

Appendix B-3

Training Policy-Live Fire Training

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Current Revision: September 2005

This policy is established to identify the minimum acceptable guidelines necessary relative to live fire training courses conducted by the New York State Office of Fire Prevention and Control. National Fire Protection Association Standards #1403 (1997) and #1500 and other standards were used as guidelines for the development of this policy.

I. General Guidelines

- A. When live fire training evolutions are conducted, a minimum of two qualified and certified state fire instructors shall be assigned. The instructor with responsibility of the course shall be the lead state fire instructor with the second instructor to serve as safety state fire instructor. If a second state fire instructor is not available to serve as the safety officer, a qualified and certified county fire instructor, municipal training officer or municipal fire instructor may be used.

If the second instructor is not a state fire instructor, the State of New York is not responsible for payment to such person. If the second instructor is a state fire instructor his/her name shall appear on the Proposed Fire Training Schedule and any relevant Schedule Change Notices. The second state fire instructor shall also submit an Instructor Training Report card and Pay Voucher for the affected units.

For the purposes of this policy, the term >certified= shall mean the person shall be currently certified for the course being conducted; while the term >qualified= shall mean the person shall have successfully completed a respirator physical, been issued personal protective equipment and have on-site access to self-contained breathing apparatus.

Both, the lead state fire instructor **and** the safety state fire instructor shall have completed the >Live Fire Training Certification (course 21-0069), Live Fire Safety Training (course 1A) and Conducting Live Fire Training Evolutions (course 1B) conducted by the Office of Fire Prevention and Control (effective 3/2003).

- B. If additional support personnel are required, these individuals shall be experienced and trained firefighters/fire officers with a minimum of the following training:

§ Firefighter I, Basic Firefighter or Fire Essentials, and
§ Intermediate Firefighter or Initial Fire Attack, and
§ Live Fire Safety Training (1A) and Conducting Live Fire Training Evolutions (1B)

- C. Live fire evolutions will only be authorized in the following outreach training courses and the specific lessons listed:

- \$ Course 1S, Firefighter I – one lesson using extinguisher training, two lessons using structural burns and one lesson using a passenger vehicle burn
- \$ Course 92, Intermediate Firefighter - 3 units maximum
- \$ Course 1T, Firefighter II – lessons using propane burn and structural burn
- \$ Course 01, Aircraft Rescue and Firefighting - unit 4

The live fire evolutions shall be conducted in accordance with all applicable laws, regulations and procedures.

- D. Two weeks prior to any live fire training evolution the lead state fire instructor shall contact the Fire Services Bureau Chief or Deputy Chief, or if unavailable, a Fire Prevention Bureau Chief or Deputy Chief. The state fire instructor shall advise OFPC of the following:

- \$ date
- \$ time
- \$ location
- \$ safety officer

Fax notification of this information to the Office of Fire Prevention and Control Fire Service Bureau at (518) 474-3240 is accomplished by using the form attached to this policy (see attachment #3). In the event that the session needs to be postponed, the lead state fire instructor shall contact the Fire Services Bureau Chief or Deputy Chief, or if unavailable, a Fire Prevention Bureau Chief or Deputy Chief and advise of the change.

Courses conducted by OFPC staff or adjunct instructors at the Academy of Fire Science, Montour Falls, or Camp Smith Annex are exempted from this provision.

- E. Only personal protective equipment issued by the Department of State Office of Fire Prevention and Control including self-contained breathing apparatus and spare cylinders shall be available and used by state fire instructors. No live fire training of any kind shall be conducted unless self-contained breathing apparatus are available and used. Support instructors will provide their own personal protective equipment and SCBA. This PPE shall be in good repair and meet appropriate OSHA, NFPA and NIOSH standards.
- F. All instructors involved in the live fire training evolution shall be thoroughly familiar with the Office of Fire Prevention and Control's respiratory protection policy and adhere to the requirements outlined within such policy, which shall be provided by the Office of Fire Prevention and Control. The lead state fire instructor will provide a copy of the policy to the support instructors. Instructors or students with facial hair (beards, mustaches, side burns) that interfere with proper SCBA face piece seal are prohibited from participating in live fire evolutions.
- G. All live structural fire evolutions shall be conducted at designated department, town, or county training facilities. Such structures shall be of non-combustible or fire resistive construction as those terms are defined in the Uniform Fire Prevention and Building Code as designed for fire training. **Acquired structures are prohibited for live fire evolutions in**

courses sponsored by the Office of Fire Prevention and Control.

II. Facilities

A. Structural live fire burn facilities shall meet the following criteria:

- ☞ buildings shall be designed for such use; all components of the building shall be in good structural condition, the building shall be maintained and the systems (parts: window shutters, walls, hand rails, etc.) shall not be compromised.
- ☞ shall be able to vent the building quickly in the event of an emergency (including proper procedures and personnel to carry out the emergency vent);
- ☞ shall have adequate emergency escape routes in the event of an emergency;
- ☞ vehicles shall not be used to simulate a building; and
- § an adequate water supply to extinguish any and all fires and support a back up line shall be available. An adequate water supply is defined as follows:
 - § 1 attack line @ 125 Gallon Per Minute (GPM), 1 backup line @ 125 GPM, 1 safety backup line @ 125 GPM total flow minimum 375 GPM for 10 minutes equaling a minimum total water supply of 3,750 gallons from static sources, water tenders (tankers) or two hydrants with a fire flow of at least 500 GPM
 - § The attack line shall have a different water source than the backup or safety lines. For example: two engines drafting from the same static water source or two engines supplied from two different hydrants would be acceptable.

B. The lead state fire instructor will make the final determination as the suitability of the training facility to be used. This state fire instructor shall contact the Fire Services Bureau of the Office of Fire Prevention and Control if there are any questions pertaining to the facility prior to the scheduled class.

Fires shall only be ignited when the direction of prevailing winds is away from exposures. If wind conditions are unsatisfactory, drills shall be postponed.

Use only those fuels, solids or liquid, which do not produce excessive smoke. Use only the amounts necessary to achieve training objectives.

Toxic materials, as defined in **6 NYCRR, Section 371.1(d)**, such as industrial waste solvents, are not suitable to use in live fire training and shall not be used. When burned, such liquid wastes, often contaminated with highly toxic impurities, enter the atmosphere and constitute a public health hazard. Use of all flammable liquids (liquids with flash points less than 100 degrees Fahrenheit), including gasoline, is restricted as defined in Conducting Evolutions section 6.

All participating personnel shall be under the direct supervision of the instructor and be equipped with full protective clothing and self-contained breathing apparatus.

An engine company under an experienced officer shall stand by with a charged hose line(s) to serve as back-up safety lines.

A Firefighter Assist and Search Team (FAST) consisting of a minimum of four (preferably six) firefighters shall stand-by with rescue equipment as specified in this policy (see attachment #2). These firefighters shall not be students in the course and may staff the back-up line, however, at least four firefighters need to be available for rescue. A means of communications shall be established between the FAST team and both the lead state fire instructor and the safety state fire instructor. Communications may be direct, face to face, by hand signals or radio.

III. Training Simulators and Vehicles

A. Non-structural live fire training burns (examples include: exterior fires, vehicle fires, and pit fires), may occur at other suitable training facilities that comply with the following: other training facilities shall be a safe distance from other exposures and be appropriate for the evolution; all safeguards dealing with identified safety features, requirements of personnel, ignition of the fire, etc., shall be followed; and vehicles used during vehicle fire training shall have the following safeguards instituted:

- ☞ fuel tank and battery removed prior to live fire training;
- ☞ shock absorbing bumpers removed or absorbers drilled to prevent over pressurization and possible rupture;
- \$ shock absorbers shall be cut or drilled;
- ☞ inspection of vehicle interior and trunk area for presence of flammable or hazardous substances; and
- \$ gas filled hood and truck cylinders shall be cut or removed.

IV. Instructor Duties and Responsibilities

- A. A state fire instructor shall be the designated safety officer for all evolutions conducted in the outreach training program.
- B. The safety officer has the authority to intervene and control any phase of the live fire training evolution when in his/her judgment, a potential or actual danger, accident or unsafe operation exists. The safety officer is responsible for the safety of all persons on

the scene, including students, instructors, visitors and spectators. He/she will not undertake any duties that would interfere with his/her safety responsibilities. General duties include:

- 👉 prevention of unsafe acts;
- 👉 removal of unsafe conditions; and
- 👉 the authority to suspend an evolution.

- C. Additional safety personnel, as deemed necessary by the safety officer, shall be strategically placed within the training area to react to unplanned or threatening conditions.

The lead instructor shall accompany the fire attack team, with a maximum of five students. The safety instructor will stand-by with the back-up team with a maximum of five students. This will maintain the required five students to one instructor ratio.

- D. A pre-burn briefing shall be conducted by the instructor for all participants. All evolutions shall be described and crew assignments made at this time.
- E. Fire ground communications and accountability shall be established to provide for coordination between the instructor, interior and exterior operations, the safety officer and back-up personnel. Communications may be direct, face to face, by hand signals or radio.
- F. Emergency evacuation of the building shall be planned and provided for. The signal for evacuation shall be discussed and demonstrated prior to any evolutions.
- G. Emergency medical services shall be available to treat any injuries. Written reports shall be made on all injuries and medical treatment rendered. A copy of such report should be mailed to the Office of Fire Prevention and Control as soon as possible. In the event of a potentially serious injury, or injury requiring the firefighter to be admitted to the hospital, the Office of Fire Prevention and Control Fire Service Bureau shall be notified immediately at (518) 474-6746. This is a 24 hour business number at which the caller will provide the following information:

- \$ Name, location and course
- \$ Name of lead SFI
- \$ Call-back number
- \$ Nature and extent of injury

Minimum on scene medical levels shall consist of at least one certified first responder equipped to provide initial treatment for burns, trauma, or cardiac related injuries. The proper method for accessing the local emergency medical system shall be identified, provided to all participants and reviewed during the briefing session.

- H **No person shall be placed inside the structure to play the role of victim.**

- I. Sufficient back-up lines will be provided to ensure adequate protection for personnel on attack lines. This back-up shall be fed by a separate source (engine) from the main attack lines to maintain proper protection.
- J. Instructors shall wear full protective clothing and self-contained breathing apparatus while igniting training fires and while supervising the activities of the fire attack crew in a building or in proximity to an open fire.
- K. A rehabilitation area shall be established. It shall consist of a place for firefighters to rest and replenish fluids. There will be a minimum of 32 ounces of water available per participant. An EMS person shall be assigned to the rehab area to provide medical monitoring.

V. Conducting Evolutions

- A. The Live Fire Evolution Checklist (attachment #1) shall be reviewed and completed prior to the start of each live fire evolution. The completed checklist will be forwarded to the Office of Fire Prevention and Control Fire Service Bureau upon course completion. Checklist for evolutions conducted at the Academy of Fire Science or Camp Smith shall be filed with the Chief, Fire Academy Bureau.
- B. Fire attack crews shall be under the direct supervision of the instructor. Crew size is limited to five firefighters.
- C. Instructors shall make a head count of firefighters entering and exiting a building during an attack evolution. Use of an accountability system is necessary to assure all personnel are accounted for.
- D. The instructor will control the materials being burned and ignition of the training fires. He/she shall ignite the fire(s) under the direct supervision of the safety officer. Both shall wear full protective clothing including self-contained breathing apparatus. The decision to ignite the training fire shall be made by the instructor in coordination with the safety officer. Fires will be lit only after a charged hose line is in place to provide protection for the person(s) igniting the fire.
- E. A thorough search of the building shall be done just prior to ignition to assure no one is in the building.
- F. **FLAMMABLE OR COMBUSTIBLE LIQUIDS ARE NOT PERMITTED.**

The only allowable exceptions to this prohibition are:

- ☞ One gallon or less of combustible liquids in pans for use with fire extinguisher training;

- 👉 100 gallons or less of flammable or combustible liquids in pits used in conjunction with aircraft firefighting;
- \$ Ignitable liquids used in support of Fire/Arson investigation training by OFPC Arson Bureau staff; and
- \$ All evolutions shall be conducted outside.

Fuels shall meet the following criteria:

- 👉 typical class >A= combustibles only;
- 👉 no tires;
- 👉 no pressure treated lumber;
- 👉 each set shall not exceed 150 pounds of class >A= combustibles in training rooms 10' x 15' or larger. Examples include: three hardwood pallets and a couch and chair;

NOTE: USE OF OVERSTUFFED FURNITURE SHOULD BE MINIMIZED AS THEY MAY CREATE EXCESSIVE SMOKE AND/OR TOXIC GASES.

- 👉 If smaller training rooms are to be used, the fuel load shall be reduced proportionally. For example, a 10' X 10' room will have a maximum of 100 pounds.
- G. The fires shall be extinguished without an excessive period of pre-burn as soon as the training objectives have been satisfied.
 - H. LPG or natural gas fueled simulators are acceptable for use during the live fire training evolutions. Use of these training simulators constitutes live fire training and necessitates compliance with this policy.
 - I. Flashover style trainers are not permitted for structural firefighter training operations in Office of Fire Prevention and Control courses.

VI. Live Fire Evolution conducted by the Office of Fire Prevention and Control Arson Bureau

- A. This policy shall apply to fires conducted by OFPC's Arson Bureau for the creation of fire investigation training aides and scenarios, except as noted in paragraph B and E of this section. All fires shall be conducted by Arson Bureau staff members designated by the Arson Bureau Chief.
- B. All structural fires conducted at the Academy of Fire Science training building or local municipal training centers shall comply with this policy.

Exception: Limited quantities of flammable or combustible liquids may be used to create indications of pour patterns, etc. Application of the ignitable liquid shall be by a designated Arson Bureau staff member. Appropriate means of extinguishment shall be in place and staffed prior to placing the ignitable liquid. Ignition should occur immediately after pouring to minimize flammable vapor build up.

- C. Fires in the burnable APods@ at Montour Falls and Camp Smith are not classed as interior structural fires. Appropriate extinguishing appliances (apparatus or hand held extinguishers) with staffing shall be available.
- D. To accomplish complete forensic examination, vehicle fire conduct by the Arson Bureau are exempted from the requirements to remove, drill or secure the item listed in section III. Arson Bureau staff shall establish a minimum safety zone of 200' during free burning of vehicles. Extinguishment will be accomplished with large caliber (2 1/2" or larger) streams and the vehicle will be allowed to cool before final extinguishment is accomplished.
- E. K-9 training aids prepared by Arson Bureau staff for the specific purposes of the canine accelerant training program, re-certification program or associated in-service training shall not be considered Live Fire Training as defined in this policy. Burns for the construction of these training aids shall be conducted outside and safely away from structures with appropriate extinguishing appliances (apparatus of hand held extinguishers) present.

VII. Smoke Evolutions

- A. Training evolutions that utilize smoke from actual fires produced within the building or structure are considered live fire evolutions and shall be governed by this policy.
- B. Training evolutions that utilize smoke from >authorized= artificial smoke generators or from actual exterior fires with smoke safely piped into the structure are not considered live fire evolutions but rather smoke evolutions and are governed by items C through F below.
- C. Authorized smoke generators, at present, include the following:

*Rosco
Comet 4
Ziamatic
Tempest
LeMeitre*

- D. Persons desiring other generators to be authorized for use in New York State fire training courses shall submit all available information, including MSDS, to the Office of Fire Prevention and Control for review.
- E. Smoke evolutions may be conducted during any state training course where the course objectives allow practical evolutions involving the use of smoke. Provisions to quickly vent the affected area shall be provided. Smoke evolutions need only a lead state fire instructor.
- F. NIOSH approved SCBA shall be utilized by the instructor and participants during all smoke evolutions.



James A. Burns
State Fire Administrator

New York State Fire Training Program
Office of Fire Prevention and Control Live Fire Training Policy
Live Fire Evolution Checklist

Course Name _____ Course Number _____

Unit Number _____ Date _____

- 1) Lead instructor has reviewed the Office of Fire Prevention and Control Live Fire Training Policy immediately prior to planning and conducting the exercise(s).
- 2) Safety instructor has reviewed the Office of Fire Prevention and Control Live Fire Training Policy immediately prior to planning and conducting the exercise.
- 3) Support Instructors have reviewed the Office of Fire Prevention and Control Live Fire Training Policy immediately prior to planning and conducting the exercise.

Notification and Permits:

- 1) Necessary authorization to use facility for live fire evolutions has been obtained in accordance with local procedures. A copy of this authorization is on file with _____. (attach copy if applicable)
- 2) Necessary burn permits have been obtained. A copy of this authorization is on file with _____. (attach copy if applicable)

Preburn Planning:

- 1) Establish location of command post
- 2) Establish location of rehabilitation center
- 3) Establish position of all apparatus
- 4) Establish positions of all hoselines (including backup lines)
- 5) Establish location of emergency evacuation assembly area
- 6) Determine water supply meeting required total water supply
 - a) Hydrant
 - b) Water Tender (Tanker)
 - c) Drafting pond
- 7) Obtain weather report (attach copy)
- 8) Establish operations area and mark perimeter
- 9) Establish communications with operations area and with dispatch center, communications may be direct, face to face, by hand signals or radio

Preburn Procedures:

- 1) All participants briefed on the following:
 - a) Building layout
 - b) Crew and instructor assignments
 - c) Safety rules and accountability procedures
 - \$ safety briefing about burn

- \$ safety rules to follow
- \$ accountability procedures
- d) Building evacuation procedure
- e) Demonstrate evacuation signal
- f) Building walk through with students
- 2) Hoselines
 - a) Backup line is of adequate flow and supplied from a separate source as primary lines
 - b) Lines charged and flow tested
 - c) Supervised by qualified personnel
 - d) Adequate number of personnel and proper equipment
- 3) Necessary tools and equipment positioned
- 4) Personnel check
 - a) OSHA approved full protective clothing
 - b) NIOSH approved self contained breathing apparatus
 - c) All personal protective equipment donned and working properly
- 5) The fire setup is proper for the intended evolution
 - a) the instructor knows what material is being burned
 - b) The fire load does not exceed specifications of the Live Fire Training Policy
 - c) No flammable liquids or combustible liquids are used in interior fires
 - d) Flammable and combustible liquids are only used in exterior extinguisher fires and ARFF training
 - e) The fire load configuration does not restrict safe egress for the participants
- 6) EMS status
 - a) Instructor has verified that adequate EMS is available
 - b) Instructor has outlined the emergency medical procedures to be followed in the event they are needed
- 7) Rehab area
 - a) EMS personnel are assigned to monitor participants
 - b) Fluids are provided (minimum 32 oz. water per participant).
- 8) FAST Team
 - a) Minimum 4 - preferably 6 - firefighters
 - b) Equipment is staged
 - c) Means of communications is established between FAST team and both State fire instructors

Postburn Procedures:

- 1) All personnel accounted for
- 2) Training critique conducted
- 3) Documentation of injuries incurred and treatment rendered

Instructor Signature: _____

Date _____

Attachment #2 Live Fire Policy

FAST TEAM EQUIPMENT

- G 2 sets of forcible entry tools (halligan/flat ax)
- G 2 six foot hooks (**steel recommended**)
- G 2 search ropes - 150' X 1/4" dia.
- G 1 cut off saw (w/blade appropriate for structure type) or ventilation chain saw
- G 1 reciprocating saw (**battery operated recommended**)
- G 1 Stokes style basket
- G 2 Fire Service Ground Ladders appropriate for the size of structure
- G 1 Thermal Imaging Camera (Optional)
- G Spare SCBA
- G Spare SCBA bottles
- G 1 Rescue Rope - 150' X 2" dia Life Safety
- G 6 pieces 24' X 1" tubular webbing
- G 2 - 2" and 2 - 4" split pulleys
- G 6 large gate carabiners
- G BLS EMS Equipment (C-collars, AED (**if available**), O2, 1st aid kit)
- G Charged hose line availability

INDIVIDUAL FAST TEAM MEMBER=S EQUIPMENT

- G Full PPE
- G SCBA
- G Pass Device
- G Portable radio - min. of 1 per 2 FF=s
- G Personal light - hands free
- G **Personal rope - 35' X 3/8" dia**
- G 1 - Large gate carabiner
- G knife
- G Wire Cutters
- G Doors Chocks
- G Forcible Entry Tool

Attachment #3

NEW YORK STATE
OFFICE OF FIRE PREVENTION & CONTROL

LIVE FIRE NOTIFICATION

FAX

TO: OFPC FIRE SERVICE BUREAU (518) 474-3240

FROM:

DATE:

LEAD INSTRUCTOR:

NAME:

SFI NUMBER:

SAFETY INSTRUCTOR

NAME:

SFI () CFI () MTO () MFI ()

COURSE:

NAME:

COURSE NUMBER -

LESSON NAME & NUMBER:

COUNTY BEING TAUGHT IN:

DATE OF LIVE FIRE:

TIME (24 HR):

LIVE FIRE LOCATION:

NAME OF FACILITY:

STREET ADDRESS:

NOTE: FAX DUE TO OFPC AT LEAST TWO WEEKS PRIOR TO LIVE FIRE TRAINING.