaining (residual risk), assuming the controls for it are implemented.
 - (b) Overall risk of a mission is determined after all controls are assumed to have been implemented. If one hazard has a high residual risk, the overall risk of the mission is high, no matter how many moderate or low-risk hazards are present.
- (3) *Make risk decision.* The commander alone decides whether or not to accept the level of residual risk or to elevate the decision to a higher level of command. The determination to elevate the decision is based on the risk acceptance authority published by higher headquarters. If the commander determines the risk is too great to continue the mission or a course of action (COA), he or she will direct the development of additional controls or modify, change, or reject the COA or mission.
- d. *Step 4 – Implement controls.* State how each control will be put into effect and communicated to personnel who will make it happen.
- e. *Step 5 – Supervise and evaluate.*
 - (1) *Supervise controls.* Leaders supervise mission rehearsal and execution to ensure standards and controls are enforced. Techniques include spot checks, brief backs, and inspections.
 - (2) *Evaluate controls.* Determine the effectiveness of each control in reducing or eliminating risk. For controls that are not effective, determine why and what to do the next time the hazard is identified. For example, in the next operation, the commander and staff might change the control, develop a different control, or change how the control will be implemented or supervised. To complete the process, the commander should disseminate lessons learned.

3-3. The role of the ADSO/NCO

The ADSO/NCO plays a key role in all phases of the risk management process, advising the commander on hazards, risks, and controls associated with the mission. Additionally, the ADSO/NCO does his or her best to ensure that risk management is integrated into unit planning, processes, and procedures and assists in developing hazard identification and assessment tools tailored to the unit mission.

Risk Management Steps

Military Decision-Making Process*	Identify Hazards	Assess Hazards	Develop Controls & Make Risk Decision	Implement Controls	Supervise & Evaluate
1. Receipt of Mission	X				
2. Mission Analysis	X	X			
3. COA Development	X	X	X		
4. COA Analysis (War Game)	X	X	X		
5. COA Comparison			X		
6. COA Approval			X		
7. Orders Production			X	X	
8. Rehearsal	X	X	X	X	X
9. Execution & Assessment	X	X	X	X	X

* -- FM 101-5, 31 May 97

Figure 3-1. Risk management actions integrated into the military decision-making process.

Troop-Leading Procedures – Risk Management

Military Decision-Making Process*	Identify Hazards	Assess Hazards	Develop Controls & Make Risk Decision	Implement Controls	Supervise & Evaluate
1. Receive Mission	X				
-- Perform initial METT-T analysis	X				
2. Issue Warning Order	X				
3. Make a tentative plan	X	X			
3A. Make estimate of the situation	X	X			
3B. Detailed mission analysis	X	X			
3C. Develop situation & courses of action for:	X	X			
3C1. Enemy situation (enemy COAs)	X	X			
3C2. Terrain & weather	X	X			
3C3. Friendly situation (OCOKA)	X	X			
3C4. Course of action (friendly)	X	X			
3D. Analyze courses of action – war game	X	X			
3E. Compare courses of action			X		
3F. Make decision			X		
3G. Expand selected COA into tentative plan			X		
4. Initiate movement				X	
5. Reconnoiter				X	
6. Complete the plan				X	
7. Issue the order				X	
8. Supervise & refine the plan					X

Figure 3-2. Risk management actions integrated into the troop-leading procedures.

Q – Is hazard adequately controlled?

		Adequate	
		Yes	No
Identified METT-T Hazard	Support – Is type/capability/condition of support adequate to control the hazard? -- Personnel -- Equipment/material -- Supplies -- Services/facilities		
	Standards – Is guidance/procedure adequately clear/ practical/specific to control the hazard?		
	Training – Is training adequately thorough and recent to control the hazard?		
	Leader – Is leadership ready, willing, and able to enforce standards required to control the hazard?		
	Unit Self-Discipline – Is unit performance and conduct sufficiently self-disciplined to control the hazard?		

A – If all “yes,” no further action.
-- If one or more “no,” risk-manage this hazard.

Figure 3-3. Hazard assessment.

Risk Level E = Extremely High H = High M = Moderate L = Low	Hazard Probability				
	Severity	Frequent	Likely	Occasional	Seldom
Catastrophic	E	E	H	H	M
Critical	E	H	H	M	L
Marginal	H	M	M	L	L
Negligible	M	L	L	L	L

Hazard Probability (The likelihood that an event will occur.)

Frequent – Occurs often, continuously experienced.

Likely – Occurs several times.

Occasional – Occurs sporadically.

Seldom – Unlikely, but could occur at some time.

Unlikely – Can assume it will not occur.

Severity (The expected consequence of an event in terms of degree of injury, property damage, or other mission-impacting factors.)

Catastrophic – Death or permanent total disability, system loss, major property damage.

Critical – Permanent partial disability, temporary total disability in excess of three months, major system damage, significant property damage.

Marginal – Minor injury, lost workday accident, minor system damage, minor property damage.

Negligible – First aid or minor medical treatment, slight system impairment.

Risk Levels

E (Extremely High) – Loss of ability to accomplish mission.

H (High) – Significant degradation of mission capabilities in terms of required mission standard.

M (Moderate) – Degradation of mission capabilities in terms of required mission standards.

L (Low) – Little or no impact on accomplishment of mission.

Figure 3-4. Individual hazard risk assessment matrix

Chapter 4 Surveys

4-1. General

- a. Accidents don't just happen. Human errors, materiel failures, and environmental factors cause accidents. The result can be death, injury, damage or destruction of equipment or other property, and loss of mission capability.
- b. A critical function of the ADSO/NCO is to conduct a thorough survey of the unit's activities and facilities to identify hazards. Review the unit's accident / casualty history prior to the survey to assess the unit's safety program and overall safety climate. If a copy of the most recent safety inspection is not available, contact the support safety office for a copy and for added information on accident experience. Analyzing this information can help the ADSO/NCO decide where to direct attention during the survey.
- c. Surveys should have a positive effect on the unit. The survey results should be used to improve operations and procedures and eliminate hazards in the workplace.
- d. Commanders also have a part in the survey process. As a result of surveys, commanders can initiate safer work procedures, provide safer work areas, and instill safer attitudes in unit personnel.
- e. Improper / unsafe acts should be corrected on the spot. Turning a blind eye to a known hazard reinforces poor discipline and sets a new, lower standard.
- f. The ADSO/NCO coordinates with the higher level safety office or the Division Safety Office to ensure that periodic safety and occupational health inspections are accomplished by qualified inspectors.

4-2. Benefits of surveys

Adequately planned safety surveys will allow ADSO/NCOs to:

- a. Detect hazards that can be eliminated, mitigated, or controlled.
- b. Emphasize the need for current SOPs and other workplace controls, such as equipment safeguards and personal protective equipment.
- c. Promote the safety program by encouraging a positive, cooperative attitude.
- d. Encourage personnel to inspect their own work areas for potential safety hazards.
- e. Communicate with unit personnel and better understand the nature of the hazards they face in the workplace.

4-3. Planning and conducting surveys

- a. Inspect all areas at least annually. High-hazard areas should be inspected more frequently. Request assistance from supervisors, technical experts, and maintenance personnel during safety surveys. Your supporting safety office will also provide guidance.
- b. During surveys, be concerned with equipment and work area conditions, unsafe personnel practices, and unsafe job practices. Make recommendations to eliminate or minimize the hazard and support the successful outcome of the mission.
- c. To have a successful survey program, the ADSO/NCO must:
 - (1) *Prioritize*. Look first at areas / operations that have the highest potential for loss.
 - (2) *Schedule*. Develop a schedule of what to inspect and when, with hazardous and high-accident-occurrence areas scheduled more often. Include surveys on the training schedules.
 - (3) *Use checklists*. Use of a safety checklist is recommended for unit evaluations. Provide areas to be surveyed with the checklists you will be using. Locally developed checklists tailored to your unit are also helpful. Include references when possible.
 - (4) *Survey*. Look closely at the unit personnel, facilities, and areas.
 - (5) *Communicate*. Talk to people and ask them about safety in the workplace.
 - (6) *Keep records*. Keep good records of your surveys. Previous survey records show where improvement has been made and areas that still need improvement. A two-year unit history of accident summaries provided by your battalion or local safety office will be beneficial. Use these to prepare for the survey of your unit.
 - (7) *Correct problems*. Once the survey is completed, brief leaders on the findings. Make recommendations and assist with corrective actions, which should be implemented immediately.

- (8) *Follow up.* Follow up on corrective actions and report to the commander on a regular basis until the actions are completed. If serious hazards cannot be corrected within 30 days, report the deficiency to the supporting safety office to be recorded on DA Form 4756 (Installation Hazard Abatement Plan), or equivalent. (Reference VDFR and VDFP 385-10 regarding forms to be used.)

4-4. Survey Teams

- a. *Commander participation.* The commander should participate in the survey as an indication of personal support for the safety program.
- b. *Survey teams.* Consider using survey teams to increase personnel participation and ensure comprehensive coverage. The ADSO/NCO should determine the size and composition of the survey team after consulting with the commander.
- c. *Organizing the survey.*
 - (1) After survey team members have been selected, organize them into sub-teams and assign individual responsibilities. Ensure that team members understand the purpose of the survey.
 - (2) Brief the survey team on the organizational structure and mission of the unit and on the purpose and use of the safety checklist.
 - (3) Provide the survey team with necessary references to accomplish the survey.
 - (4) Prepare in / out-brief for the commander.
 - (5) Ensure survey results are documented and filed for future review.

Chapter 5 Accident Investigation and Reporting

5-1. General

- a. The primary purpose of investigating and reporting accidents is to identify accident causes in order to prevent similar accidents. It is part of the accident prevention process.
- b. All accidents involving personal injury or property damage must be reported promptly to the chain of command and the safety office. Persons involved in or aware of an accident will report it immediately to the chain of command.
- c. The type of accident investigation and report required depends on two things: determining whether the injury or damage constitutes a VDF accident and, if it does, the accident classification.
- d. Preventing accidents and reporting and investigating them when they occur is a chain-of-command responsibility. The ADSO/NCO is a key player in the process and may be the accident investigator for a Class C or D accident.
- e. AR 385-40 and DA Pamphlet 385-40 contain guidance and information concerning accident reporting and investigation.

5-2. The role of the ADSO/NCO in accident investigation and reporting

- a. One of the primary roles of the ADSO/NCO is ensuring that a pre-accident plan (see Appendix B) is in place, which includes emergency notification procedures, the responsibilities of all unit organizations responding to the accident, and procedures and priorities at the accident site.
- b. Once a VDF accident has occurred, the role of the ADSO/NCO is to ensure that the pre-accident plan is followed, to advise the chain of command on the classification of the accident and the type of investigation required, to assist and support the unit and/or the safety accident investigation board, and to monitor the investigation.
- c. The type of support required of the ADSO/NCO prior to and following the arrival of the safety accident investigation board is listed in the pre-accident plan at Appendix B.
- d. The ADSO/NCO may be required to personally conduct the accident investigation and complete the report for certain Class C and Class D accidents, in accordance with VDFR and VDFP 385-10 and AR 385-40 (for guidance).

5-3. Identifying VDF accidents

Generally speaking, all unplanned events that cause injury to VDF personnel or damage to VDF equipment are VDF accidents. However, some events, such as injury and damage caused by terrorist events, crimes, or suicide are not considered VDF accidents. VDF accidents may occur on- or off-duty, in privately-owned vehicles, sports, recreation, or during training or other duty. Normally, off-duty (i.e., between drill periods or not on state active duty orders) accidents will not be considered as VDF accidents, as the VDF had no control over the individual's activities. After hours, while on-orders, or at drill locations may be covered, depending upon the location and circumstances. Refer to VDFR and VDFP 385-10 for further information to determine which accidents could be considered as VDF accidents.

5-4. Classifying VDF accidents

There are four classes of VDF accidents based upon the severity of the injury or the dollar cost of property damage. The purpose of classifying the accident is to identify and implement the appropriate notification, investigation, and reporting requirements.

- a. Class A accident. A VDF accident in which the total cost of property damage is \$1,000,000 or more; a VDF aircraft (on state active duty) is destroyed, missing, or abandoned; or an injury and/or occupational illness results in a fatality or permanent total disability.
- b. Class B accident. A VDF accident in which the total cost of property damage is \$200,000 or more, but less than \$1,000,000; an injury and/or occupational illness resulting in permanent partial disability; or a single occurrence resulting in three or more personnel being hospitalized as in-patients for medical treatment.
- c. Class C accident, A VDF accident in which total cost of property damage is \$20,000 or more, but less than \$200,000; a nonfatal injury that causes any loss of time from work beyond the day or shift on

- which it occurred; or a nonfatal occupational illness that causes loss of time from work (e.g., one work day) or a disability (lost time case).
- d. Class D accident. A VDF accident in which the resulting total cost of property damage is \$2,000 or more, but less than \$20,000.

5-5. Notification procedures

- a. Chain-of-command notification will be in accordance with the applicable command regulation and publications / SOPs.
- b. The commander who first becomes aware of any Class A or B accident will notify the VDF CG and the Virginia National Guard Joint Operations Center (JOC) immediately.
- c. The commander who becomes aware of any aviation Class C accident will notify the VDF CG and the JOC immediately.
- d. No immediate notification to the VDF CG or JOC is required for Class C ground accidents or Class D accidents (unless safety-of-use or ground precautionary message information is identified). However, all classes of accidents must be investigated using AR 385-40 for guidance and in accordance with VDFR 385-10.

5-6. Determining who will conduct the safety accident investigation

Because of the varying jurisdictions that the VDF functions under, some investigations could be under federal or state OSHA, the National Transportation Safety Board or the Virginia State Police, the Virginia National Guard, or internally within the VDF. Consult VDFR and VDFP 385-10 and AR 385-40 for guidance.

5-7. Conducting safety accident investigations

Since an accident investigation occurs “after the fact,” its primary focus is on identifying what happened, why it happened, and how to prevent it from happening again.

- a. Determining what happened is often the easiest part. The investigator looks at the accident site and collects information about personnel involved in the accident and from witnesses on what caused the accident and the injuries. Accident causes can fall into three broad categories: human, materiel, and environmental factors. The causes could be a combination of any of the three.
- b. Deciding why an accident happened is often the most difficult part of the investigation. Human error accidents, the most common cause, result from one or more of the following system inadequacies. Figure 5-1 is a useful diagram for determining these inadequacies.
 - (1) *Support failure*. Equipment / facilities are either not available or inadequate. For example, the emergency generator was not properly maintained and failed when needed.
 - (2) *Standards failure*. The standard is not clear, practical, or does not exist. When this happens, the command has not provided adequate standards. For example, the SOP for the emergency generator does not specify periodic preventive maintenance and testing to ensure that the generator is ready to operate.
 - (3) *Training failure*. Training standards exist, but the individual has not been adequately trained to standard. For example, an individual has never had training on how to perform preventive maintenance and operational check on the emergency generator.
 - (4) *Leader failure*. The standard is known, but not enforced. When leaders do not enforce standards, individuals develop their own (short cuts) and the risk of an accident increases. For example, a leader sees an unqualified individual attempting to operate the emergency generator and does not take immediate corrective action.
 - (5) *Individual failure*. The standard is known, but is not followed by the individual. The individual has been properly trained and knows the correct procedures, but chooses not to follow them. For example, the individual knows that there is a requirement to be trained to perform preventive maintenance and operational checks on the emergency generator, but the individual attempts to perform the work without the training.
- e. The investigation process is not complete until recommendations are developed on how to prevent a similar accident from happening. When the causes of the accident and their systemic inadequacies have been identified, specific recommendations must be developed. To be effective, they must be targeted as the level of command most responsible for correcting the deficiency: unit-level, higher-level, or Division-level. Then a system to ensure that recommendations are implemented closes the loop.

5-8. The accident report

- a. In the case of the Army, the Army Safety Center uses accident reports to determine lessons learned, Army-wide problems, and unfavorable trends. Valid and reliable accident reports may lead to a change in equipment design, development of new standards, or modifications to existing training. For example: After reviewing accident reports prepared by ADSO/NCOs, the Army recognized that a significant number of sports injuries were happening on baseball fields. Injuries were occurring as runners slid into bases that were fixed in place. A program was established to replace fixed bases with breakaway bases. The installation of these breakaway bases significantly reduced this type of injury. Before making a decision of this kind, evidence was needed to justify such a change; this evidence was provided by accident reports filed by ADSO/NCOs. Identification of problems and implementation of corrective actions depend heavily on safety officers/NCOs. Use of the information from accident reports saves lives, saves money, and increases mission capability.
- b. The VDF accident prevention program, therefore, depends on thorough accident investigations and accurate and complete using the appropriate forms (e.g., Workman's Compensation accident report and the Serious Incident Report (SIR) package).

5-9. Release of accident reports and information.

Accident information, reports, and records may be used only for accident prevention purposes. This information should not be released to anyone for any other purpose. Requests should be referred to the Division Safety Office.

Chapter 6 Safety in Ground Operations

6-1. General

In both garrison and tactical or contingency environments depends upon compliance with established standards and the integration of risk management. Risk management assists commanders in anticipating and controlling hazards in the planning phase and in dealing with unexpected hazards as they arise in the execution phase.

6-2. Vehicle operations

Vehicle operations continue to be one of the leading accident-producing activities in the military. The most common mistakes operators make are driving too fast for conditions, abrupt/improper steering, and misjudging clearance. Inexperienced or untrained operators, lack of crew coordination, poor planning / reconnaissance, inadequate supervision, fatigue, and indiscipline are generally the contributing factors. Engaged leaders and properly trained crewmembers are key for accident prevention.

a. Considerations.

- (1) A vehicle's height, weight, center of gravity, and turning radius effects its handling characteristics. Increased height, weight, and center of gravity can make a vehicle difficult to maneuver and susceptible to rollovers. The increased height can also make a vehicle too tall to operate safely under overpasses, footbridges, and overhead power lines, which are particularly hazardous to exposed personnel. Driving too close to the shoulder or edge of the road can cause the road's surface to collapse, putting the vehicle into a roll. This risk is even greater on unimproved roads, near canals, or other bodies of water.
- (2) Doors, hatches, and ramps are also a source of pinching or crushing injuries for many individuals. Additionally, a number of individuals experience injuries when they jump, misstep, or fall while mounting and dismounting vehicles. In some cases, an individual can catch a ring on the vehicle and deglove or lose a finger.
- (3) Extreme operating temperatures, exposed wiring and electrical shorts, leaking fuel or oil sources, malfunctioning / locked brakes and riding on flat / improperly inflated tires are factors that have results in vehicle fires. Vehicle fires can quickly get out of control and cause damage to equipment and injury to personnel.

b. Potential mitigation strategies.

- (1) Leaders, senior occupants, operators and other crewmembers must be familiar with the characteristics, capabilities, and limitations of their vehicles and understand their roles and responsibilities. Model-specific training is essential.
- (2) Provide instruction on local driving customs and practices. Ensure crews are aware of flash flood dangers and what actions to take.
- (3) Establish and enforce safe speed limits of the road and environmental conditions, such as blackout, sand / dust storms, or other restricted visibility.
- (4) Ensure operators have adequate rest before conducting a mission.
- (5) Reinforce braking and downhill driving procedures with all personnel.
- (6) Deliberate planning and mission rehearsal prior to every mission is key. Route reconnaissance is especially important for missions involving heavy vehicles, poorly maintained or unimproved roads, or uncertain terrain. Take into consideration the size and weight of each vehicle, the capacity of bridges along the route, the type and width of road surfaces, the presence of low-hanging electrical wires, and canals or other bodies of water. Leaders must brief this information to all personnel prior to the mission, along with convoy safe following distances and catch-up speeds for expected road and environmental conditions. When planning, allocate sufficient time for preventive maintenance checks and services (PMCS), pre-deployment checks and inspections, and rehearsals before every mission.
- (7) Include medical support teams and recovery assets in the convoy or verify that they will be available upon request. When the contingency situation permits and a vehicle is disabled or impedes traffic, immediately have the operator turn on emergency flashers and make every effort to move the disabled vehicle off the roadway. Ensure each vehicle is equipped with a highway warning kit and that the crew knows to place the warning triangle a minimum of at least 300 feet to the rear of the disabled vehicle and remains clear of the road and the rear of the vehicle.

- (8) Ensure operators perform any special requirements covered in the respective operator's manual as required. Operators must perform a thorough PMCS before the mission begins and after operations inspection once they complete the mission to check for any possible maintenance hazard, fire ignition sources, and damage from the terrain. Ensure that proper hand held fire extinguishers are present and serviceable and that crewmembers know how to operate them.
- (9) Ensure that all prime movers and trailer brake systems are properly connected and fully mission capable.
- (10) Secure personnel and cargo. Seat belts save lives and prevent injury. Securing equipment prevents items from becoming projectiles, which can cause injuries while travelling on rough terrain or during an accident.
- (11) Establish and mark designated sleeping / rest areas away from vehicle travel routes. Do not allow operators to park vehicles where they can roll toward sleeping personnel or on an incline without chocks.

6-3. Physical training and sports

- a. The top injury-producing activities on-duty are those associated with physical training and sports. Running, basketball, and football top the list followed by confidence course-type activities. The majority of these injuries are strains, sprains, and bruises. While most accidents associated with these activities are not serious, they affect the unit's ability to accomplish their mission.
- b. To reduce these types of injuries:
 - (1) Inspect all indoor and outdoor areas where individuals conduct physical training, play sports, or execute confidence courses for hazards. Correct deficiencies or put controls in place to mitigate hazards.
 - (2) Ensure that marching and run routes are away from high-volume traffic areas, surfaces are adequate, and individuals comply with regulatory guidance such as wearing reflective gear, going against the flow of traffic, and prohibited use of head phones and cell phones.
 - (3) Adequately supervise training, and ensure rules are established, understood, and followed.

6-4. Maintenance

- a. *Maintenance-related injuries.* When it comes to maintenance-related activities, the most serious (fatal) injuries occur when individuals are pinned or crushed between or under vehicles or equipment, burned during fuel handling operations, or electrocuted while conducting maintenance operations. However, the majority of maintenance-related injuries occur when individuals:
 - (1) Slip or fall from a vehicle or other elevations.
 - (2) Pinch or crush body parts by the hood, latch, door, or ramp.
 - (3) Strike hands or fingers on moving parts in the engine compartment (e.g., fan blades, belts, and so on).
 - (4) Strike the face or eyes with debris, fluid, metal chips or other objects.
 - (5) Lose their grip on objects or use improper lifting techniques.
- b. *Minimize injuries.* To minimize these types of injuries, follow these tips:
 - (1) Ensure areas are clear of obstructions and hazards.
 - (2) Make work platforms available when possible.
 - (3) Have personnel use fall protection when working at heights above six feet.
 - (4) Remind personnel to use safety pins and devices that secure hoods, latches, doors, and ramps.
 - (5) Institute lockout / tag out procedures for hazardous machinery and equipment operations. Stress the importance of situational awareness and the need for clear and concise communication between work crewmembers.
 - (6) Conduct spot checks to ensure appropriate guards and barriers are in place.
 - (7) Make available and enforce the use of appropriate PPE to include safety goggles, face shields, and gloves while conducting maintenance tasks.
 - (8) Promote a positive safety climate through training and incentives. Conduct training that addresses work place hazards and controls. Develop metrics that measure positive, proactive safety behavior, and institute a challenging but attainable awards program.
- c. *Recovery / towing operations.* The most serious injuries occur when individuals are pinned between vehicles, struck by snapped cables or chains while standing too close, or during rollover accidents

while towing a vehicle. Individuals have also injured their backs, hands, and feet while attempting to install or remove tow bars.

- (1) Only allow trained and certified personnel to conduct recovery operations.
- (2) Never allow personnel to stand directly behind a moving vehicle or position themselves where they could be pinned or crushed.
- (3) Do not allow personnel to ride in a disabled vehicle while towing it.
- (4) Ensure anyone handling recovery cables wears heavy leather gloves and eye protection.
- (5) Remind personnel to stand clear of all cables under tension.
- (6) Remind personnel to use the buddy system when removing and installing a tow bar.
- (7) Reiterate and enforce safe towing speeds.

6-5. Fire prevention

- a. *Petroleum, oils, and lubricants storage and handling.*
 - (1) POL handlers must know and practice safety rules and procedures. Inspect often to ensure safe storage and transfer of POL products.
 - (2) Proper grounding and bonding procedures must be established and include equipment inspections. Keep in mind, hot, dry, dusty conditions contribute to generation of static electricity. When handling fuel:
 - (a) Personnel must ground themselves by touching a large metal object before handling fuel hoses and nozzles. Individual performing refueling operations must either bond the fuel nozzles to the vehicle / equipment via a cable or by touching the end of the nozzle to the filler neck.
 - (b) Portable fuel containers must be sitting on the ground when being refilled with fuel. **DO NOT REFILL FUEL CONTAINERS IN THE BACK OF A VEHICLE OR TRAILER.**
 - (c) Only allow the use of explosion-proof flashlights when checking fuel levels. Never use lighters, open flames, or unapproved flashlights. All of these have resulted in serious burn injuries and death.
 - (d) Ensure that vehicles / equipment and radios are turned off during refueling operations.
 - (e) Do not fill fuel tanks or containers to full capacity – allow for fuel expansion.
 - (3) Ensure no-smoking areas are established and enforced.
 - (4) Establish an inspection system to ensure compliance with fire prevention standards. Ensure flammable materials are stored in accordance with appropriate directives, standards, and checklists.
 - (5) Ensure that fire extinguishing systems / equipment is operational and that personnel are proficient in their use.
- b. *Field heaters and stoves.* Operators of all types of heaters and stoves must be trained and licensed (preferably in advance). Maintain and operate equipment in accordance with operating instructions, including use of proper fuel. Keep combustible materials well away from heaters and stoves and ensure fire-fighting equipment is available for each heater and stove. Do not allow refueling of heaters and stoves with self-contained fuel supplies while it is still on or still warm. Do not use heaters or stoves in tents or other confined spaces without use of proper ventilation, such as tent vent flaps, doors, or windows.
- c. *Tactical living and work areas.* The risk of fire is highest in areas with a large number of individuals in tactical or contingency living quarters. The following guidance will reduce the risk of fires:
 - (1) Establish a fire prevention and protection plan that includes procedures for inspecting and recharging fire extinguishers during tactical or contingency operations.
 - (2) Appoint a fire marshal for each tactical or contingency living / work areas and train them in their duties. Train individuals in fire prevention techniques as well as emergency procedures in the event of a fire.
 - (3) Establish safe distances between tactical or contingency living areas to reduce the risk of multiple losses from one fire.
 - (4) Provide available fire-fighting equipment (portable extinguishers, sand, water buckets, and shovels) to contain small fires. Ensure personnel are trained on their use.
 - (5) Establish procedures for sounding fire alarms.

6-6. Weather-related injuries

Consider the effects of weather during planning. Unit effectiveness is lost quickly through weather-related casualties such as hot or cold weather injuries (e.g., heat stroke, heat exhaustion, frostbite, etc.), lightning strikes, and slips / falls. Instruct personnel in awareness, prevention, and first aid for weather-related injuries and when to expect these conditions.

6-7. Water operations

Plan operations near bodies of water carefully. The risks of drowning and equipment loss is high during water operations. Use safety lines and personal floatation devices when personnel are required to be near, on, or over bodies of water.

Appendix A References

Section 1. Publications

AR 40-5, Preventive Medicine

AR 385-10 (w/Change 1), The Army Safety Program

AR 385-40, Accident Reporting and Records

AR 385-55, Prevention of Motor Vehicle Accidents

AR 385-95, Army Aviation Accident Prevention

AR 420-90, Fire and Emergency Services

AR 600-55, The Army Driver and Operator Standardization Program (Selection, Training, Testing, and Licensing)

AR 672-74, Army Accident Prevention Awards Program

DA Pam 40-501, Hearing Conservation Program

DA Pam 385-10, Army Safety Program

DA Pam 385-40, Army Accident Investigations and Reporting

FM 10-67-1, Concepts and Equipment of Petroleum Operations

FM 100-14, Risk Management

FM 101-5, Staff Organization and Operations

TB Med 81, Cold Injury

TB Med 507, Occupational and Environmental Health Prevention, Treatment and Control of Heat Injury.

TC 11-6, Grounding Techniques

TC 21-21, Water Survival Training

TC 21-305, Training Program for Wheeled Vehicle Accident Avoidance

Section 2. Forms

Serious Incident Reporting (SIR) Package

VDF Accident Investigation Report Form

Appendix B

Guide to Preparing a Pre-accident Plan

B-1. Accidents generally occur when they are least expected

Accidents generally occur when they are least expected; therefore, confusion can occur at the accident site, and valuable time and critical evidence may be lost or overlooked. The pre-accident plan is a tool to ensure that critical aspects of rescue and investigation are performed in a timely and efficient manner. This appendix is intended to assist commanders and ADSO/NCOs in establishing a pre-accident plan. It is not intended to be all-inclusive or restrictive and may be tailored to meet the requirements of the unit. However, every pre-accident plan should include the following:

- a. Responsibilities of all offices and individuals with a role to play in accident response.
- b. Procedures to ensure coordinating among all personnel with responsibilities in the pre-accident plan.
- c. Procedures to activate the pre-accident plan.
- d. Life-saving and evacuation procedures for injured personnel.
- e. Procedures for securing the accident site and rendering it free from environmental hazards.
- f. Procedures for notifying the chain of command, with current telephone numbers.
- g. Guidelines for identifying witnesses and people involved in the accident, as well as taking initial statements.
- h. Any policies and procedures regarding the timely taking of toxicology fluid samples by medical personnel.
- i. Requirements for periodic (at least annual) testing of the pre-accident plan.

B-2. The assignment of specific responsibilities is the heart of the pre-accident plan

The following list of responsibilities provides guidance for developing this plan:

- a. The operations center will activate the plan and will:
 - (1) Contact the emergency medical treatment staff / emergency medical services, fire department, and military police or civilian police for emergency life-saving efforts.
 - (2) Contact the chain of command to alert them of an accident.
 - (3) Contact appropriate staff members, including the safety office, chaplain, and public affairs office.
- b. Medical staff or emergency medical services will:
 - (1) Dispatch medical personnel to the accident site as needed via ambulance.
 - (2) Supervise removal and transportation of injured and provide emergency treatment.
 - (3) Transport injured to nearest medical facility for treatment.
 - (4) Estimate injury severity to facilitate accident classification.
- c. The fire department will:
 - (1) Respond immediately to the accident scene, as appropriate.
 - (2) Conduct rescue and fire suppression, as necessary.
 - (3) Supervise the accident area until fire, if any, is under control or until area is safe for entry by authorized personnel.
 - (4) Request additional fire-fighting equipment when necessary because of location or nature of fire.
 - (5) Provide appropriate training for personnel.
- d. The ADSO/NCO will:
 - (1) Know the requirements of the applicable safety publications.
 - (2) Review the pre-accident plan and ensure that it is tested at least once annually.
 - (3) Ensure the accident site is secure until the safety accident investigation board arrives.
 - (4) Classify the accident based upon the estimated cost of damage and the injury severity estimates.
 - (5) Keep the chain of command informed.
 - (6) Act as advisor to the safety accident investigation board and assist its members as necessary.
- e. The public affairs officer will:
 - (1) Dispatch personnel to the accident scene to handle news releases.
 - (2) Maintain liaison with local news services.
 - (3) Help investigators identify witnesses and solicit return of wreckage pieces that may have been removed without authorization.
- f. Safety accident investigation board president will:
 - (1) Notify board members of responsibilities.

- (2) Designate the assembly point for board members.
- (3) Take charge of the accident site and initiate the investigation upon arrival at the scene after rescue and fire suppression have been completed.
- (4) Conduct the investigation as prescribed in AR 385-40, DA Pam 385-40, and applicable VDF publications.

Appendix C

Suggested Unit Safety Awareness Activities

C-1. Commanders

Commanders will:

- a. Participate actively in unit safety awareness activities.
- b. Discuss unit accident experience and accident prevention measures with personnel.
- c. Discuss hazard identification, risk assessment, and other aspects of risk management as applied to hazardous training activities.
- d. Provide recognition awards, such as letters, safety promotional gifts, “atta-boys,” and so forth.
- e. Emphasize POV safety issues, such as seatbelt use and recent POV accident history.

C-2. Junior officers

Junior officers will:

- a. Conduct safety classes for subordinates.
- b. Develop unit safety programs and SOPs.
- c. Monitor and supervise safety-training activities.
- d. Review driver selection procedures and driver training programs.

C-3. Senior NCOs

Senior NCOs will:

- a. Teach risk management techniques to junior NCOs.
- b. Monitor and supervise first-line leaders during safety instruction and training.
- c. Conduct safety reviews to ensure unit safety programs are implemented.
- d. Review qualifications of personnel for assigned positions.
- e. Review convoy procedures, as appropriate.
- f. Review safety requirements for vehicle movement under tactical / contingency conditions.

C-4. First-line leaders

First-line leaders will:

- a. Conduct crew training with emphasis on safety and hot / cold weather-related injuries.
- b. Conduct safety classes on contingency mission area operations and survival.
- c. Review unit medical evacuation and first aid procedures.
- d. Discuss effects of dehydration with unit personnel.

C-5. ADSO/NCO

ADSO/NCO will:

- a. Review and update unit safety programs and publications.
- b. Conduct in-brief for new personnel.
- c. Conduct sport and recreational safety briefings.
- d. Review fire prevention programs.
- e. Conduct motor accident prevention classes.
- f. Review safety requirements for field mess operations, field sanitation conditions, and waste disposal, in cooperation with medical and environmental personnel.
- g. Coordinate specialized safety training for activities with special hazards.
- h. Arrange safety awareness contests / events.
- i. Conduct classes on pedestrian and runner safety, bicycle safety, and troop formation safety.
- j. Coordinate with medical personnel for safety-related classes on relevant subjects (e.g., hearing protection, environmental hazards, first aid, etc.).
- k. If possible, coordinate with fire department personnel to conduct fire prevention and fire extinguisher use classes.
- l. Conduct seatbelt promotion classes. Discuss requirements and benefits, show video, and display posters. Conduct spot checks in unit parking lots.
- m. Conduct environmental hazards class, focusing on severe weather, poisonous plants, and insects.

C-6. Unit personnel

Unit personnel will:

- a. Conduct surveys of bivouac areas to identify and eliminate unsafe conditions.
- b. Review ground guide requirements and hand signals.
- c. Review emergency first aid techniques.
- d. Review grounding requirements for generators, electrical equipment, radios, and aircraft (as appropriate).
- e. Review preventive maintenance checks and services (PMCS) on vehicles and ground support equipment.

Appendix D

Sources of Assistance

D-1. Supporting safety office

Safety codes, standards, regulations, and risk management; guidance on preparation of hazard abatement plan; guidance / assistance on safety survey, annual inspections,; hazard communications; advice on safety demonstrations, exhibits, or exercises; Occupational Safety and Health Administration (OSHA); guidance on accident investigation and reporting; radiation protection officer; guidance on overall unit safety program; safety awareness.

D-2. Transportation / Logistics office

Driver selection, testing, and licensing; driver training; vehicle maintenance; administration of vehicle safety check programs; transportation of hazardous materials.

D-3. Medical officer and/or sanitation, preventive medicine staff

Treatment of injuries; hygiene and first aid; prevention of hot- and cold-weather injury; hearing protection / conservation; preventive medicine and environmental health; physical qualifications of personnel.

D-4. Personnel

Assignments and transfers (selecting suitable jobs); knowledge of physical disabilities involved in job selection.

D-5. Chaplain

Moral persuasion (attitude development); suicide prevention.

D-6. Training office

Incorporation of safety in training methods and activities.

D-7. Staff judge advocate

Legal advice; release of accident data.

D-8. Public affairs office

Media control; release of accident data.

D-9. Inspector general

Extension of the commander's eyes and ears.

Appendix E

Controls for Most-Likely Hazards

E-1. Figure E-1: Controls for Most-Likely Hazards

This figure identifies most-likely hazards for common operations and recommends sample controls.

Controls for Most-Likely Hazards

Vehicle deficiencies not identified / fixed due to improper PMCS

- Report deficiencies to proper authority in a timely manner.
- Ensure proper PMCS by conducting maintenance spot checks of vehicles before dispatch / operation.

Unsafe road conditions (wheeled vehicles)

- Select and brief routes that minimize unsafe conditions for:
 - Slippery surface (wet / mud / ice / etc.)
 - Inclines
 - Curves
 - Narrow / congested passages

Excessive speed

- Brief senior occupants / drivers on speed limits for:
 - Road / trail / terrain hazards
 - Limited visibility
 - Convoy catch-up
 - Vehicle design / cargo loads
 - Bivouac areas / contingency positions.

Following too close

- Set convoy vehicle intervals based on condition of drivers, visibility, road, vehicles. Increase intervals for:
 - Fatigued drivers
 - Limited visibility (night, g=fog, rain, snow, dust)
 - Slippery / rough road
 - Vehicles heavily loaded / poor condition

Improper ground guiding

- Ground guide required when:
 - Backing up
 - Operating in limited visibility
 - Operating in congested areas (bivouac, maintenance, assembly, and contingency positions)

Unsecure / unstable load

- Ensure loads are secured IAW load plan & applicable manuals.
- Spot check vehicles with emphasis on cargo center of gravity.

Vehicle fire

- Brief / rehearse fire procedures IAW appropriate operator manuals.

Improper turning

- Yield the right of way.
- Avoid over steering.
- Perform U-turns only in authorized areas / locations.

Improper passing

- Pass other vehicles only at safe places & times considering road, visibility, & traffic conditions.
- Know the clearance space needed for both vehicle and trailer.

Unsecure hatch / ramps

- Inspect and repair unsafe condition.
- Secure with locking pin or latch devices during operation.

Seating / Placement of passengers (wheeled vehicles)

- Spot check vehicles to ensure:
 - No passengers placed in the trailer / cargo areas of vehicles carrying hazardous materials or in last vehicle of convoy.
 - Only one driver and passenger in the cab of vehicles with manual transmission.
 - Seating provides three points of contact I fixed surface inside vehicle / sideboards.

Hot / Cold-weather injuries

- Teach personnel how to recognize the symptoms of hot / cold-weather injuries.
- Identify individuals not acclimated or who have had previous heat / cold injuries.
 - Report these individuals to the chain of command,
 - Assign appropriate duties.
 - Watch closely for symptoms
- Enforce work / rest / hydration schedules.
- Adjust work load during temperature extremes (over 80°F, under 32°F).

E-2. Figure E-2: Individual Risk-Readiness Evaluation Worksheet

This figure provides a worksheet to assist in evaluating each individual’s risk-readiness for the mission.

Are you / your personnel ready to perform duties?		Y	N
Qualification:	License		
	Leader / NCO Certification		
	First Aid / Combat Lifesaver		
Training	Drivers training		
	Adverse weather / terrain		
	Safe speed for conditions		
	Convoy procedures		
	Vehicle capability		
	PMCS (before, during, and after)		
	Ground guide procedures (signal, distance, etc.)		
	Materiel handling		
	Lifting, carrying, balance, footing, etc.		
	Loading & securing (vehicles / trailers)		
	Equipment		
	Personnel		
	Night operations		
	METL, collective and individual task		
	Avoidance of poisonous plants		
	Avoidance of wild animals, snakes, insects, etc.		
	Accidents / unsafe-act reporting / correction procedures		
	Hot/Cold-weather injury prevention		
	Actions during adverse weather (lightning, etc.)		
	Terrain walk (time permitting)		
Experience	Newly assigned personnel		
	Current		
	Proficient		
Physical / decision-making ability	Well rested and alert (example: In last 24 hours, less than 15 hours continuous duty and more than 5 hours sleep)		

Figure E-2. Individual Risk-Readiness Evaluation Worksheet

Equipment (Personal protective and operational)	Personal		
	Seatbelts (when available)		
	Goggles and scarf (dust, mud, snow, rain, etc.)		
	Hearing protection		
	Tailgate / ramp safety (safety strap, if applicable)		
	Canvas bows		
	Insect repellent and stinger kits		
Clothing	Appropriate gear (seasonal)		
	Inventory		

Figure E-2. Individual Risk-Readiness Evaluation Worksheet – Continued

Glossary

Section 1 Abbreviations

AAR – After action review

ADSO – Additional Duty Safety Officer (or NCO)

AR – Army Regulation

ARNG – Army National Guard

BAC – Blood alcohol content

CG – Commanding General

COA – Course of action

DA Pam – Department of the Army Pamphlet

DoD – Department of Defense

DTG – Date time group

ECOD – Estimated cost of damage

FM – Field Manual

FTX – Field training exercise

HAZCOM – Hazard communications

MDMP – Military decision-making process

METL – Mission essential task list

METT-T – Mission, enemy, terrain and weather, troops and time

MSN – Mission

NCO – Noncommissioned Officer

OPORD – Operations order

OSHA – Occupational Safety and Health Administration

PMCS – Preventive maintenance, checks, and services

POC – Point of Contact

POL – Petroleum, oils, and lubricants

POV – Privately Owned Vehicle

RM – Risk management

SOP – Standing Operating Procedure or Standard Operating Procedure

TB – Technical bulletin

TC – Training circular

TOE – Table of organization and equipment

VDF – Virginia Defense Force

Section 2 Terms

Accident risk – All operational risk considerations other than tactical risk, including activities associated with hazards concerning friendly personnel, equipment readiness, and environmental conditions.

Controls – Actions taken to eliminate or reduce the risk of, hazards.

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

Hazard – Actual or potential condition that can cause injury, illness, or death of personnel; damage to, or loss of, equipment, property, or mission degradation.

Probability – The likelihood that an event will occur.

Residual risk – The level of risk remaining after controls have been selected for hazards. (Controls are identified and selected until residual risk is at an acceptable level or until it cannot be practically reduced further.)

Risk – Chance of hazard or bad consequences. The probability of exposure to injury or loss from a hazard. Risk level is expressed in terms of hazard probability and severity.

Risk decision – The decision made by the commander, leader, or the responsible individual, to accept the risks associated with an action.

Risk management – The process of identifying, assessing, and controlling risks arising from operational factors and making decisions that balance risk cost with mission benefits.

Severity – The expected consequence of an event in terms of degree of injury, property damage, or other mission-impairing factors.

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.

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