

Standard Operating Guidelines



GENESEE COUNTY LIVE BURN TRAINING FACILITY

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STANDARD OPERATING PROCEDURE

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Genesee County Emergency Management Office Fire Training Center

INTRODUCTION

The Genesee County Live Fire Training Facility has been designed to afford training opportunities for various public safety disciplines. The main facility is comprised of a Fire Facilities, Inc.; Wesco steel fire training tower (Live Burn Training Facility or LBTF) which provides the basis for both "live fire" along with smoke conditions for training and skill enhancement for interior firefighters. The facility is adaptable to the point where rooms with "moveable" partitions in the two-story and parts of the four-story, allow law enforcement as well as other governmental agencies to utilize this for their tactical series of training evolutions.

To ensure the maximum effective use of this facility and the surrounding training grounds, this procedure has been developed. Identifying a process during operations as well as numerous safety procedures, these guidelines aim to provide the best possible training with the highest margin of safety.

It is the intent of the Genesee County Emergency Management Office to provide a safe and realistic training facility as well as one which will enhance the learning opportunity and skill development of those who use this facility.

Train safe ... train often.

Chapter 1 Scope

- 1-1 The SOPs apply to all personnel; including staff, instructors, students, visitors and others who may have an opportunity to use the Genesee County Live Burn Training Facility and associated Training Grounds.

Chapter 2 Purpose

- 2-1 The purpose of this Standard Operating Procedure (SOP) is to minimize the risk to all participants, promote good housekeeping and ensure the maximum life of this building.

Chapter 3 Definitions

- 3-1 **Participant** – anyone actively involved in training evolutions including students, staff and instructors.
- 3-2 **Evolution-** A set of prescribed actions that result in an effective fireground activity.
- 3-3 **Staff Instructor** –The Genesee County Emergency Management Office maintains a staff of County Fire Instructors specifically trained and assigned to provide supervisory and safety support to County agencies wishing to use the Live Burn Fire Training Facility.
- 3-4 **"Assigned Instructor Briefing Checklist"** – The "Assigned Instructor Briefing Checklist" will be used as the minimum standard of safety. At no time will live evolutions be initiated without the appropriate safety briefing, inspection of Personal Protective Equipment (PPE), tour of the facility, appropriate staging of apparatus ensuring minimum required water supply and placement of hoselines. In addition, the location of the Command Post, Safety Officer Position and location of emergency shutdown controls will be reviewed. If live fire evolutions are to be conducted, this briefing should include a review of the Temperature Monitoring Panel.
- 3-5 **FAST Team** – A Firefighter Assist and Search Team shall be established and will consist of at least four (4), preferably six (6), interior qualified firefighters. This team will be assigned to a designated staging area for the duration of the live fire operations, unless otherwise released.

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3-6 **Adequate Water Supply-** When conducting "live fire" scenarios under County auspices (i.e., the supervision of County Fire Instructors) the National Fire Protection Association guidelines will be followed as outlined in NFPA 1403, "Standard on Live Fire Training Evolutions" which states:

- **The instructor**-in-charge of the live fire training evolutions shall determine, prior to each specific evolution, the number of training attack lines and backup lines that are necessary.
- 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 360L/min (95 GPM).
- The instructor-in-charge shall assign the following personnel:
 1. One instructor to each functional crew, which shall not exceed 5 students
 2. One instructor to each backup line
 3. Additional personnel to backup lines to provide mobility
 4. One additional instructor for each additional functional assignment

NOTE: 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.

3-6.1 For live burns conducted as part of a NYS OFPC class, the following requirements will apply:

Pursuant to the requirements as developed by the New York State Office of Fire Prevention and Control (OFPC), an adequate water supply to extinguish any and all fires along with supporting a backup line will be provided. An Adequate Water Supply is defined as follows:

- One (1) Attack line @ 125 GPM
- One (1) Backup line @ 125 GPM
- One (1) Safety Backup line @ 125 GPM

For a total of three (3) lines capable of flowing 375 gallons of water per minutes for 10 minutes, for total of 3,750 gallon of available water. Additionally, there will be two separate sources of water utilized. E.g.: an engine at draft supply an attack and backup line; with a second engine at draft supplying a second backup line; another setup may include a tanker with a minimum of 1,250 gallons of available water providing supply to the backup line.

3-7 **Ignition Officer-** An individual, who is not a student, shall be designated as the "ignition officer" to control the materials being burned.

3-8 **Motor Pump Operator** –An individual assigned to the operation of an engine during live burn operations. An MPO must be assigned to each engine used for an evolution who is both authorized and qualified to operate the engine. For evolutions using **County ESU 4, a County Fire Instructor**, who is not part of the class instructor staff, will be utilized as MPO.

3-9 **Safety Officer-** An individual appointed by the requesting agency as qualified to maintain a safe working environment at all training evolutions.

3-10 **Student.** -Any person who is present at the live fire training evolution for the purpose of receiving training.

3-11 **Training Grounds.** For the purpose of this procedure, the area designated as the Live Burn Training Facility, the surrounding staging area, the bleachers, as well as the pond draft site comprise the geographical "training grounds; that area which comprises the Operations, Staging and Spectator areas.

3-12 **Clean-up.** The removal and proper disposal of all items brought to or used during training evolutions, including debris left in burn room, the car fire area as well as waste from the use of paintball guns.

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- 3-12.1 Evolutions conducted by law enforcement and other agencies using firearms with live rounds as part of the training, require the “policing” of brass upon the conclusion of the training due to the significant slip/trip safety hazard imposed by the spent rounds for others using or working in the area.
- 3-13 **Operations Area.** Area defined as all areas where live fire and support operations are being conducted.

Chapter 4 General Use of Facility

- 4-1 The Genesee County Office of Emergency Management Services requires that each user be briefed of contents of this SOP before using the facility. Copies of the SOPs will be sent to each fire department.
- 4-2 A pre-burn plan shall be prepared and utilized during the pre-burn briefing. All features of the training area and structure(s) shall be indicated on the pre-burn plan. A copy will be submitted with fire department's request for use of the LBTF.
- 4-3 The Fire Department Officer-in-charge or designee requesting the use of the facility will ensure that all students participating in a live burn will have successfully completed the New York State Firefighter I or equivalent firefighting certification unless currently enrolled in the Firefighter I course.
- 4-4 Participants shall be in full Occupational Safety and Health Administration (OSHA) compliant protective clothing.
- 4-4.1 Students with beards or any facial hair that may interfere with a proper face mask seal, shall not be allowed to wear SCBA or be permitted to participate in evolutions which may expose them to smoke or toxic environments.
- 4-5 Spectators will be restricted to an area outside of the operations area. Personal protective equipment is not required in this area.
- 4-6 Problems concerning operational issues with the facility will result in termination of all activities. Activities are not to resume until the situation can be corrected.
- 4-7 The Fire Department requesting use of the facility must make arrangements for emergency medical support. In the event that the Fire Department is unable to provide emergency medical support, the Genesee County Office of Emergency Management staff may be able to provide the medical needs.
- 4-7.1 Emergency Medical support will include a minimum of one (1) medic and basic medical equipment. The minimum requirement for the person serving as a medic for the fire department is a valid Certified First Responder (CFR).
- 4-7.2 Minimum medical requirements ***do not*** require a transporting ambulance be on site.
- 4-8 Facility radio communications shall be restricted to I/TAC.
- 4-9 **Weather forecast.** Because of the construction of the live burn facility, as well as the openness of the site, care must be exercised when conducting evolutions when electrical storms with lightning strike potential may pose a safety issue. Awareness of weather conditions, wind velocity and wind direction shall be maintained, including a final check for changes in weather conditions immediately before actual ignition.

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Chapter 5 Burn Building Fuels

- 5-1 The quantity of fuel used shall be limited to the amount necessary to meet the objective. The assigned Staff Instructor(s) will review and approve the fuel load.
- 5-2 Class A fuels are the only fuels permitted in the burn building (LBTF).
- 5-2.1 Example would be 150 lbs of pallet-like material, excelsior, paper, cardboard, straw, hay and other ordinary combustibles.
- 5-3 Prohibited materials include pressure treated wood, rubber, tires and plastic materials, straw or hay treated with pesticides or harmful chemicals are prohibited in the burn building.
- 5-3.1 Fuels that may be contaminated by toxic or unknown materials shall not be used.
- 5-3.2 Class B fuels, flammable or combustible liquids, shall be prohibited in the burn building.

Chapter 6 Internal and External Instructors

- 6-1 No agency will be permitted to use the facility without an assigned **Staff Instructor** on site.
- 6-1.1 The Genesee County Office of Emergency Management Services will arrange for an assigned **Staff Instructor(s)** to be present each time the facility is used.
- 6-2 One Fire Department **Safety Officer** outside and one **Interior Safety Officer** shall be the minimum assigned for all live burns in the burn building.
- 6-3 The Fire Department **Safety Officer** shall not be assigned other duties that will interfere with his or her primary responsibility of safety.
- 6-4 The assigned **Staff Instructor(s)** will not substitute for the Fire Department Safety Officer or Fire Department Training Officer. The requesting Fire Department must supply a minimum of one (1) **Safety Officer** and one (1) **Training Officer**. The Fire Department Chief Officer and Training Officer will be in charge of the Training Lesson Plan and its content, pending approval by the assigned Staff Instructor.
- 6-5 The Fire Department Line Officer or Training Officer to student ratio shall be 1 to 5 for both interior and exterior operations.

Chapter 7 Assigned Staff Instructor

- 7-1 The assigned **Staff Instructor(s)** shall be in full Occupational Safety and Health Administration (OSHA) compliant personal protective equipment (PPE) upon entering the training grounds
- 7-2 Safety shall be the primary responsibility of assigned **Staff Instructor(s)** at all times.
- 7-3 The assigned **Staff Instructor(s)** shall identify a recognized departmental accountability system. In the absence of a departmental accountability system, the county system will be used.

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- 7-4 The assigned **Staff Instructor(s)** shall have the authority and responsibility of keeping the training grounds risk-free. The assigned instructor(s) shall verify that a Fire Department Safety Officer or Officers have been selected prior to briefing the students.
- 7-5 The facility shall be visually inspected for damage by the **Staff Instructor(s)** along with the **Fire Department Safety Officer** prior to use. Any damage or deficiencies noted will be reported in writing to the Training Technician. Training shall not be permitted in the event burn building damage is severe enough to affect the safety of the participants.
- 7-6 It is the responsibility of the assigned **Staff Instructor(s)** to postpone or terminate all activities in the event that any operational issues or problems have been identified with the facility; completing a written report to the Fire Coordinator or the Deputy Coordinator within twenty-four (24) hours of occurrence. Activities are not to resume until the situation can be corrected.
- 7-7 The assigned **Staff Instructor(s)** will ensure that the facility is secured and all County-owned equipment is cleaned and stowed away. All trash, garbage and spent material will be picked up and disposed of by the agency using the Live Burn Training Facility or Training Grounds after all training evolutions are complete.
- 7-8 The assigned **Staff Instructor** or one of the assigned instructor(s) is responsible for ensuring proper radio communication is in place to readily contact fire dispatch, ambulance or other help, if needed.
- 7-9 The **Staff Instructor(s)** must complete all necessary injury forms and notify the Fire Coordinator or Deputy Fire Coordinator on the day of occurrence. The Fire Coordinator or his Deputy Fire Coordinator shall notify the participant's Chief within twenty-four (24) hours.

Chapter 8 Fire Department Safety Officer

- 8-1 A minimum of one (1) Fire Department **Safety Officer** is required.
- 8-2 The Fire Department **Safety Officer(s)** shall be visibly identified by means of a vest furnished by his/her department or one supplied by Genesee County Office of Emergency Management Services.
- 8-3 The **Safety Officer** shall have the authority, regardless of rank, to intervene and control any aspect of the operations when, in his/her judgment, a potential or actual danger, accident or unsafe condition exists.
- 8-4 The responsibilities of the **Safety Officer** shall include, but are not limited to, the following:
 - (1) Prevention of unsafe acts
 - (2) Elimination of unsafe conditions
- 8-4.1 The **Safety Officer** shall provide for the safety of all persons using the LBTF, training grounds and related training facility including students, instructors, visitors and spectators.
- 8-4.2 **Supervises additional Fire Department Safety Officers as needed.** Additional safety personnel as deemed necessary by the Safety Officer may be placed strategically within the LBTF to react to any unplanned or threatening situation or condition
- 8-4.3 The **Safety Officer** ensures that all personal protective equipment (PPE), including self-contained breathing apparatus (SCBA). Personal Alert Safety System (PASS), protective hoods and gloves are required. All must be in serviceable condition and in compliance with current OSHA Standard.

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- 8-4.4 The facility shall be visually inspected for damage by the **Staff Instructor(s)** along with the **Fire Department Safety Officer** prior to use. Any damage or deficiencies noted will be reported in writing to the Training Technician. Training shall not be permitted in the event burn building damage is severe enough to affect the safety of the participants.
- 8-4.5 The **Safety Officer** monitors accountability both pre- and post-burn.
- 8-4.6 The **Safety Officer** ensures that the motor pump operator[s] (MPO) maintains his or her position at each pumper during live burns. The motor pump operator may *not* be an assigned instructor or a student in the class.

Chapter 9 Training Evolution Safety

- 9-1. Visually inspecting the facility for damage prior to use.
 - 9-1.1 The facility shall be kept in a safe condition between evolutions and in a safe and clean condition before the user leaves the property. Debris hindering the access or egress of firefighters shall be removed before continuing.
- 9-2 Prior to live burns, a pre-burn briefing session shall be conducted for all personnel involved in the evolution. Prior to conducting live burns in the burn building, all participants shall be required to have an orientation of the burn building. The location of simulated victims is not required to be disclosed, provided that the possibility of victims is discussed during the pre-burn briefing.
- 9-3 The drill tower and burn building evacuation plan shall be verbally communicated and demonstrated to all involved participants. The evacuation plan is a continuous activation of an air horn. This sounding represents an emergency or perceived emergency and requires that all people exit the drill tower and burn building.
- 9-4 Primary and secondary hose lines shall be a minimum of 1½-inch diameter. A minimum of one secondary hose line shall be provided to ensure adequate protection for the students in the burn building. The water supply for secondary hose lines must have an independent water source.
- 9-5 **Car Fires** - The GCEMO has a contract with a local vendor who provides cars modified to meet NYSOFPC safety standards for use in car fire evolutions. **No other vehicles are to be brought onto the property for use in live fire activities without the permission of the coordinator or his designee.** The car fire area is required to have the minimum water supply available as outlined in 3.6. The vehicles must meet safety requirements as outlined in the Administrative Guideline which includes removal of the fuel tank, all pneumatic shocks either removed or "cut" including struts where applicable on the hood and trunk lid.
- 9-5.1 **Artificial smoke** - Training evolutions are conducted using artificial smoke generated by the County owned "Smoke Fogger" in order to provide limited visibility without the use of live fire and heat. Evolutions using "artificial smoke" do not require the water supply requirement as outlined in 3.6, nor any of the other "live fire" requirements.
- 9-6 The decision to ignite the training fire shall be made by the Fire Department Line Officer in Charge in conjunction with the assigned Staff Instructor(s) and the Safety Officer.
- 9-7 A charged hose line shall accompany the Ignition Officer when he/she is igniting any fire. The only exception will be pan fires for extinguisher training. Safety for this evolution will include at least one fully charged, dry chemical extinguisher, manned while pouring fuel in the pan and during ignition.

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- 9-8 **Live Fire** within the Training Center Burn Building shall be confined to the designed “burn room” on the first floor of the two story side or the second floor “corner burn” prop.
- 9-8.1 **NOTE:** It is NOT permissible to conduct simultaneous fires using the ‘burn room” along with the second floor “corner burn” prop within the LBTF. No more than one live burn will be permitted in the burn building at one time.
- 9-9 No person(s) will be placed inside the burn building to play the role of a victim. Under NO circumstance will the use of live “victims” during live burn evolutions be allowed.
- 9-10 After the last live burn is completed, prior to cleaning up of the burn building; the assigned Staff Instructor(s) will sample the air quality to determine if the building is safe to enter without self-contained breathing apparatus (SCBA). An air-monitoring device capable of sampling for oxygen (O₂) and Carbon Monoxide - as a minimum, shall be used to determine minimal safe atmosphere.
- 9-11 The assigned Staff Instructor(s) will discontinue operations if the internal burn room temperature *exceeds 1000 Degrees Fahrenheit*.
- 9-12 After the live burns have been extinguished; no one shall enter the burn building without fully operational personal protective equipment (PPE), including SCBA.
- 9-13 Provisions will be made for the rest and rehabilitation of participants. A designated rehab area will be established under the direction of the Safety Officer with an adequate supply of drinking water available for participants.
All injuries and illnesses must be reported to the assigned **Staff Instructor** at the earliest opportunity.

Chapter 10 Drill Tower and Burn Building

- 10-1 A staging area, south of the facility, will be designated to stage fire trucks and ambulance, which are not part of the evolution, so as to not interfere with fire ground operations. Personal vehicles shall remain in the designated Gray classroom parking area or the main lot outside the fenced area.
- 10-2 A spectator area, north of the facility, will be designated and equipped with bleachers, to accommodate firefighters, instructors, spectators and others.
- 10-3 Men’s and women’s restrooms are located in the main building adjacent to the Gray classroom for the convenience of those using the LBTF and/or training grounds.
- 10-4 The drill tower and burn building evacuation plan shall be verbally communicated and demonstrated to all involved parties
- 10-5 The plan calls for a continuous sounding of an air horn style device. This sounding represents an emergency or perceived emergency and requires that all people exit the drill tower and burn building.
- 10-6 All openings, including door and windows shall be inspected and operated; doors will remain unlocked, prior to any live burns in the burn building.
- 10-7 All post-burn material shall be extinguished. As part of the final safety inspection, all live fire debris shall be removed from the burn room and deposited in the appropriate refuse site.

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Chapter 11 Inspection of Drill Tower and Burn Building

- 11-1 Documented inspections shall be done quarterly, using the appropriate form, by the Genesee County Office of Emergency Management Staff.
- 11-2 Documented inspections shall be completed by the County Code Enforcement Official annually. [The structural integrity of the building shall be evaluated and documented annually by a licensed professional engineer with burn building experience and expertise.]
- 11-3 Once every five years, the burn building evaluation shall include the removal and reinstallation of a representative area of the thermal lining for the purpose of inspecting the hidden conditions behind the linings.
- 11-4 Once every 10 years, solid structural concrete slabs and walls that have been exposed to temperatures in excess of 300 degrees will be cored to check for hidden delaminations and test compressive strength for conventional (Portland) cement.

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ASSIGNED STAFF INSTRUCTOR BRIEFING CHECKLIST

Assigned Staff Instructor(s) _____ Date _____

Brief students /participants concerning training evolution, safety measures and facility SOPs. Yes No

Fire Department Safety Officer 1 _____

Fire Department Safety Officer 2 _____

Student/participant accountability system? _____ Yes

Type of system? _____

Interior & exterior communication system identified? I-TAC Yes

Live-burn and safety inspection of facility? Yes

All personal protective equipment (PPE) meets or exceeds OSHA standards? Yes

All students have completed or are enrolled in *Firefighter I* (FF I) Yes

Primary and secondary hoselines of *minimum* 1.5" diameter; preferably 1 3/4" diameter? Yes

Four-person Firefighter Assist and Search Team (FAST) assigned? Yes

Officer-in-Charge (participating Fire Department) (OIC) confirms students are medically unrestricted. Yes

All personnel-students/participants accounted for before ignition? Yes

Check weather conditions for the training evolution period, thunder, lightning or excessive winds, other severe conditions. Adjust training evolutions to ensure safety. Yes

One (1) Class A pumper or two (2) pumpers for live burns? Yes

Assigned Pump Operator for each pumper – may not be a student or assigned instructor Yes

All spectators restricted to the designated area outside the operations area? (or other wise accounted for) Yes

Officer to student ratio (5:1)? established Yes

Students /Participants informed to report all injuries and illnesses before leaving property. Yes

Students /Participants seemingly under the influence of drugs or alcohol will be escorted from the property by the Sheriff's Office.

COPIES OF CHECKLIST AND SIGN IN LIST ARE TO BE RETURNED TO THE TRAINING TECHNICIAN

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STUDENT/PARTICIPANT Sign In RECORD

Assigned Staff Instructor Signature _____
 Date _____ Time In _____ Time Out _____

NO	NAME (PRINT)	SIGNATURE	DEPARTMENT	FF I(✓)
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FIRE DEPARTMENT REQUEST FOR USE OF FACILITY
Advanced Notice Required
(Minimum of 10 working days)

FIRE DEPARTMENT USE

Fire Department _____ FDID _____

Date Requesting Use of Facility _____

Time In _____ Time Out _____

Specific Use of Facility or Property _____

Senior Fire Department Line Officer on requested date _____

Alternate Line Officer _____

Senior Fire Department Safety Officer on requested date _____

Alternate Safety Officer _____

Senior Fire Department Training Officer on requested date _____

Alternate Training Officer _____

Approximate Number of Students _____

Are you able to provide your emergency medical? Yes

In Yes, **Senior** Fire Department Medic on requested date _____

Check one CFR EMT EMT-I EMT-CCT EMT-P ID Number _____

Has the Fire Department Received the ***Live Burn Training Facility*** SOPs? Yes

Has the Fire Department Received the ***Live Burn Training Facility*** Orientation? Yes

Chief's Signature _____ Date _____

Genesee County Emergency Management Training Office USE

Assigned Staff Instructor No. 1 _____

Assigned Staff Instructor No. 2 _____

Additional Staff Instructor *(if required)* _____

Number of students that participated _____ **Any Injuries Reported?** Yes No

If yes, explain and notify FC or DFC _____

Any Damage to Facility during use? Yes No

If yes, explain and notify FC or DFC _____