

**Virginia Defense Force  
Pamphlet 385–10-10**

**Safety**  
**Virginia Defense Force**  
**Safety Program**  
**Supporting the Home Station**  
**and Industrial Base**

**Headquarters  
Virginia Defense Force  
5001 Waller Road  
Richmond, VA 23230-2915  
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**Headquarters  
Virginia Defense Force  
George Washington Division  
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## Safety

### VDF Safety Program

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

**Applicability.** This pamphlet 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.

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## **Chapter 1**

### **Safety and Occupational Health Hazard Identification and Abatement**

#### 1-1. Introduction

- a. The workplace will be free of recognized hazards that may cause serious injury or death. VDF leadership will ensure hazards are eliminated or reduced to the lowest possible risk level. This required the safety manager to work with other personnel to develop and execute safety and health programs that identify and minimize risk.
- b. Safety in the workplace is enhanced when regular (at least annually and possibly more frequent for high risk workplaces) inspections are conducted to ensure that all safety standards and procedures are being followed. This chapter provides guidance in implementing the requirements of VDFR 385-10-10. The Safety Program within each unit must be evaluated on an annual basis as part of the overall VDF effort to ensure that safety programs are targeted at the highest risk areas and that they are staying on target with stated goals and objectives. When evaluating the safety program of an organization it is necessary to involve the members of that organization in the process.

#### 1-2. Workplace inspection and safety and occupational health programs / assessments / inspections / reporting

- a. Safety programs will have controls established to ensure implementation of regulatory and statutory rules. The rules will be developed and coordinated with the units involved, the command group, legal, and other interested parties as determined by the commander. Once agreed to, the controls will be incorporated into the appropriate safety plan / program.
- b. The Division Safety Officer will determine the optimal schedule for safety program evaluations and will submit the schedule for safety evaluations to the commander for approval. The schedule will be coordinated with all involved parties prior to presenting to the commander for approval. Once the safety evaluation schedule has been established, the Safety Office will schedule personnel to support the safety evaluation process. Results of each evaluation will be provided to the unit being audited for comment prior to being presented to the commander.
- c. The first line of safety consists of the inspections performed by the supervisor. The supervisor has the responsibility of ensuring the workplace is free of known hazards and that procedures are being followed by workers. The supervisor's inspections tend to be less formal, with corrective actions taken immediately. When corrective action requires resources greater than the supervisor has immediately available, a work order (or similar document) should be prepared to obtain the necessary help to fix a problem. Workers also have a responsibility to report unsafe or unhealthy working conditions that they may uncover in their day-to-day activities. The OSHA web site ([www.osha.gov](http://www.osha.gov)) has "Tools for a Safety and Health Program Assessment." This web site provides guidance that the safety manager or supervisor may use for their internal inspection. Three basic areas should be checked for effectiveness, these include:

- (1) Documentation activity.
  - (2) Employee knowledge (ensure workers are knowledgeable of safety and health programs through direct interviews of personnel).
  - (3) Site review for hazards (material safety data sheets / safety data sheets, emergency phone numbers, SOPs, etc.).
- d. The safety manager will perform internal assessments and inspect various aspects of the program throughout the year, using approved metrics to evaluate the status of program implementation within the organization. Each facility's program will be assessed on a regular and continuing basis. Note: If required, the remarks section will be used to expand on corrective action status. Information may include details on progress in developing the corrective action, reason for delays (both in developing and implementing), and actions that are being taken to expedite development and implementation of the corrective action. Additionally, information on how well the program is working to ensure the quality and effectiveness of the local safety and occupational health program will be assessed.
- e. For a one or two person safety office, these procedures should be tailored to reflect the size of the program.
- f. The safety and occupational health inspection will apply accepted analysis and data gathering techniques to ensure unbiased and accurate information.
- (1) Inspectors will gather data from a variety of sources. DA Pamphlet 385-10, Appendix D may be used for guidance for these procedures.
  - (2) In addition to the procedures listed above, other information and data may be collected as determined by the individual(s) performing the safety and occupational health inspections.
  - (3) Each source of data will be correlated and compared with others to obtain the most accurate possible assessment. Not all aspects of a safety and occupational health program will have as many potential ways of obtaining data. Data collection must be tailored to each program element.
  - (4) During the inspection process, the inspecting personnel will review the written and approved safety and occupational health plan. The inspector(s) will also discuss the plan with the unit safety manager to gain a full understanding of the plan and the reasoning behind the approach set forth in the plan. When possible, the unit commander will be interviewed to obtain his / her insight and intent for the safety and occupational health plan for their facility / unit.
  - (5) During the analysis process, historical data will be used as well as data collected by the inspector(s). Whenever possible, previous year(s) data will be evaluated and analyzed in context with the current year to determine if a trend is present. Care should be taken to ensure that the data from each year are compatible (i.e., same definition of each data element, collected the same way, etc.).
  - (6) The results of the safety and occupational health inspection and assessment will be documented in a report. The results of the inspection report will be a standalone document that addresses:
    - (a) Purpose of the inspection.
    - (b) The data collection process / procedures used.
    - (c) Analysis techniques applied.
    - (d) Findings from the inspection and analysis.

- (7) The report will be provided to the unit commander and additional duty safety personnel for the facility being inspected for review and comment prior to being published.
- g. The Commonwealth of Virginia Department of Labor and Industry may conduct inspections at any time. Any deficiencies found during these inspections will be corrected as soon as possible (immediately if possible). Actions will be tracked and reported to the commander until satisfactorily completed.

### 1-3. Standards

- a. Occupational safety and health inspections will be conducted to evaluate how well safety and health standards are being implemented and maintained. Standards have been established by OSHA to ensure that personnel are provided a safety and healthy environment in which to work. The standards that have been established are generic to apply to different types of work environments, such as offices, storage, etc. Since the standards are generic in nature, they must be adapted to the specifics of each workplace. The Safety Office will take the lead in ensuring that standards have been developed and published as necessary for each workplace.
- b. Inspection procedures will be developed that ensure a fair and unambiguous inspection that determines how effectively safety and health standards are being followed. The procedures will allow for tailoring of the inspection process to the mission, size and complexity of the workplace being inspected.
- c. Each type of workplace to be inspected has specific safety requirements that must be met.
- d. Other work sites, such as offices require safe operating conditions as well. Factors such as adequate lighting, noise levels, furniture that is ergonomically sound, etc. are considerations for office safety.
- e. Each inspection will be planned with guidelines developed to lead inspectors through the process. The guidelines will address major areas of safety. They are used to focus the attention of the inspector(s) on critical areas where historical data identifies higher risk. The inspector(s) will systematically examine the work area(s), making note of deficiencies and their potential harm. Inspectors will use the appropriate PPE required for access to the work area. Area inspection guidelines will ensure:
  - (1) The policy for operation focuses on safe and healthful operations.
  - (2) The definitive goals for safety and health have been established.
  - (3) Commanders and supervisors are dedicated to safety.
  - (4) All personnel are accountable for safe operations.
  - (5) The hazard analysis has been performed and been regularly updated.
  - (6) The personnel identify any hazards and they are acted upon in a timely basis.
  - (7) The personnel are trained in safety and proper procedures to follow in event of an incident. Records are maintained to document personnel safety training.
  - (8) All accidents and near accidents are investigated promptly and thoroughly.
  - (9) All accidents are reviewed to determine if any patterns or trends are evident.
  - (10) The preventive maintenance was performed to maintain equipment in a safe operating condition.
  - (11) An emergency plan has been prepared for potential emergencies and personnel have been briefed on what they are to do in the event of an emergency.

- (12) The assigned personnel know about hazards at the work site and understand what they may be exposed to and how to react if exposed to particular hazards.
- (13) The Commanders and supervisors understand their responsibilities to ensure a safe and healthful work environment.
- f. This list is extracted from the OSHA web site and should be expanded or tailored as necessary to meet the unique requirements of each inspection.
- g. The inspector(s) will prepare a report of the findings. This report will describe conditions of the workplace, both positive and negative.
  - (1) Negative safety findings will be completely defined, the possible consequences of each delineated, and any corrective actions described (if not available, the report will establish responsible parties for developing the corrective action and the date each action must be available).
  - (2) The corrective action will include short-term and long-term actions when necessary. Findings of critical safety deficiencies, for example, possible serious injury or death or destruction of property will be directly communicated to the commander, the unit / facility safety officer (if not one of the inspectors), and the supervisor of the work site with the recommendation that work cease until critical deficiencies have been corrected.

#### 1-4. Abatement plan / tracking corrective actions

The report from the inspector(s) will be used as input to a database that will track deficiencies and the corrective action(s) associated with each deficiency. An analysis of all hazards will be made to determine the degree of risk using VDF approved risk management techniques. The procedures below will be followed in analyses of safety hazards. Each hazard will be assigned a priority for correction that is based on the criticality of the system.

- a. Hazards will be assessed (terms of hazard severity and accident probability) and assigned a risk assessment code (RAC). Cost of correction, future intended use of the facility, and availability of desirable alternative methods of control will be considered. Coordination will be effected between the facility manager and the safety and occupational health personnel to ensure that hazards identified by those organizations are entered into appropriate abatement plans.
- b. Hazards should be eliminated on a worst-first basis. An abatement plan must be prepared for each RAC 1 or 2 hazard whose correction will exceed 30 days. Individual deficiencies of an identical character may be grouped together into a single abatement plan or into an associated abatement project. The plans will be kept current by adding new projects and by placing completed project in a completed project section of the abatement plan. The command element involved will approve abatement plans.
- c. Procedures such as spot checking or sampling will be used to ensure that interim control measures are being implemented.
- d. Copies of abatement plans will be posted.
- e. Violations that are the responsibility of an outside agency will be brought to the attention of the responsible official for action.
- f. VDF Headquarters representatives will review facility abatement plans at least annually to ensure adequate resource allocation and ensure nonresource-intensive

- corrective actions are accomplished. These plans may also be subject to review by OSHA and/or the Commonwealth of Virginia Department of Labor and Industry.
- g. A database will be established that will be used to track the inspector(s) findings and corrective action status from the abatement plan. At a minimum, the database will include the following data elements:
    - (1) Finding number (or other identification method).
    - (2) Priority of finding.
    - (3) Risk level.
    - (4) Description of finding.
    - (5) Risk consequence.
    - (6) Person(s) responsible for correction action(s).
    - (7) Corrective action description.
    - (8) Corrective action status.
    - (9) Remarks. (Note: If required, the Remarks section will be used to expand on corrective action status.)
    - (10) Date of last update briefing to commander (when corrective action has been implemented and briefed to the commander, this block will be closed).
  - h. The status of abatement plan / corrective actions will be informed to the commander upon completion of the inspection and on a regular basis thereafter until all high priority corrective actions have been implemented. Lesser priority corrective actions implementation progress will be reported as directed by the commander, through periodic briefings or written reports.
  - i. The commander has the responsibility of ensuring that corrective actions are implemented in a timely fashion to reduce risk from hazards identified during the inspection.
  - j. Hazard abatement funding will follow these procedures:
    - (1) Operating plans and budgets will include appropriate planning, programming, and resources to correct RAC 1 and 2 hazards from the abatement plan according to abatement priority numbers and any supplemental Department of Military Affairs program guidance. For VDF managed properties, when abatement project require construction funds or exceeds local funding ceilings, the local commander will submit appropriate funding requests through command channels.
    - (2) Funding will be accomplished generally from local operations and maintenance funds.

#### 1-5. Occupational Safety and Health Administration (OSHA) / Department of Labor and Industry (DoLI) inspections

- a. OSHA / DoLI representatives will be admitted to conduct inspections at selected workplaces in a reasonable manner without delay during normal operating hours.
- b. OSHA / DoLI representatives will initially report to the facility commander or designated representative and will be accompanied at all times on the VDF facility. A closing conference with the VDF facility or activity commander or designee will be arranged before the OSHA / DoLI inspector's departure.
- c. OSHA / DoLI representatives will, upon request, be provided available safety and health information on worksites to be visited. Such information may include data on



- hazardous materials in use, copies of recent inspections / survey reports, accident reports, and abatement project information.
- d. When OSHA / DoLI representatives issue an OSHA-2H Form (Notice of Unsafe and/or Unhealthful Working Conditions), local officials should treat such notices in the same manner as similar internal notices and provide for abatement of significant deficiencies. Facilities that receive an OSHA-2H will immediately transmit copies through command channels to the VDF Division Commander, with a copy to the Division Safety Officer. The OSHA-2H will assist in developing appropriate VDF policy in the safety and occupational health program.
  - e. Response to OSHA / DoLI inspection reports will originate at the local level. Elevation of unresolved conflicts to higher echelons for interagency resolution will be at OSHA's / DoLI's initiative via their channels. This provision, however, will not inhibit normal internal communication with command channels to appraise higher command of the results of OSHA / DoLI inspections and to coordinate responses to OSHA / DoLI.

## **Chapter 2**

### **Standing Operating Procedures (SOP) for Hazardous Operations**

#### 2-1. Introduction

- a. Every effort is taken to eliminate, control, or reduce hazards and associated risks through other methods of the correction precedence. However, far too often reliance must be placed on adopting procedures as a control method. Therefore, it is important that a method be established to ensure tasks are executed in an efficient, effective, and safe manner.
- b. SOPs are written procedures that must be followed when performing a task. An SOP is required when tasks are complex or involve hazardous materials. A correctly developed SOP leads to work that is performed satisfactorily and efficiently, with minimal risk, and the highest possible levels of safety. An SOP should be designed to provide safety, security, and environmental protection.

#### 2-2. Purpose

This chapter establishes a requirement for SOPs and describes a method for ensuring that hazardous operations are performed in an efficient, effective, and safe manner based on collective experience and knowledge. Agreement by the SOP developers will be based on their assessment of the safest and most logical way to perform a given task.

#### 2-3. Applicability

This section of the pamphlet applies to all VDF hazardous operations involved in execution of missions and processes except for administrative tasks. Written standards (i.e., work plans, internal operating plans, operating manuals, work instructions, etc.) may be substituted when they provide the necessary level of detail to execute the task in an efficient, effective, and safe manner.

#### 2-4. Standing operating procedure requirements

A well-written SOP provides detailed procedures. The net result of following an SOP is a product or service that is consistent in quality and that is the same as other items produced in the same manner. The SOP has to meet certain criteria to be acceptable. These criteria include:

- a. The steps must be in a logical sequence. Work space and equipment being used must be available for the work process. The SOP should include initial steps that are required for obtaining the necessary equipment, or verifying that it is present and operational.
- b. The safety procedures have to protect the worker and the environment throughout the process.
- c. Risks must be identified and the appropriate steps required to mitigate the risks included and explained.
- d. The process set forth in the SOP should be the most efficient possible that results in a useful outcome / product.

## 2-5. Standard operating procedure developers

The first step in the SOP development will be to assemble a team of personnel with experience and expertise in the operation being documented to conduct the hazard assessment and develop the SOP. SOPs must conform to any applicable OSHA and/or environmental standards.

## 2-6. Writing the standard operating procedure

When writing an SOP, the author must take into account the work environment, the supplies needed to perform the task, safety equipment and clothing, and type of hazard. The SOP should meet the guidelines set forth in paragraph 2-4. An SOP requires the talents of several people. The writer must work with knowledgeable people from safety, environmental, quality assurance, etc.

- a. The first step in writing the SOP is to observe the worker demonstrating how the task is to be performed. Since this discussion concerns hazardous conditions / materials, the worker will walk through the steps without actually performing the task and not using any hazardous materials during the walkthrough. The worker performing the task must be knowledgeable or what is required. The worker's supervisor should be part of the walkthrough to ensure that no steps are overlooked.
- b. During the walkthrough the safety person will observe and make note of any hazards that may occur during the task.
  - (1) The hazard assessment of the task will be documented as part of the SOP. Countermeasures to eliminate or control the hazards should be developed based on the correction precedence.
  - (2) Included in control and/or elimination of hazards will be the need for specific PPE and other protective equipment. The effects of these items will be determined, as well as any changes in the level of risk.
- c. A description of each step in the task should be broken down into the smallest sub-steps required to clearly and completely define the flow of the task. Procedures will fill the following criteria:
  - (1) Procedure successfully directs the users to accomplish its objective.
  - (2) Procedures are usable.
  - (3) Procedures are accurate.
  - (4) Procedures are written in accordance with appropriate standards and regulations.
  - (5) Procedures contain the appropriate level of detail and present all-important information without presenting superfluous information.
  - (6) Equipment labels and markings cited in the SOP correspond with actual hardware.
  - (7) Procedures will be written in short, simple words and sentences using a vocabulary appropriate for the task performer.
  - (8) For SOPs that address tasks in areas containing contingency planning, emergency preparedness, and security will be addressed. Procedures for promptly notifying emergency response and environmental agencies will be clearly stated in the SOP.
- d. The draft SOP will be reviewed for completeness and accuracy by subject matter experts both within and external to the performing unit / organization. Each step in the procedure should be included, along with the safety precautions and equipment (both PPE and other required at each step). Once the SOP has been through an informal "desk top" review, the final draft will be prepared.

## 2-7. Review-concurrence

- a. A process will be developed to have competent personnel with specialized knowledge (e.g., safety, environmental, logistics, etc.) review the SOP for clarity, compliance with standards and regulations, and conformity with accepted practices in their specialty area. After review and update, an operator should walk through the process with the SOP open. The SOP will be followed step-by-step in performing the task. This final verification is required before the SOP can be finalized.
- b. The cover sheet with the draft and final version of the SOP will contain the following information:
  - (1) Activity name.
  - (2) Name of process.
  - (3) Unique SOP number.
  - (4) Date of SOP.
  - (5) Name of preparer, title, and phone number.
  - (6) Signatures of individuals and their office titles responsible for reviewing and concurring with SOP (i.e., safety, environmental, logistics, etc.).
  - (7) Name and title of approving authority and date of approval.
- c. Component personnel will concur with the SOP prior to the SOP being signed by the approving authority. Once the SOP has been checked, evaluated and verified using the above procedures, it will be published and used to ensure a consistent and safe process and product.

## 2-8. Review date

Each activity will establish a method for reviewing and revising SOPs based upon the complexity and hazardous-nature of the process. The review cycle should not exceed 2 years for any SOP.

## 2-9. Supervisor statement

A method will be provided for the signatures of supervisors or person-in-charge indicating that they have read the SOP; understand operations involved in the task; have verified that the operators are trained in and understand the SOP; and that the task can be executed in a safe and efficient manner. The supervisor / person-in-charge should sign the statement when:

- a. First assigned to supervise the task.
- b. Beginning an operation that is intermittent and has not been performed for 90 days.
- c. A change is made to the SOP.
- d. At least annually when an operation is performed on a continuous basis.

## 2-10. Operator / task performer statement

A statement will be provided and provisions made for the operator to sign under the statement. The statement will attest to the fact that they have read or have had read to them and understand the SOP. The task performer will sign the statement page when:

- a. First assigned to the task.
- b. Prior to beginning an operation that is intermittent and has not been performed for 90 days.
- c. When a change is made to the SOP.
- d. At least annually during continuous operation.

2-11 Accessibility of standing operating procedures

SOPs for the task being executed will be readily available to the supervisors and operators.

2-12. Standing operating procedure index

An index will be maintained for all approved SOPs and will contain the following information:

- a. SOP number.
- b. Title of SOP.
- c. Name of office submitting SOP.
- d. Date of approval.
- e. Next review date.

2-13. Confirmation of use

Supervisors will use the SOP during training of personnel. During day-to-day operations, the supervisor will verify that SOP requirements are being followed by operator personnel.

## Chapter 3 Emergency Planning

### 3-1. Introduction

Emergency planning establishes the procedures and processes that an organization will follow when responding to an emergency. The goal of emergency planning is to protect life, health, property, and to restore normal operations as soon as possible. The emergency planning process is documented in the emergency plan. The emergency plan should address immediate response actions to protect life and property and longer-term actions to manage full recovery operations, whether the incident has only local effects or has impact on a broader, regional, or even national basis. The goal is to provide short-term relief immediately while putting into place the necessary actions to maintain or restore full operational capability.

### 3-2. Functions

During emergencies, there is often the need for action from many different responders. Personnel and equipment from police, fire units, engineering, medical, recovery, hazardous materials response teams, public affairs and other specialties may be required to respond depending on the nature of the hazard.

- a. The commander will ensure that emergency preparedness is part of the command's critical operations and will receive reports of the status of emergency preparedness and associated planning on a regular basis. One means of ensuring the effectiveness of emergency planning is to have regular exercise to test planning. At a minimum, command post exercises (CPXs) should be conducted on an annual basis, and a full operational exercise involving all elements of the plan should be conducted every three (3) years, or shortly after a major revision of the plan.
- b. The commander will ensure that there are resources available to execute the emergency plan. Resources that must be available are determined by the hazards addressed by the emergency plan, but generally will include emergency response personnel and equipment (security, medical, IMAT, etc.), support (logistics, food service, etc.), press relations / public affairs (newspaper, radio, television), and management (someone in charge).
- c. A good emergency plan will address each threat or hazard that has been determined to be a valid risk. These may include such elements as natural disaster (i.e., tornado, hurricane, flooding, etc.), accidental release of hazardous materials, accidents (i.e., aircraft crash, vehicle accident, etc.), fires, large-scale power outages, and other viable elements. The emergency plan will address each threat that has been determined to be a viable risk; appendixes may be used as necessary.
- d. The emergency plan will also address the process to be followed to return to normal operations. For minor incidents, the return to normal operations may not require major effort.
  - (1) A major incident (generally one that cannot be resolved by routine emergency response arrangements) will most likely require the implementation of special procedures to return to full operation.
  - (2) The emergency plan will provide the guidance required to establish the mechanism for recovery. For example, the loss of a building from a tornado requires an extensive effort to return to operational status that may include

requesting budget assistance from the Department of Military Affairs. Recovery from the loss of a single vehicle obviously requires a much smaller commitment of management and personnel to recover.

- (3) Emergency planning must take into consideration the surrounding civilian communities and the environment. Planning for major incidents may include coordination with civilian authorities to share resources. Volunteer organizations, such as the Salvation Army and Red Cross may also become elements of the response and recovery operation. Coordination with civilian Government organizations should be part of the emergency planning process.
- (4) Emergency planning must consider devolving to an alternate location if all operations cease, and all or most personnel are incapacitated and the affected location.

### 3-3. Elements of emergency planning

- a. Emergency planning and preparedness have as the basis of the process a need for speed and flexibility at the local operational level, the ability to provide assistance across organizational boundaries, and an ability to manage the operation to provide operational, tactical, and strategic guidance as necessary. Emergency planning is not a one-time thing. An emergency plan must be reviewed and updated regularly as new threats and hazards become known and as old ones become less of a risk. There are four parts to emergency planning.
- b. Risk assessment is the first step in emergency planning. Risk assessment begins with identifying the hazards present in the organization / command and its operational environment. Each hazard:
  - (1) Will be studied and ranked according to the risk proposed by the hazard.
  - (2) Will assess the personnel, equipment, facilities, and other infrastructure that are vulnerable.
  - (3) Will have a written hazard analysis prepared that quantifies the overall risk to the organization / command for each hazard. By quantifying the risk, emergency planning can be based on realistic threats and be made proportional to the risk.
- c. Each organization and sub-organization needs to undertake its own risk assessment to develop the appropriate response to the hazard and to more appropriately contribute to the overall emergency plan. The hazard analysis will answer the following type of questions:
  - (1) What can occur? (Identify the hazards including natural, terrorist threats, man-made.)
  - (2) How often it is likely to occur? (Profile each hazard including magnitude, duration, speed of development. and seasonal pattern.)
  - (3) What damage is it likely to cause? (Develop a command / community profile that addresses geography, property, infrastructure, demographics, and resources available.)
  - (4) How likely is it to affect the community? (Determine vulnerability using standard categories: catastrophic, critical, limited, and negligible.)
  - (5) How vulnerable the command / community is to the hazard? (Create and apply scenarios that address first warning or emergency, potential impact, potential

damage / casualties / loss of services, and actions / resources needed to respond to the emergency.)

- (6) Developing the emergency plan, including functional annexes, hazard-specific sections, and implementing instructions commences as the hazards and associated risks become known. Included as an essential part of the plan should be plans for eliminating, reducing, controlling, or mitigating the effects of each hazard. The emergency plan has to address the action(s) required in case of an incident.
- (7) Major incident plans should:
  - (a) Define the response that will be made to the incident, incorporating the rules of integrated emergency management (assess the incident, prevention actions, preparation required to respond to an incident, the response mechanism, and plans to recover from the incident).
  - (b) Incorporate the protocols for working within different functions and civilian and Government agencies (as appropriate).
  - (c) Identify technical experts in all possible area where that may be needed and the procedures for contacting and obtaining their input (technical experts include not only how to physically deal with the incident, but with crowd control / policy action, public affairs, etc.).
  - (d) Describe the process for recovery and restoration to return to full operational status.
  - (e) The plan should be compatible with commands / organizations above or below the actionable command and with the surrounding communities.
  - (f) The plan should be in compliance with all laws and federal / state regulations.
  - (g) The plan should be tested or reviewed by experts, signed by the commander, and tested on a regular basis.
- d. Continuity of operations (CONOPS) should be part of the planning process. As noted above, the emergency plan has to address the process by which the command will either remain in operational status or return to operational status as soon as possible. The emergency plan should address human resources, devolution, alternate facilities, facilities, logistics, equipment, utilities, communications, and chain of command.
  - (1) The plan should include references to all laws, regulations, executive orders, and other authorities that form the legal basis for the plan.
  - (2) Testing the emergency plan is an essential part of the planning process. It is through testing, both CPX and operational type of testing, that weaknesses are most likely to be uncovered. Area where the plan is unclear – not providing sufficient guidance and areas where the plan does not work – will surface during testing. From testing lessons learned are produced that can be used to adjust and modify the plan.
  - (3) Review and update the plan regularly to reflect changing hazards, technology, and resources. An updated emergency plan should reflect the most recent information available about every hazard in the original plan, as well as including hazards that may have entered into the picture since the plan was first drafted.

### 3-4. Coordination

- a. Emergency planning has to be a team effort. A typical emergency planning team will consist of representatives from all aspects of command, and the civilian community



- (as required). Different aspects of the plan require input from different specialty areas. Expertise may be required as the hazards are incorporated in to the emergency planning process, such as:
- (1) Police / security.
  - (2) Fire.
  - (3) Medical.
  - (4) Hazardous materials coordinator.
  - (5) Aviation.
  - (6) Safety.
  - (7) Radiation safety officer.
  - (8) Public works.
  - (9) Community affairs
  - (10) Public information office
  - (11) Environmental office.
  - (12) Legal office.
  - (13) Others (including surrounding civilian community representatives).
- b. The emergency plan has to be coordinated with all involved agencies within the command / organization. The final plan will be approved and signed by the commander.
- (1) During the coordination process every effort should be made for all members of the team to agree on terminology, mission, and commitment to rapid and full response to maintaining and validating the plan.
  - (2) The team has to agree on the command structure that will be put in place should an emergency occur. Agreement by each element of the response team to implement the plan and follow-through as required is essential and must be part of the coordination effort.
  - (3) Once the emergency plan has been approved it will be distributed to all organizations within the command involved in the emergency planning effort. The letter distributing the plan should be signed by the commander and include instructions for all elements of the command to implement the plan.

## Chapter 4 Workplace Safety Programs

### 4-1. Introduction

- a. This chapter prescribes guidelines and procedures for implementing major workplace safety programs to protect VDF personnel working in non-military unique operations.
- b. Workplace safety programs should be modified to fit local operations as determined by commanders and safety and occupational health personnel to provide maximum safety and reduction of the risk of accidental loss.

### 4-2. Hazard Communication Program

- a. Hazardous Communication (HazCom) Program is established to ensure that hazardous information on all hazardous chemicals in the workplace is transmitted to affected employers and exposed employees. Policies and procedures of this program are established in accordance with 29 CFR 1910.1200. NOTE: Beginning in 2013, HazCom is being revised to comply with the “Globally Harmonized System” (or GHS). Training is to begin in 2013, but must be in compliance by the start of 2016.
- b. Commanders, safety, logistics, training, operations, personnel offices, and supervisory personnel at all levels who share responsibility for implementation of the VDF HazCom Program should:
  - (1) Provide chemical specific training to trainers.
  - (2) Maintain health hazard inventory.
  - (3) Maintain a central master file of MSDS (Material Safety Data Sheets). (NOTE: Under GHS, these will be called Safety Data Sheets or SDS.)
  - (4) Provide copies of MSDS’ / SDS’ as needed.
  - (5) Interpret MSDS / SDS data as needed.
  - (6) Determine personnel to be trained through field surveys.
- c. Commanders will:
  - (1) Ensure a written comprehensive HazCom Program is developed, implemented, and maintained at each level of activity.
  - (2) Ensure all personnel who use or are exposed to hazardous chemicals receive VDF HazCom training.
  - (3) Ensure all personnel who use or are exposed to hazardous chemicals are trained on specific hazards of each chemical.
  - (4) Ensure supervisors maintain MSDS / SDS for each hazardous chemical that is used or stored.
  - (5) Ensure MSDS’ / SDS’ are obtained from vendor for directly purchased items.
  - (6) Ensure hazardous material inventory is maintained and updated at least quarterly in each work section.
  - (7) Ensure a copy of the updated hazardous material inventory is forwarded to the local unit safety office.
  - (8) Ensure hazardous material containers are labeled in compliance with 29 CFR 1910.1200(f).
  - (9) Ensure personnel have access to MSDS’ / SDS’.
- d. Supervisors will:

- (1) Develop, implement, and maintain a written comprehensive hazardous communication program.
- (2) Ensure all personnel who use and are exposed to hazardous chemicals receive VDF HazCom training.
- (3) Ensure all personnel who use and are exposed to hazardous chemicals are trained on specific hazards of each chemical.
- (4) Maintain MSDS / SDS for each hazardous chemical.
- (5) Obtain MSDS / SDS from vendor for directly purchased hazardous chemicals.
- (6) Maintain and update hazardous material inventory.
- (7) Label, tag, and mark hazardous material containers in compliance with 29 CFR 1910.1200(f).
- (8) Ensure personnel have access to MSDS' / SDS'.

#### 4-3. Lock-Out/Tag-Out (LOTO)

- a. The purpose of this program is to establish minimum requirements for the lock-out or tag-out (LOTO) of energy isolating devices. It will be used to ensure that the machine or equipment is isolated from all potentially hazardous energy, and locked or tagged out before personnel perform any servicing or maintenance activities when the unexpected energization, start up, or release of stored energy could cause injury. This program establishes minimum performance requirements for the control of such hazardous energy.
- b. Procedures:
  - (1) Appoint principle staff adviser and technical consultant to conduct periodic inspections to ensure each activity is in compliance with this regulation and other Federal policies governing lock-out/tag-out of machines or equipment.
  - (2) Ensure LOTO safety plans are developed, established, and implemented in each workplace as required.
  - (3) Ensure authorized personnel responsible for performing LOTO procedures are identified in activity safety plans (i.e., supervisors, line supervisors, operators, maintenance personnel).
  - (4) Ensure all machinery and equipment is listed in each section LOTO safety plan.
  - (5) Establish LOTO safety plan isolating equipment and machinery at the energy source.
  - (6) Train affected employees in the purpose and use of the LOTO procedures.
  - (7) Train authorized personnel in performing LOTO procedures.
  - (8) Ensure authorized personnel perform LOTO procedures as required.
  - (9) List all machines and equipment in the LOTO safety plan.
  - (10) Obtain required LOTO devices needed to isolate equipment and machinery in the workplace.
  - (11) Assign required LOTO devices to authorized personnel.
- c. Requirements. Appropriate LOTO devices will be affixed to energy isolating devices, and to otherwise disable machines energization, start up, or release of stored energy in order to prevent injury to personnel.
  - (1) Commanders and supervisors responsible for machinery and equipment will establish a LOTO safety plan. Procedures will be developed for each type of equipment.

- (2) Each new or transferred individual and other personnel whose work operations are (or maybe) in the area will be instructed in the purpose and use of LOTO procedures of affected personnel (operators of equipment).
  - (3) Authorized personnel (i.e., supervisors or maintenance personnel) will be trained on the LOTO procedures to isolate energy from the machinery and equipment.
  - (4) Inventory of equipment will be locked/tagged out while in unoperational condition.
  - (5) Inventory of equipment that requires LOTO procedures will be included in LOTO safety plan.
  - (6) Make a survey to locate and identify all isolating devices to be certain which switches, valves, or other energy isolating devices apply to the equipment to be locked or tagged out. More than one energy source (i.e., electrical, mechanical, or others) may be involved.
- d. Sequence of LOTO system:
- (1) Notify all affected personnel that a LOTO system is going to be utilized and the reason thereof. The authorized personnel will know the type and magnitude of energy that the machine or equipment utilizes and will understand the hazards thereof.
  - (2) If the machine or equipment is operating, shut it down by normal stopping procedures (depress stop button, open toggle switch, etc.).
  - (3) Operate the switch, valve, or other energy isolating device so that the equipment is isolated from its energy source. Stored energy (such as that in springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure, etc.) must be dissipated or restrained by methods such as repositioning, blocking, bleeding down, etc.
  - (4) Lock-out or tag-out the energy isolating devices with assigned individual locks or tags.
  - (5) After ensuring that no personnel are exposed, and as a check on having disconnected the energy sources, operate the push button or other normal operating controls to make certain the equipment will not operate. **CAUTION:** Return operating controls to “neutral” or “off” after the test.
  - (6) The equipment is now locked or tagged out.
- e. Restoring machines or equipment to normal operations:
- (1) After the servicing and/or maintenance is complete, and equipment is ready for normal operation, check the area around the machines or equipment to ensure that no one is exposed.
  - (2) After all tools have been removed from the machine or equipment, guards have been reinstalled and personnel are in the clear, remove all LOTO devices. Operate the energy isolating devices to restore energy to the machine or equipment.
- f. Procedures involving more than one person. In the preceding steps, if more than one individual is required to LOTO equipment, each will place his / her own personal lock-out or tag-out device on the energy isolating device. When an energy isolating device cannot accept multiple locks or tags, a multiple LOTO device (hasp) may be used. If lock-out is used, a single lock may be used to lock-out the machine or equipment with the key being placed in a lock-out box or cabinet which allows the use of multiple locks to secure it. Each individual will then use their own lock to

- secure the box or cabinet which allows the use of multiple locks to secure it. As each person no longer needs to maintain their lock-out protection, that person will remove their lock from the box or cabinet.
- g. Basic rules for using LOTO system procedure. All equipment will be locked out or tagged out to protect against accidental or inadvertent operation when such operation could cause injury to personnel. Do not attempt to operate any switch, valve, or other energy isolating device where it is locked or tagged out.

#### 4-4. Confined spaces.

In order to prevent injuries and possible deaths, VDF personnel **WILL NOT** be authorized to enter confined spaces.

- a. A confined space is a space that is large enough and configured for an individual to enter and perform work, has limited or restricted means to enter and perform work, has limited or restricted means for entry or exit, and is not designed for continuous employee occupancy.
- b. A permit-required confined space is a confined space that has any one of the following characteristics:
  - (1) Contains or has the potential to contain a hazardous atmosphere.
  - (2) Contains a material which has a potential for engulfing an entrant.
  - (3) Is internally configured such that an entrant could be trapped or asphyxiated.
  - (4) Contains any other recognized serious safety or health hazard.
- c. Confined spaces are, but are not limited to, boilers, cupola, degreasers, furnaces, pipelines, pits, pumping stations, septic tanks, sewage digesters, sewers, manholes, silos, storage tanks, utility vaults, vats, tunnels, cells, ducts, or similar type enclosures.

#### 4-5. Bloodborne pathogen

- a. Purpose. This regulation establishes responsibilities and procedures for the VDF Bloodborne Pathogen Exposure Control Program (BBPECP). The goal of this program is to minimize the risk of occupational exposure to Hepatitis B Virus (HBV), Human Immunodeficiency Virus (HIV), and other bloodborne pathogens (BBP) that personnel may encounter in their workplace and in accordance with 29 CFR 1910.1030.
- b. General. The BBPs are microorganisms in human blood that can cause disease in humans. Exposure to blood or certain other body fluids infected with BBP can result in transmission of the infection to another person (considering the potential lethal effects of some BBPs, it is necessary that every possible measure to prevent exposure be utilized). At this time, the greatest bloodborne risk to emergency medical personnel and other first or emergency responders is posed by HBV. Fortunately, the risk of infection can be greatly reduced through the use of appropriate workplace practices. VDF personnel do not routinely perform any medical procedures involving exposure to blood, blood products, or body fluids, except in an emergency or contingency setting.
- c. Procedure.

- (1) In the event of a potential exposure of VDF personnel to BBPs, the individual shall receive whatever first aid or emergency medical treatment as needed, and seek treatment under Virginia's Workman Compensation program.
  - (2) The individual and the individual's supervisor will ensure that the appropriate accident notification report is submitted to the VDF Safety Office as soon as possible following the incident.
  - (3) Information and training:
    - (a) Provide guidance and requirements for engineering and workplace controls in accordance with 29 CFR 1910.1030 to assigned medical personnel and others identified as normal or potential emergency first responders.
    - (b) Training of identified personnel is to be upon initial assignment and annually thereafter.
    - (c) All training must include a general discussion of bloodborne diseases and their transmission, engineering and work practices, response to emergencies involving blood, how to handle exposure incidents (including post-exposure evaluation), and signs, labels and color coding. There must be opportunity for questions and answers, and the trainer must be knowledgeable in the subject matter.
  - (4) Methods of compliance:
    - (a) Mandate universal precautions and emphasize engineering / work practice controls.
    - (b) "In general, the use of universal precautions means that all blood, body fluids, or other materials contaminated (or reasonably anticipated to be contaminated) with blood or other potentially infectious materials are treated as if known to be infectious for HIV, HBV, and other BBPs." The terms "engineering controls" and "workplace practices" refer to implementing procedures which will minimize the risk of exposure such as splashing or puncture wounds. For example, this includes the use of gloves, face masks, protective eyewear, puncture-resistant sharps containers, and the bagging of contaminated materials. This also includes the provisions of adequate hand-washing facilities and the cleaning and repair of reusable equipment.
    - (c) HazCom. Biohazard warning labels will be affixed to containers of regulated medical waste and other containers used to store or transport blood or other potentially infectious materials. Red bags or containers may be used instead of labeling.
- d. Post-exposure evaluation and follow-up:
- (1) The medical facility / physician will mandate follow-up procedures under Workman's Compensation, as the VDF does not possess a medical treatment capability beyond a first aid level at the time of this regulation. NOTE: The use of Workman's Compensation is for on-duty incidents only. Any incidents that occurred outside of VDF functions / activities is not covered by this program.
  - (2) The patient should obtain copies of medical paperwork from the treating physician and provide these copies to their primary care physician for inclusion into their medical records for documentation.
  - (3) When submitting the accident report, the patient must include any work restrictions due to the incident, if any hospitalization was involved (if so, how

many days), if unable to return to work or lost days from work (if so, how many), etc.

#### 4-6. Material handling

- a. Purpose. This paragraph establishes procedures for the safe handling of material. The goal of these responsibilities and procedures is to reduce the risk of material handling related injuries (e.g., strains, back injuries, falls, over exertions, etc.). Local material handling programs will be implemented in accordance with 29 CFR 1910.176 and this pamphlet.
- b. Procedures.
  - (1) Use of mechanical equipment. Where mechanical equipment is used, sufficient safe clearances will be allowed for aisles, at loading docks, through doorways, and wherever turns of passage must be made. Aisles and passageways will be kept clear and in good repair, with no obstruction across or in aisles that could create a hazard. Permanent aisles and passageways will be appropriately marked.
  - (2) Secure storage. Storage of material will not create a hazard. Bags, containers, bundles, etc., stored in tiers will be stacked, blocked, interlocked, and limited in height so that they are stable and secure against sliding or collapse.
  - (3) Housekeeping. Storage areas will be kept free from accumulation of materials that constitute hazards from tripping, fire, explosion, or pest harborage. Vegetation control will be exercised as needed.
  - (4) Clearance limits. Clearance signs to warn of clearance limits will be provided.
  - (5) Lifting devices. Fire protection, design, maintenance, and use of fork trucks, tractors, platform lift trucks, motorized hand trucks, and other specialized industrial trucks powered by electric motors or internal combustion engines will comply with 29 CFR 1910.178.
  - (6) Guarding. Covers and/or guardrails will be provided to protect personnel from hazards of open pits, tanks, vats, ditches, etc.

## **Appendix A References**

### Section 1. Publications

AR 385-10, Army Safety Program

AR 40-5, Preventive Medicine

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

29 CFR 1910.23, Guarding floor and wall opening and holes

29 CFR 1910.120, Hazardous Waste Operations and Emergency Response (HAZWOPER)

29 CFR 1910.146, Permit-Required Confined Spaces

29 CFR 1910.147, Control of Hazardous Energy (Lock-out/Tag-out)

29 CFR 1910.176, Handling Materials – General

29 CFR 1910.178, Powered Industrial Trucks

29 CFR 1910.1030, Bloodborne Pathogens

29 CFR 1910.1200, Hazard Communications

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

DA Pam 385-10, Army Safety Program

DA Pam 385-30, Mishap Risk Management

DA Pam 385-40, Army Accident Investigations and Reporting

FM 5-19, Composite Risk Management (CRM)

### Section 2. Forms

OSHA-2H Form, Notices of Unsafe and/or Unhealthful Working Conditions

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

**Appendix C****Standard VDF Safety and Occupational Health Inspections Mandatory Procedures**

Facility level inspections will use the following procedures and processes:

**C-1. Standard VDF Safety and Occupational Health Inspections**

- a. All workplaces will be inspected at least biannually using standard VDF Safety and Occupational Health Inspection procedures.
- b. Facilities and operations involving special hazards will be inspected more frequently as determined by qualified Safety personnel.

**C-2. Standard VDF Safety and Occupational Health Inspections for all work sites**

- a. Unless specifically exempted in this paragraph, Standard VDF Safety and Occupational Health Inspections for all work sites will be conducted by qualified Safety personnel, as defined in Section II of the Glossary.
- b. Safety and Occupational Health Inspections for work sites meeting the following criteria may be performed by trained, qualified and appointed additional or collateral duty safety personnel. If there is a dispute over interpretation of safety and health standards, hazards, or risk severity and probability, a qualified safety professional, as defined in Section II of the Glossary, will make the final determination on the disputed issue. Current reference materials pertinent to the work site, such as standards, regulations, SOPs, hazard analyses / job hazard analysis (JHA), risk assessments, MSDS / SDS, TMs, FMs, and/or operator's manuals, will be readily available.
- c. Criteria for work sites where Safety and Occupational Health Inspections can be conducted by additional / collateral duty safety personnel:
  - (1) Low risk operations as determined by a written hazard assessment specified in subparagraph c(3), below.
  - (2) Lost time job-related injury rate of no more than 10 per 1,000 personnel averaged for the last 3 years.
  - (3) Written hazard assessment (Ref. 29 CFR 1910.132) for current operations on file at the work site, conducted by qualified Safety personnel as defined in Section II of the Glossary.
- d. Qualifications for additional or collateral duty safety personnel conducting Safety and Occupational Health Inspections include:
  - (1) Appointment and validation by the activity commander that personnel can accomplish tasks required in 29 CFR 1960.57 and outlined below.
  - (2) Recognize hazards.
  - (3) Assess risks including the requirement and procedures to contact Safety professionals when risks are assessed as medium or higher.
  - (4) Advise on abatement options, complete abatement documentation and follow-up on corrective actions.
  - (5) Use OSHA Standards and VDF requirements appropriate to the work site(s).
  - (6) Use equipment necessary to conduct a thorough inspection.
  - (7) Complete supervisor and/or employee training as required by 29 CFR 1960.55 and 29 CFR 1960.59.
  - (8) Conduct at least one inspection accompanied by qualified Safety personnel as

defined in Section II of the Glossary.

### C-3. Additional or collateral duty

Additional or collateral duty personnel should conduct their inspections on a semi-annual basis, and a qualified Safety person, as defined in Section II of the Glossary, should accompany them on at least one inspection every two years in order to assure quality inspections are being conducted.

### C-4. Standard VDF Safety and Occupational Health Inspection standards

Inspections may be conducted with or without prior notice. No-notice inspections will be used when local safety and health personnel determine that they will provide a significantly more meaningful assessment of actual operating conditions and practices.

- a. A representative of the official in charge of a workplace will be given the opportunity to accompany the inspector during physical inspection of workplaces. Facility and activity commanders, or their designated representative, may deny the right of accompaniment to any person who, in their judgment, will interfere with the inspection.
- b. The inspector performing the inspection will consult a sampling of personnel on matters affecting their safety and health and offer them the opportunity to identify, confidentially, unsafe or unhealthful working conditions in the work areas.
- c. When an “imminent danger” situation is discovered, the immediate supervisor and activity head will be notified as soon as possible.
  - (1) The inspector will provide technical advice to the supervisor on the scene, who will correct the condition or cease operation and withdraw personnel from exposure.
  - (2) If the inspector finds that the hazard cannot be immediately eliminated, he or she will notify the Division Safety Office. If this official finds that corrective action is inadequate, he or she will secure approval of the commander or an authorized representative of the commander for measures to be taken to prevent personnel exposure to the hazard.
  - (3) Imminent danger hazards from which personnel have been withdrawn from as an interim measure will be identified on the forms described in subparagraph i, below.
  - (4) Commanders may authorize specific safety personnel to temporarily halt operations when imminent danger situations are found.
- d. Upon completion of a formal inspection, a closing conference will be held with the commander or their designated representative, and a notice of unsafe or unhealthful working conditions will be discussed for each RAC 1, 2, or 3 hazard that was not corrected immediately.
- e. Written reports of violations resulting from Standard VDF Safety and Occupational Health Inspections will be provided to the head of the activity or the commander of the unit inspected. These reports will cite hazards and safety management deficiencies and will recommend corrective actions. DA Form 4753 (Notice of Unsafe or Unhealthful Working Conditions) or its equivalent may be used for this purpose (see Appendix E for a sample form). RAC 1 and 2 violations that cannot be corrected within 30 calendar days of discovery will be recorded and maintained at the facility

- on DA Form 4756 (Installation Hazard Abatement Plan) or its equivalent (see Appendix G for a sample form and instructions). Written reports of inspections will be retained for 5 years, unless specific regulations require longer retention times, after the deficiencies have been corrected. Automatic data processing systems may be used to facilitate the recording and documentation of inspections and abatement plans, provided that the requirements of this regulation are met.
- f. Notices of violations for RAC 1 and 2 hazards detected during a Standard VDF Safety and Occupational Health Inspection will be recorded on DA Form 4753 or equivalent. Copies of each notice of unsafe or unhealthful conditions will be given to the appropriate official in charge of the workplace. Notices will be posted by the official in charge of the workplace where the condition was discovered. Where it is not practical to post the notice at or near the hazard, it will be posted in a prominent place where it will be readily observable by all affected personnel. Delivery and posting will take place within 15 calendar days of detection for safety violations and 30 calendar days for health violations. The notices will remain posted for 3 working days or until correction, whichever is later. All posted notices will describe the nature and severity of the violation, the substance of the abatement plan, and interim protective measures.
  - g. All violations of standards detected during a Standard VDF Safety and Occupational Health Inspection will be entered on DA Form 4754 (Violation Inventory Log) or equivalent (see Appendix F for a sample form). This log will be used to monitor compliance. It will show all violations in order of discovery and prescribe an abatement date and the date for follow-up on correction of the deficiencies.
  - h. Procedures will be established to follow-up on the correction of deficiencies identified during an inspection. If corrective action has not been accomplished or it is discovered that interim safety measures are not being enforced, the inspector will inform the facility or activity commander if appropriate. For all uncorrected violations, entries on DA Form 4756 (or equivalent) will reflect the revised corrective action schedule and appropriate remarks.

**Appendix D  
Notice of Unsafe or Unhealthful Working Conditions**

D-1. Sample of DA Form 4753.

<p><b>NOTICE NO. <u>07-101</u> OF</b></p> <p><b>UNSAFE OR UNHEALTHFUL</b></p> <p><b>WORKING CONDITION</b></p> <p><b>(DO NOT REMOVE NOTICE UNTIL CONDITION IS ABATED)</b></p> <p style="font-size: small; margin-top: 20px;">For use of this form, see DA PAM 385-10; the proponent agency is OCSA.</p>	
<p>1. UNIT INSTALLATION USADTC School Brigade Technical Services Library</p>	<p>3. DATE OF INSPECTION 30-31 Oct 2007</p>
<p>2. OFFICIAL IN CHARGE OF WORKPLACE J. Lang</p>	<p>4. STANDARD VIOLATED 29 CFR 1910.1001(c)</p>
<p>5. LOCATION OF VIOLATION Main Library room, particularly NE and NW corner desks</p>	
<p>6. DESCRIPTION OF UNSAFE OR UNHEALTHFUL CONDITION Air sampling by Industrial Hygiene Associate Inc. indicates that the personnel in this area are exposed to respirable asbestos fibers well in excess of permissible levels. Exposure is intermittent, apparently caused by the effect of physical disturbances of the ceiling material by air conditional vibration and air flow.</p>	
<p>7. RECOMMENDED ABATEMENT PROCEDURES</p> <p>a. Interim Remove employees from the area. Clean-up employees will be selected, trained, and equipped in accordance with applicable regulations. All materials removed to temporary library will be thoroughly cleaned by capable contractor.</p> <hr/> <p>b. Final: Abatement should be completed by Airborne exposure will be eliminated by removal or encapsulation of asbestos-containing installation. Air will be sampled and shown to be within allowable limits before routine reoccupancy.</p>	
<p>8. ADDITIONAL INFORMATION CONCERNING THIS VIOLATION CAN BE OBTAINED FROM Safety or Occupational Health Services</p>	
<p style="text-align: right;">TELEPHONE NO. <u>X2345/9876</u></p>	

D-2. Instructions for completion of DA Form 4753.

- a. Block 1. Enter name of unit and facility on which hazard was found.
- b. Block 2. Enter name of workplace supervisor.
- c. Block 3. Enter date of the inspection.
- d. Block 4. Enter specific reference to the standard violated.
- e. Block 5. Enter exact location of the violation.
- f. Block 6. Describe hazardous condition found in terms of physical standards and the Risk Assessment Code (RAC).
- g. Block 7. Describe interim safety measures supervisory personnel and personnel should maintain until the hazard is abated to an acceptable level.
- h. Block 8. Enter name of facility safety manager and the office phone number.

D-3. Corrective Action

When representatives issue notice of unsafe or unhealthful conditions, local officials should treat such notices in the same manner as similar internal notices and provide for abatement of significant deficiencies.

**Appendix E  
Violation Inventory Log**

E-1. Example of DA Form 4754

VIOLATION INVENTORY LOG								
For use of this form, see DA PAM 385-10; the proponent agency is OCSA.								
LOG OF SCHEDULE OF CORRECTIVE ACTION-COMPLIANCE WITH SAFETY AND HEALTH STANDARDS								
NAME OF INSTALLATION U.S. Army Driver Training Center, Fort James, AR (School Bde Tech Service Library)								
ITEM	LOCATION OF INCONSISTENCY <sup>1/</sup>	OSHA REFERENCE		INCONSISTENCY	CORRECTIVE ACTION	TARGET DATE FOR CORRECTIVE ACTION <sup>3/</sup>	DEGREE OF DANGER <sup>3/</sup>	ESTIMATED COST
		TITLE/PART	SUB-PART <sup>2/</sup>					
a	b	c	d	e	f	g	h	
1	Main Room (stacks) NE & NW corners and throughout.	29 CFR 1910.1001  TB MED 513	(c)	Personnel are exposed to asbestos concentration several times higher than standards.	Remove or encapsulate asbestos in accordance with engineering study. Clean contaminated surfaces and material to levels below cited references. Withdraw personnel during interim.	Interim: accomplished Final: 26 May	LA(I)	

NOTES: <sup>1/</sup> Such as "Carpenter Shop and/or Building Number." <sup>2/</sup> Include paragraph number in another code if further referenced. <sup>3/</sup> Use Roman numerals (Category I - Imminent danger, Category II - Serious hazard, Category III - Moderate hazard, Category IV - De minimus hazard)

## Appendix F Alleged Unsafe or Unhealthful Working Conditions

### F-1. Example of DA Form 4755

<b>EMPLOYEE REPORT OF ALLEGED UNSAFE OR UNHEALTHFUL WORKING CONDITIONS</b> <small>For use of this form, see DA PAM 385-10; the proponent agency is OCSA.</small>		
<i>This form is provided for the assistance of any complainant and is not intended to constitute the exclusive means by which a complaint may be registered with the local Safety Office (Ref OSHA Poster on rights of employees and their representatives).</i>		
The undersigned (check one) <input checked="" type="checkbox"/> Employee <input type="checkbox"/> Representative of employees <input type="checkbox"/> Other (Specify) _____		
believes that a job safety or health hazard exists at the following place of employment: Technical Services Library (Main Room), Bldg. 6001, School Brigade		
Does this hazard(s) immediately threaten serious physical harm? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If "yes" checked, immediately contact your supervisor or safety representative		
Name of official in charge	Mrs. J. Lang	Telephone x2345
Operation/Activity <u>Library</u>		
Exact location of worksite The whole main room, especially near the air condition vents.		
1. Kind of operation Shelving and signing out publications, helping patrons.		
2. Describe briefly the hazard which exists there including the appropriate number of employees exposed to or threatened by such hazard White powder blows down from the ceiling when the air condition runs. Sometimes it gets all over the desks. A lot of people say it might be asbestos, but no one will check and tell us for sure. Only 4 of us work in the room, but a lot of patrons come through.		
3. List by number and/or name the particular occupational safety and health standard (s) which may have been violated, if known I don't know, but I know it's against the law.		
4. (a) To your knowledge, has this hazard been the subject of any union/management grievance or have you (or anyone you know) otherwise called it to the attention of, or discussed it with the employer or any representative thereof?      I don't think so.		
(b) If so, please give the results thereof, including any efforts by management to eliminate or reduce the severity of the hazard The supervisor says it can't be asbestos because the building is too new.		
5. Please indicate your desire: <input type="checkbox"/> I do not want my name revealed to the official in charge. <input checked="" type="checkbox"/> My name may be revealed to the official in charge.		
WORK LOCATION	TELEPHONE NO.	DATE
Technical Services Library, Bldg. 6001	x2345	20 Sep 07
TYPED OR PRINTED NAME OF EMPLOYEE OR EMPLOYEE REPRESENTATIVE		SIGNATURE
Ms. H. Stokes		



**Appendix G  
Installation / Facility Hazard Abatement Plan**

G-1. Example of DA Form 4756

<b>INSTALLATION HAZARD ABATEMENT PLAN</b> <small>For use of this form, see DA PAM 385-10; the proponent agency is OCSA.</small>		
1. PROJECT NO. 3-1-2b	2. DATE PREPARED 21 Sep 07	3. DATE REVISED 6 Nov 07
4. ACTIVITY/ORGANIZATION School Brigade Technical Services Library	5. HAZARD LOCATION(S) Main Section Ceiling	6. RISK ASSESSMENT CATEGORY LA (I)
7. CITATION OF SPECIFIC OSHA AND OTHER STANDARD VIOLATED 29 CFR 1910.1001(c). TB MED 513		
8. DESCRIPTION OF PROPOSED CORRECTIVE ACTION OR REMEDIAL MEASURES Revise original proposal to encapsulate ceiling material to complete removal based on cost and requirements for monitoring. All ceiling material which tests positive for asbestos content is to be removed and disposed of in accordance with the installation hazardous materials control plan.		
9a. ESTIMATED COST OF CORRECTIVE ACTION \$ 16,000.00	9b. APPROPRIATION CPA	
9c. PROGRAM ELEMENT NUMBER 362-109-ATES	9d. BUDGET COST ESTIMATED (BCE: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> )	
10. ESTIMATED ADDITIONAL OPERATING AND MAINTENANCE COSTS, IF ANY \$		
11. DESCRIPTION OF INTERIM HAZARD CONTROL MEASURES IN EFFECT Essential library operations have been moved to temporary facilities in Bldg. 5069. Equipment and materials moved into that building were thoroughly cleaned by contractors with expertise in this area. Air sampling established that detectable levels of asbestos contamination were not present in the new facility.		
12. OTHER RELEVANT INFORMATION		
13. ESTIMATED ABATEMENT COMPLETION DATE 6 Dec 07		
PREPARED BY J.C. Stokes, Safety and Occ. Health Spec.		APPROVED BY Jim Chapman, Chief, Loss Control

## G-2. Instructions for completion of DA Form 4756.

- a. Block 1 – Not applicable to the VDF.
- b. Block 2 – Self-explanatory.
- c. Block 3 – Enter date when plan is amended.
- d. Block 4 – Enter name of unit and facility which hazard was found.
- e. Block 5 – Enter building number and room number, if applicable, of location.
- f. Block 6 – Enter Risk Assessment Code (RAC).
- g. Block 7 – State specific OSHA or other recognized safety and health standards violated.
- h. Block 8 – Describe project details necessary to abate the hazard to an acceptable level.
- i. Block 9 – Self-explanatory.
- j. Block 10 – Self-explanatory.
- k. Block 11 – Explain interim measure that supervisors and workers are to maintain until hazard is abated to an acceptable level.
- l. Block 12 – Include points of contact, as appropriate.
- m. Block 13 – Enter initial estimate of final abatement date, update as required.

**Appendix H****Safety and Occupational Health Program Sub-functions / Tasks / Cost Drivers**

H-1. Table H-1, below, lists the sub-function definitions, tasks, and cost drivers for the safety and occupational health programs.

<b>Table H-1 Sub-functions, definitions and cost drivers</b>		
<b>Sub-function</b>	<b>Task</b>	<b>Cost Driver</b>
Program management	Develop, justify, manage, plan, organize and implement a safety program to manage compliance with statutory and regulatory standards. This sub-function includes the following programs: leader consultation, human and fiscal resources, policy, and guidance, councils, and records management.	Size of the organizations and mission and sub-programs.
Education, training, and promotion	Design, conduct, develop, and execute safety awareness, statutory and regulatory training, promotional and special emphasis campaigns, and programs to enhance safety awareness throughout the command.	Number of training requirements / events and number and type of personnel.
Mishap and near-miss investigations	Identify mishap casual factors and potentially unsafe practices or conditions, and recommendations for corrective actions to prevent mishap reoccurrence and reduce hazardous conditions. The sub-function includes the following elements: mishap screening, accident feeder reports, notifications, investigation, report review / coordination, report processing, mishap log, board appointments, command level reviews, countermeasure development, malfunction recording for components, OSHA recordkeeping.	Population served. Risk factors. Historical data.
Inspections, surveys, assessments, and technical consultation	Establish and execute a program for the conduct of inspections, surveys, and assessment of programs, projects, events, workplaces / facilities, and training sites.	Level of risk (low, medium, high). Number of inspections and/or evaluations required. Number of units, facilities, events, projects supported.
Hazard analysis and countermeasure	Collect, review, and analyze data from various sources to identify trends, systemic deficiencies and profiles for use in establishing program initiatives and priorities. Develop, implement, and manage a countermeasure program.	Risk level of operations (low, medium, high). Number of data resources (work orders, accident investigations, findings, and recommendations,

		feeder reports).
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## H-2. Common Core Sub-functions and Tasks

Table H-2, below, lists the general sub-functions and tasks applicable to the VDF.

<b>Table H-2</b>
<b>Sub-functions and Tasks</b>
<b>Common core sub-functions / tasks</b>
<b>A. Safety and Occupational Health Program management</b>
Develop, justify, manage, plan, program, and validate budget requirements for resources necessary to conduct safety activities (TDY travel, contracts, etc.)
Respond to inquiries (i.e., congressional / special interests, higher command, etc.)
Serve as staff advisor, technical consultants, and coordinators to the commander and staff. Provides guidance for establishing and implementing plans, policies, programs, and procedures for conducting safety and occupational health activities at all levels of the VDF. Provides technical assistance and professional assistance to eliminate or control unsafe behavior or environments.
Review and comment on local lesson plans, regulations, and SOPs to ensure incorporation of safe techniques, tactics, practices, procedures, and applications of risk management.
Maintain appropriate VDF safety regulations, directives, messages, and publications in a reference library.
Develop, publish, and integrate safety policies and guidance. Develop and integrate safety and occupational health goals, programs, and evaluation criteria into the command's plan.
Coordinate with the appropriate facility manager(s) for necessary safety support of mission training to include maintenance and repair of unsafe conditions existing (i.e., facilities, barracks, dining and support facilities, roadways, and training areas).
Review, provide recommendations, and interpret Safety and occupational health statutes, standards, and policies promulgated by higher command or regulatory agencies.
Serve on boards, committees, and other groups pertaining to safety and occupational health as the commander's representative and SME.
Plan, coordinate, organize, and administer operational safety programs in accordance with local, VDF, OSHA, and other applicable State and Federal regulations.
Establish budgets for resources necessary to conduct safety activities.
Establish and maintain liaison with other military agencies, State and Federal agencies to ensure cooperation on matters of mutual concern.
Develop and implement tactical safety policies, procedures, and standards designed to minimize accidental losses during tactical operations and training without adversely impacting upon mission accomplishment.
Provide guidance and assistance to develop and integrate the safety requirements into tactical exercises, operations, and training.
Develop force protection – mobilization.
Coordinate with other military services and civilian agencies to ensure safe practices and standards are incorporated into joint training exercises (JTX) and joint readiness exercises. Participates in joint and mobilization, and tactical exercises and operations.
Reviews plans to ensure the safety of VDF personnel and the public for proposed demonstrations, exhibits, exercises, maneuvers, and contingencies.
Provide technical safety advice in planning, preparation, and execution of VDF tactical operations. Participates in the planning, conduct, and debrief of exercises. Ensures the incorporation of safety principles into all field training operations orders.

<b>Table H-2</b>
<b>Sub-functions and Tasks – Continued</b>
Review and evaluate courses of action in the decision making process and make recommendations for operations.
Review and assist in development of risk assessments of military-type training conducted on range or training areas.
Develop, plan, organize, and execute workplace safety programs to include hazardous communications, respiratory protection, personal protective equipment, materials handling and storage, machinery and machine guarding, hand and portable powered tools and other hand-held equipment, electrical safety, bloodborne pathogens, and confined spaces.
Execute and monitor workplace safety programs identified above.
Ensure each activity maintain MSDS, as needed.
Ensure hazardous materials are stored in accordance with State and Federal standards.
Ensure personnel are trained in wearing proper protective equipment.
Assist in the development of fire protection plans.
Assist supervisors in evaluation of proper material handling and storage.
Assist in development and implementation of lock-out/tag-out (LOTO) procedures for each piece of equipment.
Develop, plan and coordinate Vehicle Safety Program to include procedures for safe operating of all VDF vehicles.
Review and analyze feeder reports for motor vehicle accidents.
Review safety releases. Review, assess, and provide recommendations for operational requirements documents.
Review and evaluate system training plans and integrate safety procedures.
Establish and implement Radiation Safety Program, as required.
Advise and ensure safe handling of radioactive material, storage and use.
Advise and ensure safe handling of laser and radio frequency systems.
Designate radiation safety officer for ionizing radiation sources, laser, and radio frequency radiation sources.
Ensure radiation safety officer is adequately trained commensurate with their duties and types of materials within their program.
Ensure individuals working with ionizing and/or non-ionizing radiation are properly trained.
Maintain laser and radio frequency radiation source inventory.
<b>B. Inspections, surveys, assessments, and technical consultation</b>
Conduct frequent operational walk-through inspections of industrial-type activities.
Review reports of accident investigations for completeness, accuracy, and the appropriateness of findings and recommendations.
Assess each workplace to ensure each individual is trained on the hazards they are exposed to.
Conduct special general officer directed operational assessments.
Schedule and execute evaluations and assessments of the VDFs accident prevention efforts, effectiveness of risk management, and accomplishment of command composite safety goals and objectives annually, or as required.
Integrate safety and composite risk management assessment criteria into command and other staff evaluation and assessment programs.

<b>Table H-2 Sub-functions and Tasks – Continued</b>
Conduct annual and special assessments of training, events, sites, facilities, etc. as required / directed.
Investigate report of unsafe and unhealthful conditions and respond within 72 hours of report with written report.
Review all identified hazards and assign risk assessment code (RAC). Ensure hazards are in VDF master plan as priority with any RAC 1 or RAC 2 are corrected within 30 calendar days, or as soon as possible.
<b>C. Mishap and near-miss investigations</b>
Collect, review, and analyze data from various sources (accident records, exposure assessments, feasibility studies, hazard probability and severity modeling, inspections, surveys, product, and document assessments) to identify trends, systemic deficiencies, and profiles for use in establishing program initiatives and priorities.
Conduct accident mishap investigations.
Administer an accident notification and reporting program for the command to ensure timely and accurate notification and reporting of accidents and related data.
Establish and manage procedures for accident reporting to ensure timely notification and reporting to comply with VDF and OSHA regulations.
Provide technical assistance in accident investigation and reporting to ensure accuracy, completeness, and timeliness.
Conduct investigations or support accident / incident investigation boards (internal and external) as required. Coordinate findings and recommendations with the correct party(s) for corrective actions. Review, analyze, and inspect accident scene, conduct interviews, and develop written reports.
Establish and maintain safety Web page; provide safety information to other web sites as appropriate.
Prepare, coordinate, and publish VDF safety awareness correspondence (e.g., holiday safety messages, safety of use messages, special emphasis memos, etc.)
Design, conduct, develop, and integrate component risk management (CRM) training in to military training.
<b>D. Education, training, and promotion</b>
Provide hazard recognition and abatement training specific to regulatory and statutory requirements for work site or activity.
Develop and execute safety promotional and special emphasis campaigns and programs to enhance safety awareness throughout the VDF.
Integrate safety and occupational health procedures into all VDF training guidelines and techniques to be applied in the field.
Conduct required workplace safety training as required by VDF, OSHA, local, State, and Federal applicable regulations.
Distribute aviation and safety flight information.

<b>Table H-2</b>
<b>Sub-functions and Tasks – Continued</b>
<b>E. Hazard analysis and countermeasures</b>
Collect, analyze, and disseminate accident data concerning the experience of the command and report to commanders and subordinate elements. Develop recommendations for corrective actions where warranted by adverse accident rates or trends, hazardous conditions or procedures, and other deficiencies.
Design, develop, conduct, and integrate safety and CRM into Leader Development and Safety Officer / NCO training.
Develop, implement, and manage a countermeasure development program (develop control measures, procedures, programs, engineering, administrative, elimination, and PPE).
Ensure that adequate safe practices and safe physical standards are incorporated in operating procedures, manuals, directives, and other instructions.
Develop and plan pre-accident plan.
Develop reports for recommendation of countermeasures.
<b>F. Special tasks</b>
Manage the safety awards program.
Manage the Occupational Health / Industrial Hygiene program.
Support system safety review boards, as needed.
Provide safety support during mobilization and disaster / contingency operations.
Provide safety support to Homeland defense activities, civil support teams, state active duty, etc.
Conduct operational walk-through inspections of industrial-type areas for health hazard inventory, assessment, and evaluation.

### H-3. Facility / Installation support core sub-functions / tasks

Table H-3, below, lists the general facility / installation support core sub-functions and tasks.

<b>Table H-3</b>
<b>Facility / Installation support core sub-functions and tasks</b>
<b>Facility / Installation support</b>
Coordinate necessary safety support for mission training to include maintenance and repair of unsafe conditions existing in infrastructure (i.e., facilities, barracks, dining and support facilities, roadways and training areas, etc.)



## **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

BBP – Bloodborne pathogens

BBPECP – Bloodborne Pathogen Exposure Control Program

BBPP – Bloodborne Pathogen Program

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

CFR – Code of Federal Regulations

CHEMTREC – Chemical Transportation Emergency Center

CONOPS – Continuity of operations

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

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

DOT – Department of Transportation

DUI – Driving under the influence

ECP – Exposure control plan

EPA – Environmental Protection Agency

FAA – Federal Aviation Administration

FM – Field Manual

FOIA – Freedom of Information Act

GOV – Government Owned Vehicle

HAZMAT – Hazardous Materials

HBV – Hepatitis B virus

HIV – Human immunodeficiency virus

HSPG – Highway Safety Program Guidelines

IATA – International Air Transport Association

IACO – International Civil Aviation Organization

JHA – Job hazard analysis

MIL-STD – Military Standard

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

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

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)

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.

**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.

**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 if 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.

**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 of material 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.

**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.

**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.

**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.

**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.