

GREELEY FIRE DEPARTMENT STANDARD OPERATING PROCEDURES

SECTION 11I – EDUCATION, TRAINING AND TRAVEL

PUBLIC SAFETY TRAINING CENTER

LIVE FIRE TRAINING STANDARD OPERATING PROCEDURES/COMPLIANCE

PURPOSE:

To provide Live Fire Training Standard Operating Procedures that are in compliance with NFPA 1403, 2012 Edition.

SCOPE:

This Administrative Regulation applies to all participants who are involved in live fire training at the City of Greeley's Public Safety Live Fire Training Structure. This Administrative Regulation and all other Greeley Fire Department Standard Operating Procedures remain in effect.

REGULATION:

The Fire Chief, or designee, will be responsible for ensuring proper qualifications, training and documentation prior to any person participating in live fire training at the City of Greeley Public Safety Training Facility. Agencies that are not affiliated with the Greeley Fire Department must comply with Greeley Fire Department policies and procedures. A minimum of one qualified Greeley Fire Department Instructor in Charge must be on-site at all times during live fire training.

PARTICIPANT MINIMUM REQUIREMENTS:

Students - All participants, including students, shall have completed training to meet the minimum job performance requirements for Fire Fighter I as described in NFPA 1001. Outside agencies must submit Outside Agency Live Fire Qualifications Statement to the Greeley Fire Department Battalion Chief of Training prior to participating in any live fire training.

Instructors - Individuals serving as an Instructor in Charge (IIC) must be members of the Greeley Fire Department. The IIC shall hold at minimum a current State of Colorado Fire Instructor I Certification and must have completed a qualifying Greeley Fire Department/Authority Having Jurisdiction (GFD/AHJ) IIC Live Fire Qualification Course.

Individuals serving in the assignment of Safety Officer, Command, Instructor, Fire Control Team, Ignitions, or in any safety assignment such as RIT, Back-up, or Safety shall meet the minimum job performance requirements for Fire Fighter I as described in NFPA 1001 and must be approved by a qualified GFD IIC.

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GENERAL USAGE:

Scheduling - All live fire training must be scheduled and approved as outlined in the Greeley Fire Department Standard Operating Procedure 111.08. The Battalion Chief of Training shall be notified by email and the on-duty Battalion Chief must give approval before any live fire training.

Pre-Burn Procedures - A qualified Greeley Fire Department Instructor in Charge (IIC) will be responsible for completing all pre-burn procedures, to include all pre-burn documentation listed in this policy prior to any live fire training.

The IIC will be responsible for conducting a visual inspection of the exterior and interior of the live fire structure. Any damage that is found to be severe or that may impose a safety risk must be reported to the Battalion Chief of Training and the live fire training will be terminated. All doors, windows, ventilation hatches, standpipes and safety devices must be checked and found to be in good operating condition before any live fire training.

A pre-burn walk through of the live fire structure and a pre-burn briefing are required for all participants prior to any live fire training. The IIC will lead the pre-burn briefing using an approved Greeley Fire Department Burn Plan.

Post-Burn Procedures – At the conclusion of the last live fire evolution, it is recommended that all remaining unburned fuels be shoveled into one pile and allowed to burn out. Full extinguishment is not required nor is it recommended. The Live Fire Training Structure shall be locked and secured at the conclusion of live fire training.

Upon completion of live fire training, all completed documentation shall be sent to the Greeley Fire Department Battalion Chief of Training. The IIC is responsible for ensuring that the building is left in a ready state and that the building is secured.

Required Equipment:

Protective Clothing – Each participant shall be equipped with full protective clothing and positive-pressure self-contained breathing apparatus (SCBA) with a working Personal Alert Safety System (PASS) device. This equipment shall meet the following NFPA Standards:

1. NFPA 1971 Standard on Protective Ensembles for Structural Fire Fighting
2. NFPA 1851 Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting
3. NFPA 1981 Standard on Open-Circuit Self Contained Breathing Apparatus (SCBA)
4. NFPA 1982 Standard on Personal Alert Safety Systems (PASS)
5. NFPA 1852 Standard on Selection, Care, and Maintenance of Open-Circuit Self Contained Breathing Apparatus (SCBA)

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Each participant shall operate in an SCBA whenever operating in an atmosphere that is or could be oxygen deficient or contaminated by the products of combustion. This will include the interior of the Live Fire Training Structure during live fire events and, pre-burn and post-burn procedures. When working in the Live Fire Training Structure during pre-burn and post-burn operations where there is not an Immediately Dangerous to Life or Health (IDLH) atmosphere but hazardous particulates are of concern, members must wear at minimum an approved N95 respiratory protection mask capable of particulate filtering.

Water Supply – Two separate sources of water supply shall be utilized for live fire training. Water supply sources shall be capable of delivering the required water flow necessary for control and extinguishment of the training fire.

Hoselines – All hoselines (attack, back-up, RIT and safety lines) shall be supplied by an approved water supply source with the capability of delivering a minimum of 95GPM. Hoselines that are used as attack lines during the live fire evolutions shall be from a separate water supply source than those serving as backup, RIT, or safety lines. A back-up, RIT, or safety line shall be in place prior to the ignition of any fire and for the duration on any live fire evolution.

Required Assignments and Responsibilities:

Instructor in Charge (IIC) – A minimum of one qualified Greeley Fire Department IIC must be on-site at all times during any live fire training. The IIC will be responsible for full compliance of this policy and all other Greeley Fire Department policies. The IIC shall inspect the structure for damage prior to live fire training and ensure all pre-burn procedures are followed. All doors, windows, vents and safety equipment shall be checked and operated prior to live fire training to ensure they operate correctly as primary, secondary and/or as an emergency means of egress. The IIC shall consult with the Safety Officer to designate the IDLH Hot Zone for the live fire training. This zone should be included in the Burn Plan. The IIC can serve in any assignment as outlined in this policy other than as a student.

Safety Officer (SO) – One member will be appointed as the SO by the IIC. The SO is responsible for the overall safety of all persons on scene and has the authority to intervene and control any aspect of the operations when, in his/her judgment, a potential or actual danger, potential for accident, or unsafe condition exists. The SO will identify and mark the IDLH Hot Zone. The SO will monitor personnel to ensure full PPE including SCBA are in use inside of this designated area. If weather conditions change during the day the SO will adjust the perimeter of this zone to ensure that no personnel are exposed to the products of combustion that result from the burning of class A materials inside of the Live Fire Training Structure. Additional individuals may be assigned in a safety assignment when determined necessary by the IIC or SO.

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Command – The IIC will designate one individual to serve as Command during the live fire evolution. The individual serving as Command will operate under the IIC and SO. A command location shall be clearly identified and will remain stationary. Those serving in Command will be responsible for the accountability of personnel and overall coordination of fire ground operations during live fire training, to include firefighter emergencies or Mayday situations.

Instructor – One Instructor will be assigned to each functional crew/assignment operating during live fire training. At no time will the Student to Instructor ratio exceed 5:1. Greeley Fire Department Company Officers and Acting Officers, or those deemed to be qualified by the IIC, may serve as an Instructor during live fire training and will be responsible for the direct supervision, accountability, and safety of assigned personnel.

Fire Control Team (FCT)/RIT – A minimum of two members will serve as the Fire Control Team/RIT. One member will serve as the “ignition officer” and will be responsible for igniting, maintaining and controlling materials being burned. The other member will serve as a “safety” and will provide protection of the Fire Control Team members with a charged hoseline. The Fire Control Team/RIT will be responsible for monitoring the heat of the Live Fire Training Structure using a Thermal Imaging Camera. The maximum sustained temperature during live fire training in any burn room is 1,000 degrees F at the ceiling. A maximum temperature spike during live fire training is 1,200 degrees F at the ceiling. Temperature readings shall be reported to the IIC or Incident Command throughout the training day. In the event of an emergency, the FCT/RIT will be responsible for assisting any participant in need along with fire extinguishment and cooling and clearing the building by opening windows, doors and ventilation openings.

Live Fire Procedures:

Fuel Materials - Only Class A materials consisting of wooden pallets, straw, hay, and pine excelsior shall be used for live fire training in the Live Fire Training Structure. Any other material, including pressure treated wood, rubber, plastics, furniture or chemically treated Class A materials shall not be used. The use of flammable and combustible liquids, as defined in NFPA 30, shall not be used in live fire training within the Live Fire Training Structure.

Fuel Loads – It is the responsibility of the IIC to enforce appropriate fuel loads and heat energy that ensures a safe training environment for all personnel and that helps promote durability of the structure. Only approved fuel loads shall be used for live fire evolutions. There shall be no deviation from the approved fuel load and burn sets as determined by the IIC for the live fire evolutions. Fires shall be placed away from walls, doors, shutters, and roof openings to reduce deterioration of those items. All second floor fires must be set on the designated burn racks. Burn racks can be used on the first floor but are not required. Sequential live fire burn evolutions are approved but will be at the discretion of the IIC and temperatures must not exceed 1,000 degrees F at the ceiling. Fuel loading and the number of pallets needed at the beginning of the day or when the building is cool generally consists of four pallets. Additional

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pallets may be added to an existing fire set as long as the ceiling temperature does not exceed 1,000 degrees F.

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Communications – Radio communications will be established to enable coordination between all participants. Radio communications must be established between all participants before any live fire evolution begins.

Emergency Medical Services and Rehabilitation – At a minimum, an EMS and Rehabilitation location with Basic Life Support capabilities shall be available during live fire training.

Mayday and Emergency Procedures – MAYDAY training drills shall not be conducted under Live Fire or IDLH conditions. If at any time an emergency occurs, the team or member involved shall issue a call for help over the radio using the term “MAYDAY”. The Incident Commander (IC) will be responsible for managing the MAYDAY call. The IC will acknowledge the MAYDAY by repeating the MAYDAY over the radio. Any Engineer on site shall give three (3) blasts of the air horn, pause and then repeat three (3) blasts. All radio traffic will cease except for the Emergency Traffic related to the MAYDAY/EMERGENCY Call. The Fire Control Team (FCT) will be responsible for extinguishing the fire, ventilating the structure, and assisting with the removal of the victim.

Personnel Accountability Reports (PAR) – PAR’s shall be used when requested by the IIC or Incident Commander such as prior to entry and upon exit of the IDLH atmosphere. PAR’s shall also be used anytime there is an event resulting in the sudden evacuation of the building or any call for help to include a MAYDAY.

Live Victims – At no time shall a live person play the role as a simulated victim (firefighter or civilian). Only approved mannequins can be used in live fire training to simulate victims.

Ignition - Prior to igniting any fire, Instructors will visually ensure that all participants who are not required for the ignition process are clear of the immediate flame area and fire room. Under the direction of the IIC, a two-person team will carry out the ignition of all training fires. During the ignition process, the Fire Control Team shall wear full PPE with SCBA and will operate under the protection of a charged hoseline that has the capability of delivering 95gpm. The FCT shall utilize a Thermal Imaging Camera when igniting fires being sure not to overload any burn room that would result in fires exceeding the maximum allowable temperature of 1,000 degrees F. Propane lighters, butane lighters, safety flares, kitchen matches, and similar devices are approved ignition sources and must be removed from the building immediately following ignition.