

Eastern Shore Regional Fire Training Center



Operations Guide 2010

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Section 1: Introduction

The purpose of this guide is to provide the instructor and student a collection of policies, rules and practices for proper and safe operation of the facility, props, vehicles, and for the care of the equipment used at the Eastern Shore Regional Fire Training Center (ESRFTC). The general format describes the access requirements for the facilities, the rules governing operations, and provides a check-off list for field use. The information contained herein will be reviewed on an as needed basis but not to exceed three (3) years.

Purpose

To provide an overview of the rules and regulations of operation of the ESRFTC for instructors, students and guests during instruction, live burn training, or other activities/exercises.

Scope

This procedure is applicable to all fire-rescue career, volunteers, industrial members, instructors, support persons, students, and guests participating in a program being offered through the ESRFTC.

Preface

The Eastern Shore Regional Training Committee (ESRTC) hereby provides the **Eastern Shore Regional Fire Training Center Operations Guide** with current policies and procedures established for conducting emergency services training activities at the ESRFTC. It is intended for use by VDFP staff members, instructor personnel, company officers, and others responsible for emergency services training for purposes of uniform application and equitable administration of the ESRFTC programs.

All personnel involved with the delivery of training at the ESRFTC should read this Guide and become thoroughly familiar with the material contained therein. Users are encouraged to maintain this Guide as a reliable local companion reference to the Virginia Department of Fire Programs Instructor Manual. **Where this Operations Guide conflicts with NFPA 1403, NFPA 1403 shall supersede this manual.** The ESRFTC Operations Guide is intentionally structured parallel to the Virginia Department of Fire Programs Instructor's Manual with the sole purpose of simplicity and in effort to reduce duplication. The information will be especially useful to fire instructors and fire department training officers. All questions relative to the information and material contained in the ESRFTC Operations Guide should be addressed directly to the ESRTC Committee.

Section 2: Administrative Policies, Procedures & Forms

General

All persons and/or organizations must complete an **Eastern Shore Regional Fire Training Center Facility Use Application & Hold Harmless Agreement** to use the facility in accordance with the policies, forms and rules stated within.

It is very important to provide complete and factual information.

The ESRTC has the right to refuse any proposed drill that would pose possible harm to personnel directly or indirectly involved, cause damage to the facility and/or buildings, not meet national, state, and/or local accepted safe practices for emergency services personnel.

Those agencies which by their very nature are a governmental entity, in the process of conducting a training program, class or meeting, designed or attempting to accomplish the goal of improving public safety, may use the facility, after application and approval of the Fire Training Center chair and or committee. A review of the application, will determined if a fee is needed or warranted.

Visitors, guests and non-fire department personnel visiting the ESRFTC are not permitted on the concrete area during any training exercise in the burn building, the tower, or in area designated as hot zones from props and/or evolutions in the field. Guests are to remain a safe distance in the cold zone away from training exercises and fire apparatus. The OIC/Lead Instructor/Safety Officer shall have absolute authority on the establishment of hot, warm and cold zones as needed. All agencies training at the Center are responsible for the safety and actions of their guests.

Instructor and student POV parking is confined to the marked area in front of the classroom building and the parking overflow on the left as you enter the gate. Apparatus parking is across the street from the classroom building. Students POV's are not allowed in the practical training area. Students shall respect the handicap parking. Emergency and service vehicles are allowed in the practical area. Auto extrication props are not allowed in parking areas.

All organizations will provide their own equipment for training. Equipment needed is the user's responsibility. If ESRFTC equipment is needed, please indicate that on the Eastern Shore Regional Fire Training Center Facility Use Application.

All personnel shall be courteous and disciplined. Proper decorum shall be observed at all times toward fellow students, staff and instructors.

The following are **PROHIBITED**: Abusive language or behavior; sexual harassment; racial slurs or harassment; horseplay or any disturbance during any course or program, any form of gambling, and reporting to the Center under the influence of drugs or alcohol.

Use of LIVE victims is prohibited in any and all high risk activities. Any other use of live victims must be pre-approved through the application process.

In accordance with Accomack County policy, smoking is prohibited in all County buildings. Anyone wishing to smoke must do so in the designated outdoor areas. Receptacles for discarded cigarettes are provided outside the classroom building door. Failure to use and clean these receptacles daily will result in the discontinuation of smoking on the entire site.

Safety

The wearing of jewelry by students in practical evolutions is not allowed. It is strongly recommended that rings, necklaces, bracelets or earrings not be worn during any training

exercising. This will help to minimize injuries. Jewelry that can be removed should be removed and secured by the student prior to participating in any evolutions. The ESRFTC and Accomack County shall not be responsible for lost or stolen jewelry.

In accordance with NFPA 1500 5-3.10 and 29 CFR 1910.134 the ESRFTC prohibits individuals from participating with facial hair that makes contact with the face piece seal on a positive pressure self contained breathing apparatus. The minimum acceptable body coverage is shorts and t-shirts (full length pants should be worn for all live burn evolutions). Cut-offs and bare bodies are not permitted. Some clothing may be deemed inappropriate by the instructor in charge. Those students will be asked to wear alternate attire or be asked to leave the facility.

Gun Policy

Guns worn and/or carried in performance of law enforcement duties by authorized law enforcement officials are permitted.

ALL guns of non-law enforcement shall be prohibited on ESRFTC property.

The ESRTC Committee and/or Accomack County hold right to allow special use, when deemed necessary.

Drug & Alcohol Policy

Alcohol (including open containers), illegal substances, and/or mind altering substances, as well as, persons impaired by alcohol, illegal substances, and/or mind altering substances are prohibited throughout this facility.

All students with ANY type of medication or possible need of medication MUST inform Lead Instructor upon arrival. Students taking any prescription or over the counter drugs are responsible to inform the lead instructor as to what is being taken and its potential side effects. Failure to do so may lead to removal from the facility.

Reporting an Accident or Injury

VDFP PROGRAMS: For State credited programs, instructors will immediately report all life threatening student injuries to the State EOC (804) 674-2400 or (800) 468-8892 and student's department. The Lead Instructor will make a complete written report of the incident and forward it to the VDFP Division Chief within 24 hours. (Major injuries and/or deaths will be communicated and confirmed ASAP to the Branch Chief or Operations and Training of VDFP and VDFP Division Chief). The VDFP Division Chief will make a complete investigation of the incident and forward his/her report along with a copy of the instructor's report to the Branch Chief of Training of VDFP.

ALL OTHER TRAINING: The Lead Instructor is required to complete the VDFP Accident Report Form and submit to the ESRTC Chairman. For serious injury or life threatening injury, the Chairman or representative must be notified immediately. Call 911 to have notification made.

Instructions for preparing and submitting this report are printed in the box on the top front of the form and must be followed precisely. It is very important to obtain complete and factual information. Every injury must be considered as potentially serious and instructors should notify VDFP staff immediately unless it is positively determined that an injury is clearly minor.

A report must be completed for every accident which requires any type of first aid or medical attention no matter how minor. Also, an accident report form should be submitted for any accident regardless of injuries, which occur during training activities to record the incident.

Every instructor should maintain copies of this form for their own use.

Emergencies

In case of an urgent problem with the facility, contact the ESRTC Chairman. (Urgent facility problems include: fire, flooding, broken pipes, broken windows, prop malfunction, and physical damage that prevents securing the building). The emergency contact information is listed in the appendix of this document.

If unable to contact the Chairman, contact any member of the ESRTC Committee.

If unable to contact the Accomack County Regional Training Committee Chairman, contact the Accomack County Department of Public Safety Shift Supervisor on duty.

Insurance

The ESRFTC does not provide any type of insurance coverage on students, instructors or guest. ALL users of this facility shall maintain a Certificate of Insurance on file with the Accomack County Administrator's Office. Failure to provide and renew annually your Certificate of Insurance will void your access to this facility until such certificate is on file.

Civilians must provide the VDFP (when state funds are used) and the ESRFTC with satisfactory written evidence that they have Worker's Compensation Insurance (payment for disability and medical expenses) and personal liability insurance that will cover the type of training activity for which they are applying. In lieu of Worker's Compensation, individuals may substitute a personal insurance policy (if such insurance provides coverage equivalent to workers compensation).

The necessary insurance can sometimes be furnished as extensions of policies carried by employers on their employees or by organizations on their members, but coverage is not automatic and should not be assumed. In many cases, coverage is effective only when individuals are authorized by the policyholder to attend and/or participate in specifically identified training activities.

The Virginia Department of Fire Programs does not provide any type of insurance coverage on students.

Junior Firefighters

Persons under the age of 16 years shall not be permitted to attend training programs at the facility.

All persons under 16 years of age shall only be permitted in areas not considered a training zone.

Persons 16-18 may participate in moderate and high risk training activities with all of the following in place:

- A letter (original, not a copy) of parental (or legal guardian) consent that permits Junior Firefighter participation
- Legal documentation of age 16 years old on the day of the training.
- Must be a full member of a volunteer department and covered under such insurance
- The Junior Firefighter shall have a copy of the locality/department current liability insurance for Junior Firefighters.

Complaint and Appeals Process

Individuals should file complaints against any instructor/coordinator through their department or organization by placing in writing on company letter head and signed by the Fire/Rescue Chief or other lead operations officer of the department or organization the complaint facts, time and date. The ESRTC shall notify the Accomack County Fire and Rescue Commission Chairman within three (3) business days of receiving the complaint. The Accomack County Fire and Rescue Commission shall monitor the complaint process from start to resolution. The ESRTC Committee shall review the complaint and provide a written response to the department or organization within thirty (30) calendar days. The department or organization shall have thirty (30) calendar days to appeal to the Accomack County Fire and Rescue Commission. Upon receiving an appeal, the Accomack County Fire and Rescue Commission shall review the complaint and provide a written response to the department or organization within sixty (60) calendar days. The department or organization shall have thirty (30) days to appeal to the Accomack County Board of Supervisors. The Accomack County Board of Supervisors shall act on the appeal within their own complaint resolution procedures. Individuals and/or organizations having complaints against this facility and/or any of the State support staff or instructors are advised that there are separate Commonwealth of Virginia Department of Fire Programs complaint procedures. This policy in no way replaces or is a substitute for those policies. Contact the VDFP Area Office immediately to determine current procedures and reporting requirements.

Section 3: Operational Policies, Procedures & Forms

Training Activities

The very nature of emergency operations training involves some degree of risk. Each instructor must function as a risk manager not a risk taker during training activities. In most cases, each student represents many unknowns; unknown knowledge/skill, unknown physical and medical conditions, and unknown motivations. Low risk training activities, such as lectures, discussions, and other classroom related activities are not normally

associated with student danger and therefore a student/instructor ratio is not critical and no more than one instructor will normally be assigned per class.

Moderate risk training activities are those practical activities where there is an increased danger to students. For example, students train with fire hoses, ladders, forcible entry/ventilation tools, fire extinguishers, pumper operations, and EVOC. Usually these training activities require a greater degree of instructor attention to each student's participation and performance. Therefore, the activities require a student/instructor ratio of no more than 10-1 (ten students per instructor). These courses offer an excellent opportunity for new instructors (Level I) to develop their instructor skills under the close supervision of the supervising instructor. Such training activities must have one instructor as the supervising instructor who supervises the instructors actually performing the training.

High risk training activities are those practical activities which involve power tools, live fire fighting, activities below grade, activities above grade, activities in confined spaces, or activities in areas which may contain a toxic atmosphere. Some other subjects which are considered high risk training activities are: liquid and flammable gases, SCBA maze, fire streams involving live fire, heavy and tactical rescue, and fire attack courses. These activities require a high degree of instructor attention to each student's participation and performance. Therefore, these training activities require a student/instructor ratio of no more than 5-1 (five students per instructor) for students actually engaged in the performance of the high risk activity. At all times during high risk training activities, there will be an assigned safety officer who is not performing instruction duties (NO EXCEPTIONS). During all high risk training, enough instructors should be assigned to enable instructors to occasionally go to rehab for a safety break.

All moderate and high risk training activities will involve use of the Incident Command System (ICS) with the supervising adjunct instructor serving as the Incident Commander (IC). The IC will monitor the activities of each student group (sector) and on a regular basis ensure that each student group is assigned to rehab. Experience has shown that close instructor supervision and attention to the rehabilitation needs of the students will eliminate most injuries.

Company Drills

Company drills can be and are strongly encouraged to be conducted at the ESRFTC. Content of the materials presented at company drills must be complete with performance and safety standards of local state and/or national standards on emergency services training. The fire chief, training officer, and/or safety officers will be responsible for all operations during the drill including compliance with this Operations Guide in its entirety.

In house training conducted by organizations without an approved training officer (facility representative) shall be required to use the services of another approved individual from another member organization until such time their own personnel are approved.

The fire company OIC shall be held accountable to conduct the company drill in compliance with the rules and regulations of this Operations Guide. The OIC when conducting company drills shall function under the same administrative rules, regulations, and responsibilities as the Lead Instructor referenced in other sections of this manual.

The fire company OIC is responsible for the completion of all utilization forms and student rosters which are available in the classroom building.

The fire company OIC will promptly report any accidents or injuries per the accident reporting policies of this manual, as well as, their own department.

Lead Instructors Responsibilities

Lead Instructor must be approved by the ESRTC Committee.

Instructors who wish to use any of the facilities, props and equipment operated by ESRTC must be nominated by a Fire Chief or by the Virginia Department of Fire Programs. This is accomplished by first contacting the ESRTC and completing an indoctrination program. The Virginia Department of Fire Programs or your local fire chiefs will recommend you to the ESRTC. An instructor must complete indoctrination on each of the facilities, props, and equipment.

The Lead Instructor has the authority and responsibility to correct and/or terminate any training session/program for just cause and to ensure compliance with state and local code of conduct requirements. These requirements are bound to everyone including non-funded company drill nights where the facility representative and/or the company chief officer shall enforce these requirements.

The Lead Instructor conducts himself or herself as a representative and administers the class and makes decisions with the best interest of the students.

The Lead Instructor supervises the laying out of all materials and checkout of equipment before the starting time of the class. In doing so, assures that other assigned instructors carry out tasks so that the lead instructor can meet with the students in the classroom, take roll, and provide any introduction and associated rules and regulations for the class.

Lead Instructor supervises assigned support instructors and assigns tasks as necessary keeping in mind that new support instructors should only be given assignments appropriate to their experience and training.

Lead Instructor is responsible for supervising and assigning duties for clean-up of the Center, grounds, and equipment used.

Lead Instructor carries out all safety procedures to guard against any injuries. They report any injury and incident using the appropriate accident report form. Reports should describe the circumstances concerning the incident and any corrective or emergency action taken by the instructors. Enforces all rules and regulations set forth by ESRTC and the Virginia Department of Fire Programs and assures that discipline is maintained.

Lead Instructor administers the class instruction following such lesson plan that are supplied by or approved by the sponsoring organization.

Lead Instructor releases students and support instructors only after clean-up is complete and all assigned duties are carried out.

Lead Instructor checks the security of the facilities and grounds assuring that all doors and windows are closed and locked. Completes all required facility utilization forms and returns keys to the facility at the end of the class.

Lead Instructor reports to the ESRTC Chairman any irregularities that might be observed in students, instructors, facilities, and equipment.

Lead instructor shall have the authority to remove any person or persons whose presence represents a disruption or safety risk to others. The duration of the suspension shall be in effect the duration of the program the individual or individuals were signed up for. The decision of the Lead Instructor can only be overturned by the appeals process. A request to appeal a suspension must be requested in writing on company letter head signed by the fire/rescue chief or other lead operations officer of the department or organization.

All live burn training shall have an individual identified as the Lead Instructor. The Lead Instructor shall be responsible for all compliance with VDFP Instructor's Manual on Live Burns, NFPA 1403 and all procedures policies and rules of the facility, instructors, support staff and students through the time allocated. This also includes course objectives and behavior while at the ESRTC.

The ESRTC will assure that instructors have access to needed equipment and supplies for their class. It is the instructor's responsibility to get ready for class, work with the class to schedule needed apparatus, lay out equipment required for the class, teach the class, and control the conduct and demeanor of the students as well as clean-up, securing of the equipment used, and securing the building and grounds.

Instructors must provide their schedules along with their application for use of the ESRTC. If a class is going to meet at the ESRTC, the schedule should clearly note the days and times for facility use. Practical sessions requiring logistical support from instructors will notify the ESRTC as soon as possible with any schedule changes.

When special drills are to be conducted (fire extinguishers, LPG, etc.) only use instructors who are authorized to operate that particular prop or piece of equipment. Instructors must be checked out for special props and equipment by the ESRTC. List is available from the ESRTC.

Be prepared before the class to give specific assignments to other instructors who will be supporting you. Do not let the instructors leave until everything is cleaned, put away or tagged, if repairs are needed. Instructors are expected to care for the equipment so that it is ready for the next instructor class.

If you use the classroom, assure that the room is clean and all teaching material is removed after class.

All general instructors shall be responsible and in support of the Lead Instructor.

Under no circumstance will an instructor appear before a class under the influence of alcohol or drugs or mine altering substances. The instructor is a role model and must set a

positive example, both within and outside the classroom and should always conduct himself/herself in a manner to reflect favorably on his/her department.

Inappropriate conduct by instructors at school or the social activities related to regional, statewide, or special schools which reflect adversely upon the instructor, the school, and host department may be the basis for disciplinary action under the Policies and Procedures of ESRFTC. If in the judgment of the ESRTC the situation warrants the immediate removal of an instructor, they may do so pending investigation of the matter. The action is subject to the appeals process.

For training safety if the school involves active firefighting or other high risk activities, additional experienced instructors should be assigned for practical exercises. The student/instructor ratio for all high risk training activities shall be 5:1 for the following subjects: All activities involving live fire liquid and flammable gases, SCBA Maze, fire streams involving live fire fighting, heavy and tactical rescue, and fire attack. The 5:1 ratio is for students engaged in the act of performing the high risk activity not the total class enrollment.

Any change of dates from those originally scheduled for a school must be approved by the ESRTC prior to the start of the school. Any reassignment of instructors or substitute instructors must be approved by the ESRTC prior to school commencement.

Exception: Substitute adjunct instructors in good standing with the Virginia Department of Fire Programs and other instructors from the preapproved staff support list available from the Accomack County Department of Public Safety is allowed. The purpose of this exception is to allow changes due to uncontrollable circumstances, death, illness, weather etc...

All live field evolutions shall have an approved safety officer appointed in advance as part of the request to use the facility.

Section 4: Live Burn Requirements & Standards

Organizational Structure

An organizational chart must be submitted with the Live Burn Plan depicting at a minimum the items covered in section four (4). A Live Burn Checklist is provided in the appendix.

- The Lead Instructor shall be responsible for full compliance with this standard.
- A safety officer shall be appointed for all live fire training evolutions.
- One person who is not a student shall be designated as the “ignition officer” to control the materials being burned.
- Additional instructors shall be designated when factors such as extreme temperatures, large groups are present, or classes of long duration are planned.
- The participating student-to-instructor ratio shall not be greater than 5 to 1.
- It shall be the responsibility of the Lead Instructor to coordinate overall live fire training structure fire ground activities to ensure proper levels of safety.
- Prior to the ignition of any fire, instructors shall ensure that all protective clothing and equipment specified in this chapter are being worn according to manufacturer’s instructions.
- Instructors shall monitor and supervise all assigned students during the live fire training evolution.

- All instructors shall be qualified to deliver fire fighter training.
- Safety Officer shall be designated by fire floor.
- The Lead Instructor shall assign the following personnel:
 - One instructor to each functional crew which shall not exceed five students
 - One instructor to each backup line
 - Additional personnel to backup lines to provide mobility
 - One additional instructor for each additional functional assignment
- Additional safety personnel, as deemed necessary by the safety officer, shall be located strategically within the structure to react to any unplanned or threatening situation or condition.

Water Supply

- The Lead Instructor shall determine the rate and duration of water flow necessary for each individual live fire training evolution, including the water necessary for control and extinguishment of the training fire, the supply necessary for backup lines to protect personnel, and any water needed to protect exposed property.
- The minimum water supply and delivery for live fire training evolutions shall meet the criteria identified in NFPA 1142.
- A minimum reserve of additional water in the amount of 50 percent of the fire flow demand determined in accordance with NFPA shall be available to handle exposure protection or unforeseen situations.
- Separate sources shall be utilized for the supply of attack lines and backup lines in order to preclude the loss of both water supply sources at the same time.
- Backup lines shall be provided to ensure protection for personnel on training attack lines. Each hose line shall be capable of delivering a minimum of 95 gpm.
- The user is responsible to ensure that the apparatus used at the ESRFTC has a current pump test and is performing as per its manufacturer's recommendations.
- A water supply calculation sheet is available in the appendix.

Rehab

The Lead Instructor shall provide for the rest and rehabilitation of members operating at the scene, including medical evaluation and treatment, food and fluid replenishment, and relief from climate conditions in accordance with the circumstances of the training session.

EMS

Emergency medical services shall be available on site to handle injuries. Written reports shall be filled out and submitted on all injuries and on all medical aid rendered. It is recommended that a minimum of one BLS provider should be on site during the time actual live fire evolutions are being conducted. Transport capabilities should either be available on site or available to respond to the training site within a reasonable response time. If EMS agencies from outside of the local EMS Council are to be used, contact the local Eastern Shore EMS Council office in advance of the training evolution and advise the origin of the EMS agency to be used.

Communications

Communications on a common frequency established between the Lead Instructor, Safety Officer, Interior Operations, Pump Operator, and EMS Support. Readily available communications must be established with the local emergency communications center

should external assistance be needed. A method of fire ground communications shall be established to enable coordination among the incident commander, the interior and exterior sectors, the safety officer, and external requests for assistance.

Safety

- A building evacuation plan shall be established, including an evacuation signal to be demonstrated to all participants in an interior live fire training evolution.
- A search of the structure shall be conducted to ensure that no unauthorized persons, animals, or objects are in the live fire training structure immediately prior to ignition.
- No person(s) shall play the role of a victim inside the live fire training structure.
- Fires shall not be located in any designated exit paths.
- The training session shall be curtailed, postponed, or canceled, as necessary, to reduce the risk of injury or illness caused by extreme weather conditions.
- Each participant shall be equipped with full protective clothing and SCBA.
- All participants shall be inspected by the Safety Officer prior to entry into a live fire training evolution to ensure that the protective clothing and SCBA are being worn according to manufacturer's instruction and are in serviceable condition.
- Protective coats, trousers, hoods, footwear, helmets, and gloves shall have been manufactured to meet the requirements of NFPA 1971.
- SCBA shall have been manufactured to meet the requirements of NFPA 1981.
- Personal alarm devices shall have been manufactured to meet the requirements of NFPA 1982, *Standard on Personal Alert Safety Systems (PASS)*. Each student and instructor will wear a device while inside the burn building.
- All students, instructors, safety personnel, and other personnel shall wear all protective clothing and equipment specified in this chapter according to manufacturer's instructions whenever they are involved in any evolution or fire suppression operation during the live fire training evolution.
- All students, instructors, safety personnel, and other personnel participating in any evolution or operation of fire suppression during the live fire training evolution shall breathe from an SCBA air supply whenever operating under one or more of the following conditions:
 - In an atmosphere that is oxygen deficient or contaminated by products of combustion, or both
 - In an atmosphere that is suspected of being oxygen deficient or contaminated by products of combustion, or both
 - In any atmosphere that can become oxygen deficient or contaminated, or both
 - Below ground level
- Students who have facial hair that will prevent the face piece from achieving a proper seal will not be allowed to participate in any part of the evolution requiring the use of SCBA's.
- All protective equipment and clothing shall be inspected by the Safety Officer prior to the start of the training session to ensure it is serviceable condition. Additional clothing requirements shall include long pants (no short pants), shirts (no tank top or sleeveless shirts) and socks.
- Instructors shall take a head count when participants are entering and exiting the live fire training structure during an actual attack evolution conducted in accordance with this standard.

Accountability

An accountability system shall be used for all high risk training activities. The fire training facility may in special cases be able to provide a system for those departments without one.

Live Burn Site Plan

- A pre-burn plan shall be prepared and shall be utilized during the pre-burn briefing sessions.
- All features of the training areas and structure shall be indicated on the pre-burn plan.
- The Lead Instructor shall assess the selected fire room environment for factors that can affect the growth, development, and spread of the fire.
- The Lead Instructor shall document fuel loading, including all of the following:
 - Furnishings
 - Wall and floor coverings and ceiling materials
 - Type of construction of the structure, including type of roof and combustible void spaces
 - Dimensions of room

Student Training Certification Statement

Prior to participating in the live fire training evolutions, the student must have received training to meet the performance objectives for Firefighter I of the following sections of NFPA 1001, Standards for Fire Fighter Professional Qualifications. These will need to be documented on the Student Training Certification Form.

- General Information
- Fire Behavior
- Self Contained Breathing Apparatus
- Personal Protective Equipment
- Forcible Entry
- Ventilation
- Rescue
- Safety
- Ladders
- Fire Hose, Nozzles, and Appliances
- Fire Streams
- Water Supply

Pre-Burn Briefing

- Prior to the conduct of actual live fire training evolutions, a pre-burn briefing session shall be conducted for all participants.
- All facets of each evolution to be conducted shall be discussed in the pre-burn briefing, and assignments shall be made for all crews participating in the training session.
- The location of simulated victims shall not be required to be disclosed, provided that the possibility of victims is discussed during the pre-burn briefing.
- Prior to the conduct of any live fire training, all participants shall be required to conduct a walk-through of the structure in order to have knowledge of and familiarity with the layout of the live fire training structure and to facilitate any necessary evacuation of the live fire training structure.

Pre/Post Burn Building Inspection

- Live fire training structures shall be inspected visually for damage prior to live fire training evolutions.
- Damage shall be documented.
- Where the live fire training structure damage is severe enough to affect the safety of the students, training shall not be permitted.
- All doors, windows and window shutters, roof scuttles and automatic ventilators, mechanical equipment, lighting, manual or automatic sprinklers, and standpipes necessary for the live fire training evolution shall be checked and operated prior to any live fire training evolution to ensure they operate correctly.
- All safety devices, such as thermometers, oxygen and toxic and combustible gas monitors, evacuation alarms, and emergency shutdown switches, shall be checked prior to any live fire training evolutions to ensure they operate correctly.
- Live fire training structures shall be left in a safe condition upon completion of live fire training evolutions.
- Debris hindering the access or egress of fire fighters shall be removed prior to the beginning of the next training exercises.
- In preparation for live fire training, an inspection of the structure shall be made to determine that the floors, walls, stairs, and other structural components are capable of withstanding the weight of contents, participants, and accumulated water.
- 911 Center shall be noticed prior to the start of any live burn.
- Awareness of weather conditions, wind velocity, and wind direction shall be maintained, including a final check for possible changes in weather conditions immediately before actual ignition.
- There is a Pre & Post Burn Building Inspection Report in the appendix.

Site Safety

- Fire lines shall be established to keep pedestrian traffic in the vicinity of the training site clear of the operations area of the live burn.
- Areas for the staging, operating, and parking of fire apparatus that are used in the live fire training evolution shall be designated.
- An area for parking fire apparatus and vehicles that are not a part of the evolution shall be designated so as not to interfere with fire ground operations.
- If any of the apparatus described in 6.2.14.1 is in service to respond to an emergency, it shall be located in an area to facilitate a prompt response.
- Where required or necessary, parking areas for police vehicles or for the press shall be designated.
- A parking area for an ambulance or an emergency medical services vehicle shall be designated and located where it will facilitate a prompt response in the event of personal injury to participants in the evolution.
- The parking area shall be located to facilitate prompt response in the event of a personal injury to participants in the evolution.
- Ingress and egress routes shall be designated, identified, and monitored during the training evolutions to ensure their availability in the event of an emergency.
- All spectators shall be restricted to an area outside the operations area perimeter established by the Safety Officer.
- Control measures such as ropes, signs, and fire line markings shall be posted to indicate the perimeter of the operations area.

- Visitors who are allowed within the operations area perimeter shall be escorted at all times.
- Visitors who are allowed within the operations area perimeter shall be equipped with and shall wear complete protective clothing in accordance with manufacturer's instructions.

Ignition Officer and Building of Fire

- The Ignition Officer shall wear full protective clothing, including SCBA, when performing this control function.
- A charged hose line shall accompany the ignition officer when he/she is igniting any fire.
- The decision to ignite the training fire shall be made by the Lead Instructor in coordination with the Safety Officer.
- The fire shall be ignited by the Ignition Officer in the presence of and under the direct supervision of the Safety Officer.
- The fuels that are utilized in live fire training evolutions shall have known burning characteristics that are as controllable as possible.
- Unidentified materials, such as debris found in or around the structure that could burn in unanticipated ways, react violently, or create environmental or health hazards, shall not be used.
- Fuel materials shall be used only in the amounts necessary to create the desired fire size.
- Pressure-treated wood, rubber, and plastic, and straw or hay treated with pesticides or harmful chemicals shall not be used.
- The fuel load shall be limited to avoid conditions that could cause an uncontrolled flashover or back draft.

Post Training Activities

- Overall Critique and Accountability: All students and instructors will gather and discuss the overall activities and make preparation for overhaul/clean up operations. Prior to releasing the students, the Lead Instructor shall ensure the welfare and any participants involved in the training activity.
- Injury/Illness Reports: Any participant who is injured or who becomes ill during the exercise shall immediately report his/her condition to the Lead Instructor. The Lead Instructor will ensure that a Virginia Department of Fire Programs Accident Report Form is completed and procedures are followed regarding injury/illness as outlined in the Virginia Department of Fire Programs Fire Instructor Manual (current edition).
- Site Overhaul, Cleaning, and Inspection: The building an exterior will thoroughly inspected for any remaining fire and for physical damage. All unusable burned materials will be extinguished and properly discarded in a dumpster or area provided at the facility. Any damage to the building as a result of the training evolution will be documented on the Facility Equipment Malfunction & Damage Form (see appendix) and reported to the ESRTC Chairman the next business day. At the

conclusion of the exercise, the building and grounds will be left in a safe and clean condition.

ESRTC Staffing Responsibilities

All students, instructors, and safety personnel shall properly wear all protective clothing and equipment whenever they are involved in any evolution of fire suppression operation during live fire training evolutions. All protective equipment and clothing shall be inspected by the Safety Officer prior to the start of the training session to ensure it is in serviceable condition.

Where a training certification is required to meet any staffing support function the Chief Officer shall be allowed to produce a VDFP web site generated report showing the person has meet the training requirements if any.

It is the responsibility of support staff to obtain the permission of their sponsoring agency to use personal protective clothing and or other equipment needed to perform any staff support function at the ESRFTC. Damage to this equipment is the responsibility of the sponsoring organization and not the ESRFTC.

Position Requirements & Job Duties (See Job Resp./Job Aid Form in Appendix)

Lead Instructor

Qualifications:

- Fire Instructor II
- Current LB Awareness
- Completed ESRFTC Orientation

Duties:

- ▶ Lead Instructor shall be responsible for ensuring that the exercise is conducted in compliance with NFPA-1403, Standard on Live Fire Training Evolutions in Structures (latest edition) and that all conditions and requirements outlined in these policies are followed.
- ▶ The Lead Instructor shall coordinate the area of responsibilities of the remaining instructors and coordinate all activities prior to, during, and after the training exercise.
- ▶ Instructors at the facility are responsible for ensuring that policies are followed and for conducting themselves according to instructional practices as outlined under NFPA 1041, Standards for Fire Service Instructor Professional Qualifications and the Virginia Department of Fire Programs Instructor Manual.
- ▶ The Lead Instructor is responsible for all students participating in the training and shall respond to the needs of the students in an efficient and effective manner to ensure their health and well being.

Support Instructors/Officers

Qualifications:

- Minimum Fire Instructor I

Duties:

- ▶ Support Instructors shall be assigned to maintain a student to instructor ratio of no greater than five to one (5:1) in high risk/impact training environments.
- ▶ The Assisting Instructors are responsible for carrying out active supervision and readiness of students involved in live firefighting training operations. As such, they shall function as interior crew supervisors and report directly to the Lead Instructor.
- ▶ May be responsible for the set-up and ignition of the fire(s). All set-up and ignition methods shall comply with NFPA 1403 and these policies.
- ▶ Assisting Instructors have the authority to take over hose line operations or stop their crews operation should any condition arise that could compromise student safety.
- ▶ The Assisting Instructors will provide direct hose lines and activity supervision to crews engaged in live firefighting training. Assisting water supply is established for “main attack” and “backup” hose lines.

Lead Safety Officer**Qualifications:**

- Fire Instructor I
- NFA: Incident Safety Officer

Duties:

- ▶ The Safety Officer is expected to maintain a visible presence during the entire evolution. After each evolution and once all personnel are accounted for, the Safety Officer shall re-inspect the structure. A checklist is provided and designed to assist the Lead Instructor in preparing all materials that are needed for a successful training evolution. This checklist can be used for Firefighter I and II live fire training.
- ▶ One (1) Safety Officer shall be present per floor for live burns.
- ▶ A Safety Officer shall be appointed by the Lead Instructor. This person shall be familiar with the latest edition of NFPA 1500 Standards on Fire Department Occupational Safety and Health Program, and NFPA 1521 Standard for Fire Department Safety Officer. The Safety Officer shall not be assigned other duties that interfere with safety responsibilities.
- ▶ The Safety Officer is responsible and accountable for the safety of all persons on the training grounds, including spectators and the media. He shall have the responsibility for ensuring that the Lead Instructor has complied with the requirements of this procedure.

- ▶ The Safety Officer shall have the authority to intervene and control any aspect of an operation within his/her judgment, a potential or real danger, or unsafe condition exists. This authority includes stopping an operation if necessary.
- ▶ The person must be a member in good standing with his/her sponsoring organization. All live field evolutions shall have an approved Safety Officer appointed in advance as part of the request to use the facility.
- ▶ Additional Safety Officers may be appointed by the Lead Safety Officer. Qualifications for these positions shall be a minimum of Fire Instructor I.

EMS Officer

Qualifications:

- EMT-B or higher

Duties:

- ▶ A EMS/Rehab sector will be established away from the structure in a safe area. The rehab area provides the student and instructor an area free from smoke and contaminants to rest, replenish fluids, and to have their vitals taken when they arrive in this sector.
- ▶ It is recommended to follow all guidelines as defined in Section 4 of the Virginia Department of Fire Programs Fire Instructor Manual (current edition) in regards to extreme temperature training. The rehabilitation area will be established that will have the necessary equipment and supplies to provide hydration and medical monitoring. Emergency Medical Services shall be available on site to handle any injuries.
- ▶ Written reports shall be made on all injuries and all medical aid rendered. It is recommended that the minimum of one BLS (Basic Life Support) provider should be on site during the time actual live fire evolutions are being conducted.
- ▶ Transport capabilities should either be available on site or available to respond to the training site within a reasonable response time.

Rehab Officer

Qualifications:

- As determined by the Chief Officer/Lead Instructor

Duties:

- ▶ Rehab area shall be established away from the active training area.
- ▶ The Rehab area provides the student and instructor as area free from smoke and contaminants to rest, replenish fluids, and to have their vitals taken when they arrive in this sector.

- ▶ Required items to have in the Rehab area:
 - 2 Coolers:
 - One with ice and water)
 - One with ice and a mix (Gatorade, etc. for replacement of electrolytes)
 - Package of cups

Accountability Officer

Qualifications:

- As determined by Chief Officer of Department

Duties:

- ▶ A system of accountability shall be used for all training evolutions at the facility.
- ▶ A department may use its own accountability board as long as it meets all applicable safety standards in place at the time of the drill.
- ▶ The ESRTC accountability board system may be used for those departments who do not have a system. This system includes Command Board, Passports (for the number of squads that will be present at the evolution) and individual blank name tags (one for each student who will participate in the evolution and for each instructor).

Ignition Officer and Stokers

Qualifications:

- Firefighter I

Duties:

- ▶ This person shall add fuels as necessary to produce the desired output of smoke and or heat as per directions from the Lead Instructor. The person must be a member in good standing with his/hers sponsoring organization.
- ▶ Must adhere to Procedure on Fire Building in Burn area.
- ▶ Reports to Lead Instructor.
- ▶ Lead Instructor may appoint additional personnel as stokers to work under the direction of the ignition Officer. All duties and rules of conduct shall apply for these positions.

RIT Officer

Qualifications:

- Firefighter I

Duties:

- ▶ The RIT shall be responsible for establishing and maintain the Rapid Intervention Team.
- ▶ All team members shall be certificated to the Firefighter I level.
- ▶ All team members during the Live Burn Evolution shall be position on a hose line with full PPE and SCBA.
- ▶ RIT team members shall be required to have SCBA mask on and a ready to act position during the evolution.

Water Supply Officer

Qualifications:

- Training and/or experience equal to NFPA Driver Pump Operation NFPA 1002 as approved by Company Chief Officer.

Duties:

- ▶ The water supply needed to conduct the evolution shall comply with NFPA 1403.
- ▶ When conducting live fire evolutions, two independent water sources shall be established.
- ▶ These sources shall include structural firefighting apparatus with at least 500 gallons of tank water available, drafting equipment, or hydrant water supply.
- ▶ One source shall always be maintained as a backup supply and shall be ready to supply water instantaneously.
- ▶ The second source shall be utilized for attack training crews.

Temperature Monitoring System Operator

Qualifications: Firefighter I

Duties:

- ▶ The system is to be activated and tested for the area(s) of training. It should be immediately accessible to the Lead Instructor and Safety Officer to signal temperature levels.
- ▶ This individual shall maintain a presence at the control panel at all times and report levels as appropriate to the lead instructor and safety officer. If they system is unavailable or inoperable, the Lead Instructor shall take steps to assure that the fuel loading procedures are carefully monitored to protect both the structure and the students. Lead Instructor shall report the problem to the ESRFTC Facility Representative.

- ▶ A file must be maintained on every burn that takes place in the facility. This file may be either paper or diskette. The training fire is to be monitored for overall progression and temperature by way of the temperature monitoring device.
- ▶ Follow Temperature Monitoring System procedure & complete the Burn Building Temperature Monitoring Form (see appendix).

Students/Participants

Qualifications:

- Meet the NFPA 1403 minimums for training

Duties:

- ▶ Prior to participating in the live fire training evolutions, the student must have received training to meet the performance objectives for Firefighter I of the following sections of NFPA 1001, Standards for Firefighter Professional Qualifications:
 - General information
 - Fire behavior
 - Self contained breathing apparatus
 - Personal protective equipment
 - Forcible entry
 - Ventilation
 - Rescue
 - Safety
 - Ladders
 - Fire hose, nozzles, and appliances
 - Fire streams
 - Water supply
 - Protective Equipment and Clothing
- ▶ Each student and instructor participating in live firefighting operations shall be equipped with a full complement of protective clothing and equipment that meets the applicable NFPA Standard. This complement of equipment consists of:
 - Firefighting Helmet
 - Firefighting Hood
 - Firefighting Coat
 - Firefighting Bunker Pants
 - Firefighting Boots
 - Firefighting Gloves
 - Self Contained Breathing Apparatus (SCBA)
 - Personal Alert Safety System (P.A.S.S.) device
- ▶ Additional clothing requirements shall include long pants (no short pants), shirts (no tank top or sleeveless shirts) and socks.
- ▶ Students who have facial hair that will prevent the face piece from achieving a proper seal will not be allowed to participate in any part of the evolution requiring the use of SCBA's.

- ▶ Students/participants using these facilities must, at all times, follow instructions given by those providing supervision and must abide by those policies to ensure the safe and effective use of the facility outlined within this procedure.

Section 5: Facility Use Policies

Conducting Live Burn Training: Burn Building

- The temperature monitoring system is to be activated and tested for the area(s) of training. It should be immediately accessible to the Lead Instructor and Safety Officer to signal unsafe temperature levels. If the system is unavailable or inoperable, the Lead Instructor shall contact a facility representative. Alternate methods and means of temperature monitoring may be used in these extreme circumstances. At all times steps should be taken to assure that the fuel loading procedures are carefully monitored to protect both the structure and the students. A file must be maintained on every burn that takes place in the facility. This file may be either paper or diskette.
- The training fire is to be monitored for overall progression and temperature by way of the temperature monitoring device (if applicable). Great care must be utilized by the Lead Instructor in timing fire development with student entry. 800 degrees Fahrenheit is the maximum safe level for the fire ceiling temperature.
- The fire is to be cooled to acceptable interior condition.
- No more than two fires shall be burning at the same.
- All care should be taken to avoid physical contact with the burn tiles. Tiles are susceptible to breakage and damage.
- Application of straight or solid waters systems directly on the padgenite is forbidden.
- Direct fire attack method shall be used in this burn building.
- Fires shall only be constructed in areas designed with fire brick on the floor. Fire outside these locations is forbidden.
- Flares may be used to light fires only if the instructor takes responsibility to remove all slag, trash and flare remains from the building at the end of the exercise.
- Five bales of excelsior are allotted for each live fire evolution. Be careful not to soak the excelsior during the exercise. Wire should be removed from the bale and the building and placed in the trash.
- Fuel for live burns - All combustible materials will be provided.
- Pallets or hay shall not be stacked to prevent egress from the building.

- Helmets or hard hats are required at all times inside the building and anywhere on the concrete pad surrounding the building during the class period.
- Cooling of sensors to permit training in higher temperature ranges is prohibited.
- The use of live persons(s) as a victim in any live fire training exercise is prohibited. Only inanimate objects will be used as victims, such as the fire training dummies, hose dummies, and mannequins.
- There shall be no burning in the attic space. It shall be the responsibility of the instructor to ensure the trap door is closed.

Procedure: Fire Setting

- All fire setting must be done by the designated Ignition Officer.
- When setting fires, stokers or Ignition Officer shall not utilize the interior stairwell as a means of transferring floors.
- Must only light the fire on command from Fire Control.
- No flammable or combustible liquids of any type may be using in starting or maintaining fires.
- Use of Materials:
 - No more than 4 pallets per evolution
 - No more than 1 bale of hay/excelsior per evolution
- If fire conditions warrant, additional venting, fire streams can be put in place to control high levels of heat.

Procedure: Temperature Monitoring System

- One person shall continuously monitor the system
- Turn power on
- Open cabinet and insert 3.5 floppy diskette (formatted)
- Document on paper the initial readings
- Turn on record button
- See procedure for fire setting
- Document the time and temps at the start of the training evolution (entry)
- Document the time, temp and location if the alarm temperature (800 degrees is reached)
- Document the time the evolution ends
- Turn off recording switch
- Turn off system
- Remove diskette
- Lead Instructor and Safety Officer sign documentation
- Turn in the Burn Building Temperature Monitoring Tracking Form and diskette to facility rep at the conclusion of training.

Conducting Live Burn Training: L.P. Gas Prop

- Complete the LP Gas Prop Inspection form before & after exercise
- See following manual pages for start up and shut down of prop

3.0

OPERATION

3.1 INTRODUCTION

This section describes the necessary procedures to operate the **250 Gallon Tank O-100 FIRE TRAINER**.

3.2 SETUP

1. Locate the Tank Mock-Up outdoors; clear of all ground/aerial obstructions on level ground, a minimum of 45 feet downwind of the Propane Supply.
2. Position the Pilot Box Assembly so the pilot shroud is over the LPG Vapor Burner Element as shown in figure 3-1.
3. Remove the wheels from the Pilot Box Assembly. Store wheels safely away from training area.
4. Extend all lines (gas, control, electric) and check for any damage. Check all the gas line Acme fittings for dirt and damage.
5. Remove protective thread cap from the **LPG VAPOR** connection marked "IN" on the Pilot Box Assembly (see figure 3-2).
6. Connect the 50' Vapor Supply Hose to the **LPG VAPOR** connection marked "IN" on the Pilot Box Assembly (see figure 3-2).
7. Remove protective thread cap from the **LPG LIQUID** connection marked "IN" on the Pilot Box Assembly (see figure 3-2).
8. Connect the 50' Liquid Supply Hose to the **LPG LIQUID** connection marked "IN" on the Pilot Box Assembly (see figure 3-2).
9. Remove protective thread cap from the **LPG VAPOR** connection marked "OUT" on Pilot Box Assembly.
10. Connect the 10' steel flex gas hose to the **LPG VAPOR** connection marked "OUT" on Pilot Box Assembly (see figure 3-2).
11. Remove protective thread cap from the **LPG LIQUID** connection marked "OUT" on the Pilot Box Assembly (see figure 3-2).
12. Connect the 10' steel flex gas hose to the **LPG LIQUID** connection marked "OUT" on Pilot Box Assembly (see figure 3-2).
13. Remove protective thread cap from the **LPG VAPOR** connection on Tank mock-up (see figure 3-1).
14. Connect the remaining end of the 10' steel flex Vapor Supply Hose to the **LPG VAPOR** connection on Tank mock-up (see figure 3-1).
15. Remove protective thread cap from the **LPG LIQUID** connection on Tank mock-up (see figure 3-1).
16. Connect the remaining end of the 10' steel flex Liquid Supply Hose to the **LPG LIQUID** connection on Tank mock-up (see figure 3-1).

Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this manual.

Operation 3-1

7. **SEE ABOVE WARNING PRIOR TO PERFORMING THIS STEP!** Once the Pilot Flame has ignited, the vapor main flame for the vapor burner element can be ignited by pushing and holding the "VAPOR" button on the Control Pendant (see figure 3-3).

 **WARNING**

PRIOR TO PERFORMING THE NEXT STEP BE SURE THAT FLAME FROM VAPOR BURNER ELEMENT IS VISIBLE.

8. **SEE ABOVE WARNING PRIOR TO PERFORMING THIS STEP!** Once the vapor flame is visible the AUX button (see Figure 3-3) can be pressed to ignite the liquid propane that supplies the liquid propane burner element.
9. When the students have successfully performed the proper fire fighting technique the instructor should turn off the main flame by releasing the appropriate push button on the Control Pendant, but leave the pilot running. When the main flame is fully extinguished turn the Control Pendant "PILOT" switch to the OFF position.

NOTE

WHEN THE VAPOR/AUX. BUTTON IS RELEASED THE CORRESPONDING SOLENOID VALVE, IN THE PILOT BOX ASSY., CLOSES AND GAS FLOW TO THE BURN PAN STOPS. THE FLAMES WILL CONTINUE TO BURN FOR A SHORT PERIOD DUE TO THE RESIDUAL GAS IN THE SUPPLY LINES.


3.4.2 SHUTDOWN

1. At the end of a training session there will still be fuel in the hoses from the Propane Supply Tank to the Pilot Box Assembly and burner elements. This will have to be burnt off before the equipment is taken apart. It is important that this procedure be followed even if you are not taking equipment apart but are just shutting down at the end of a training session.
2. Close the Liquid and Vapor Propane valves at that Propane Supply Tank.
3. Start the Pilot by turning the "PILOT" switch to the ON position (see Figure 3-3). Verify that Pilot ignited.

 **WARNING**

PRIOR TO PERFORMING THE NEXT STEP BE SURE THAT PILOTS HAVE IGNITED.

4. **SEE ABOVE WARNING PRIOR TO PERFORMING THIS STEP!** Once Pilot Flame has ignited, push and hold the "VAPOR" button on the Control Pendant (see Figure 3-3).

 **WARNING**

PRIOR TO PERFORMING THE NEXT STEP BE SURE THAT FLAME FROM VAPOR BURNER ELEMENT IS VISIBLE.

Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this manual.

Use of Classroom

- Maximum occupancy shall not exceed 70 persons.
- Exits shall not be blocked
- Equipment shall not be removed from the building without expressed written permission from the ESRFTC.
- This is a non smoking building. An outside smoker's butt can is provided. All smoking activities shall remain at least 25 feet from any open window and/or door.
- The user shall be responsible for all damages to facilities and equipment beyond ordinary wear and tear.
- The instructor/presenter shall maintain an orderly classroom.
- The instructor/presenter has the authority to remove persons from the classroom who disrupts the classroom and or fails to follow rules and or instructions.
- The Chief Operational Officer or his/her designee and their sponsoring organization, shall be accountable for the behavior and or actions of his/her personnel. Failure of the chief operational officer or his/her designee and their sponsoring organization to maintain control and discipline of his/her personnel may result in loss of use privileges for the individuals and or the chief operational officer or his/her designee and their sponsoring organization.
- Radios, pagers and cell phones shall be off or in the silent/vibrate mode only, unless otherwise instructed by the instructor/presenter.
- Not responsible for safe food handling practices. All food remaining in the refrigerator shall be throw-out or removed at the conclusion of the training program.
- The water at this facility is approved by the Accomack County Health Department as drinking water.
- The user shall ensure that damages or equipment failures are reported to the ESRTC Chairman immediately. Forms for notifying are provide in classroom building.
- The instructor/presenter is responsible to prepare his or her classroom as necessary for his/her presentation.
- The user shall ensure clean up is conducted at the conclusion of each day of use. Clean up shall include but is not limited to:
 - Pick up and remove all trash to community dumpsters in the area
 - Close all windows and lock all doors
 - Set HVAC at 85 degrees summer and 55 degrees winter
 - Confirm that smokers can has been extinguished
 - Sweep and mop all floors, clean as required all bathroom fixtures and showers
 - Upon dismissal this facility shall be in equal to or better condition than it was found
- There shall be no storage in the central hallway at anytime
- Ensure that the user log is completed for the purpose of documented volume of use.
- In the event of an accident in this facility it shall be the responsibility of the Lead Instructor to complete the Accomack County Government accident notifications, reporting procedures and forms.
- The Lead Instructor shall secure the building/facility upon completion of programs.
- The facility representative shall return all keys to the Knox box.

Use of Grounds

<< to be developed >>

Section 6: Recommended Training Guidelines for Extreme Environmental Conditions

Inclement Weather

In cases of inclement weather, the Lead Instructor may cancel training activities when in his/her opinion the weather represents an undue safety hazard. This may include at the ESRFTC or on the roads leading to the Center.

This procedure establishes the practices to assist in minimizing the hazards presented by training extreme environmental conditions.

Responsibilities

- Instructors of fire/rescue training courses not only bear a moral responsibility for the safety of their students, but are also legally liable for injuries to students resulting from unsafe practices and/or equipment. Monitor environmental conditions and modify training activities as required.
- Students should monitor environmental conditions, maintain proper nutrition and fluid intake and notify instructor and unit supervisor regarding their physical condition.

Definitions

Air Quality Index (AQI): A measurable index that describes air quality levels equivalent to national standards. The index has a scale of 0 to 500, with the higher the reading, the greater the health danger.

Humiture: A value derived from the Heat Stress Index Table that represents the relative effect of a given temperature/humidity.

PPE: Personal Protective Equipment

Heat Stress Index: An index based on the temperature and humidity levels that produce an overall humiture reading.

Heat Stress Index Categories: A table that associates the humiture reading with potential of injury a person may sustain if they operate in that environment.

Wind Chill Index: An index based on the rate of heat loss from exposed skin caused by wind and cold. The scale was adopted by the National Weather Service on November 1, 2001.

Procedure

Poor Air Quality Conditions

Air Quality Index (AQI) is listed as follows:

Color	Level of Health Concern	AQI Value
Green	Good	0-50
Yellow	Moderate	51-100
Orange	Unhealthy for sensitive groups	101-150
Red	Unhealthy	151-200
Purple	Very Unhealthy	210-300
Maroon	Hazardous	301-500

Note: The most important number on the scale is 100 which is the level set by the U.S. Environmental Protection Agency (EPA) to protect public health.

When the AQI rises above 100, personnel involved in training classes shall attempt to limit prolonged outdoor exertion, especially those personnel with respirator conditions (i.e. asthma).

When the AQI rises above 150 (Code Red) no live fire training burns, including vehicle fires, L.P. gas emergencies, L.P., and gas fed burn building shall be conducted.

Extreme Heat Conditions

When the humidity index is in “Danger” or “Extreme Danger” categories, outside training activities should be stopped and either rescheduled or relocated to a climate controlled environment (as feasible).

Instructors can obtain the local temperature and humidity readings by accessing a local weather website at: www.weather.noaa.gov/weather/current/KHEF.html

HEAT STRESS INDEX TABLE

TEMPERATURE (°F)	RELATIVE HUMIDITY								
	10%	20%	30%	40%	50%	60%	70%	80%	90%
104	98		104		110		120		132
102	97		101		108		117		125
100	95		99	105		110		120	132
98	93		97	101		106		110	125
96	91		95	98	104	108		120	128
94	89		93	95	100	105	111	122	

	92	87	90	92	96	100	106	115	122	
	90	85	88	90	92	96	100	106	114	122
	88	82	86	87	89	93	95	100	106	115
	86	80	84	85	87	90	92	96	100	109
	84	78	81	83	85	86	89	91	95	99
	82	77	79	80	81	84	86	89	91	95
	80	75	77	78	79	81	83	85	86	89
	78	72	75	77	78	79	80	81	83	85
	76	70	72	75	76	77	77	77	78	79
	74	68	70	73	74	75	75	75	76	77

Extreme Cold Conditions

When the winds chill reaches a level where exposed skin can freeze in 30 minutes or less, outside training activities should be stopped and either rescheduled or relocated to a climate controlled environment (as feasible).

Instructors can obtain local temperature and wind speed readings by accessing local weather website at: weather.noaa.gov/weather/current/KHEF.html.

Other Environmental Conditions

Precipitation in any form will in itself not be a cause for class cancellation unless it affects the safety of students.

Rain Conditions will typically not affect outdoor class scheduling unless the storms are severe in nature, lightening is involved, or the amount of precipitation interferes with safe training environment (i.e. trench rescue, etc.). Class instructors will need to exercise good judgment in these types of situations.

Frozen precipitation (snow, sleet, etc.) may affect any outdoor or indoor class scheduling.

High wind conditions may affect classes where apparatus or equipment has limitations related to wind speeds (i.e. ground and aerial ladders). Class instructors will need to exercise good judgment in these types of situations and may need to refer to apparatus manufacturer recommendations or other accepted training resources.

Instructions

1. Locate the current temperature (F) degree on the “Temperature” scale.
2. Follow that line horizontally across until the closes relative humidity column is lined up.
3. The number at the intersecting point of those two components is the humiture reading. If personnel are operating in direct sunlight, add another 10 degree to the humiture reading. If personnel are wearing personal protective clothing then add another 10 degree to the humiture reading.
4. Take the final humiture reading and refer to the categories listed below.

HUMITURE OF	DANGER CATEGORY	INJURY THREAT
Below 80 Degree	None	Little or no danger under normal circumstances.
80 Degree - 90 Degree	Caution	Fatigue possible if exposure is prolonged and there is physical activity.
90 Degree - 105 Degree	Extreme Caution	Heat cramps and heat exhaustion possible if exposure is prolonged and there is physical activity.
105 Degree - 130 Degree	Danger	Heat cramps or exhaustion likely, heat stroke possible if exposure is prolonged and there is physical activity.
Above 130 Degree	Extreme Danger	Heat stroke imminent!

Recommended Medical Parameters

The information listed below is intended for use as a guideline for the evaluation of firefighters during baseline and post entry physical evaluations. The final decision on allowing a person to begin or continue training must be based on the best judgment of the onsite medical personnel according to all the information available in each individual situation. Students and instructors should not be allowed to begin or continue training against medical advice. The Lead Instructor shall ensure that medical advice is followed and not override that advice.

- Blood Pressure: diastolic greater than 105 mm HG or a resting blood pressure greater than 160/100 mm Hg
- Pulse: greater than 70 percent of the maximum heart rate (220-age)
- Respiratory Rate: greater than 24 per minute
- Temperature: greater than 99.5 degree F (oral) or greater than 100.5 degree F (core) or less than 98.0 deg. F (core)
- Mental Status: altered status such as slurred speech, clumsiness, or weakness
- Skin: temperature, color, injuries

A student or instructor who does not meet these guidelines should be allowed to extend his or her stay in rehab and then be reevaluated. If after a reasonable period, in the opinion of the EMS Officer, these guidelines cannot be met, the person should be removed from further participation for the remainder of the day and the lead instructor should be notified.

Nothing in this guideline is to replace the judgment of onsite medical personnel that would indicate that a person is in medical distress and in need of immediate transport to a medical facility. This form should be turned in to the Lead Instructor as part of the normal school package.