



## ***Greene County Department of Emergency Services***

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### **Section 1: Purpose**

The Greene County Burn Tower is for the enhancing of training to firefighters within a location of a controlled environment for hands on training. In order for this to be accomplished the adherence to the following rules and S.O.P. is necessary and mandatory. They are not intended to restrict the use and/or enjoyment of the facility, but to ensure the safety and accountability of all parties involved. The existence and compliance of these rules will demonstrate to our community our dedication and professionalism within our organization as Emergency Service Responders. All users of the facility shall adhere to this policy.

### **Section 2: Student Prerequisites**

In order to ensure the safety of all firefighters during an exercise with the use of the burn tower, all personnel entering the tower shall have received the minimum level of training

or in the process of achieving the training. The minimum level of training shall be FF1 or equivalent.

Prior to being permitted to participate in live fire training a list of personnel shall be supplied with a letter of written approval from the Fire Chief for all county sponsored curriculum.

### **Section 3: Structure Preperation**

- Safety precautions will be strictly enforced and applied.
  1. AT NO TIME SHALL LIVE PERSONNEL, ANIMALS, ETC. BE USED DURING ANY LIVE BURN EXERCISE.
  2. The training tower shall receive a complete visual inspection of the interior and exterior. All doors, windows, window shutters, scuttles, vents, lighting, equipment, stairs, standpipes, etc. shall be *inspected* and *operated*, where appropriate, before ANY live burn fire training is performed.
  3. Burn room Padgenite panels shall be inspected for any damage and that the panels are free to move to allow for expansion. This can be checked by a visual inspection of the washers. The washers are attached via fastners and washers should be able to move freely.
  4. Any damage that is found shall be confirmed that it is not severe enough to affect the safety of the training personnel.
  5. All doors shall be unlocked before use.
  6. Check temperature sensor for proper operation and is reading correctly.

### **Section 4: Water Supply**

- The water supply required for the live burn evolution must be capable and sufficient to supply a continuous fire flow to handle the maximum building environment. Examples of water supply are as follows:
  1. Hydrant Water Supply
    - a. The live water hydrant shall be used only as a backup water source and not the main source of water. A minimum 2 ½” supply line is required with a recommended 5” LDH.
    - b. Only approved and tested hose line that is equipped on the apparatus shall be used.
    - c. Hydrant water that is used shall be for an emergency. The filling of tankers or apparatus is discouraged. If water is used from hydrant notification shall be made to the E.O.C. and Deputy Fire Coordinator Car 4, George Lackie.
  2. Dry Hydrant
    - a. A Class “A” rated pumper, ETA, or equivalent shall be used for connection with a minimum 1000 G.P.M. pump

- b. Dry Hydrant connection is not required. Hard suction may be directly inserted into pond with either floating strainer or barrel recommended.
- 3. Tanker Supply
  - a. A minimum 1,000 gallon capacity may be used as a final option with a 500 G.P.M. minimum pump.
- 4. Back-Up Engine
  - a. Minimum 500 G.P.M.
  - b. Minimum 500 gallon tank water supply
  - c. May be tied into the “dry” hydrant system, but not through main attack engine

### **Section 5: Fuel Materials**

- Only Class “A” materials in the amount necessary to create the desired size fire will be used. Acceptable materials include scrap wood, pallets, or clean hay. No pressure treated wood, couches, etc. will be used. There shall be no more than 100 lbs. of materials used per burn room. An example is approximately 2 pallets and a 1/3 to 1/2 bale of hay. Temperature shall be monitored to not exceed 800 degrees F. All materials used shall be supplied for the use of County sponsored curriculum only. Any other agency shall supply own materials with a list supplied and quantity. Any use of county materials will have to be approved by Deputy Coordinator George Lackie, Director of Emergency Services or in absence the Deputy Director. All materials shall be cleaned out of room when evolution is terminated with no materials of any kind stored in any other room or area of burn building. A dumpster is located near the tower and shall be used for disposal of materials. Shovels and brooms are located within the storage container on site. If dumpster is used notification must be made to Deputy Coordinator George Lackie, Director of Emergency Services or in his absence the Deputy Director so arrangements may be made for pickup.
  - a. If any room is reaching the maximum temperature of 800 degree F. the evolution shall be ceased until burn room temperature is regulated through use of water or other means to reduce temperature.
  - b. THERE SHALL BE NO USE OF LOW FLASH POINT FLAMMABLE LIQUIDS FOR STARTING OR DURING AT ANY TIME
  - c. Burning shall only be conducted within the BURN ROOMS OF THE TOWER ONLY.

### **SECTION 6: SAFETY OFFICER**

- A safety officer shall be appointed for all fire training evolutions. The officer shall be familiar with the NFPA 1521: Standard for Fire Department Safety

Officer and NFPA 1403: Live Fire Safety Training & Conducting Live Fire Training Evolutions.

- The safety officer shall have the authority, regardless of rank or title, to intervene and control any aspect of the operation when, in his/her judgment, a potential or real danger, accident, or unsafe conditions exists.
  1. Responsibilities, but not limited to:
    - a. Inspection of protective clothing and SCBA of personnel
    - b. Prevention of unsafe acts
    - c. Prohibiting the use of unsafe equipment
    - d. Elimination of unsafe conditions
    - e. Control of fuel materials and quantity
- The safety officer is responsible for the safety of all personnel on the scene, including students, instructors, visitors, and spectators.
- The safety officer shall not be assigned any other duty that interferes with the safety responsibility.

## **Section 7: OTHER SAFETY REQUIREMENTS**

- There shall be no personal vehicles allowed on site during any training evolutions. All personal vehicles shall be located outside of fenced area. This pertains to all training evolutions and county sponsored training.
- All personnel on both attack and back up lines must be outfitted with full protective clothing that meets NFPA requirements and SCBA prior to the ignition of any fire.
- Separate sources of water shall be utilized for supply of attack lines and back-up lines in order to preclude the loss of both water sources at the same time.
- Established water sources shall be achieved prior to any ignition of materials.
- A fire ground communication system shall be established to coordinate command, interior and exterior sectors, the safety officer, and external requests for assistance
- A building evacuation plan should be established, and an evacuation signal shall be demonstrated to all participants prior to the ignition of any fire. A predetermined location shall be demonstrated and pointed out to all participants prior to the ignition of an fire.
- Accountability shall be mandatory with the two tag system. One tag is required prior to entry located at front gate. Accountability officer shall be assigned at the entry point to building.
- Emergency Medical Services shall be available on site to handle any injuries. It is recommended an EMT at a minimum be on site with proper equipment with the preferred method being an ambulance agency capable of transport. Any injuries must be reported to the Safety Officer on scene so an accident

report can be filled out. A filled out report must be submitted within 24hrs to the coordinators office and verbal notification to Deputy Coordinator George Lackie and Director of Emergency Services or in absence the Deputy Director.

- Only one person shall be designated to ignite the live training fire under the direction of instructor, the officer in charge, and safety officer.
- A FAST or RIT team personnel shall be on site and properly equipped and trained prior to any live burn exercise. The individual in charge of evolution is responsible for the degree of experience the personnel possess in charge of these responsibilities associated with FAST or RIT team.
- Departments without an accountability system or firefighters without an accountability tags are prohibited from using the burn tower.
- Hydration and rehab of personnel is required. This is during warmer months and during colder months from protection from harsh elements, etc. and is required per NFPA.

## **Section 8: PROTECTIVE CLOTHING AND EQUIPMENT**

- All participating personnel shall be equipped with full protective clothing and SCBA. All participants shall be inspected by the Safety Officer to ensure that the protective clothing and SCBA are being properly worn and functional prior to entry into building.
- All clothing and equipment shall meet the edition of the respective NFPA standard that was current when it was purchased, or shall meet the current NFPA standards.
- PASS and alarm devices if available shall be used and meet the requirements of NFPA 1982.
- All students, instructors, safety personnel, and others shall properly wear all protective clothing and equipment whenever these persons are involved in any evolution or fire suppression operation during the live burn.

## **Section 9: INSTRUCTORS**

- All instructors or personnel shall be approved and certified by Greene County. A list will be kept on file of approved instructors. The term instructor is not limited to state fire instructors. Training will be provided on a yearly basis to make them aware of the protocols and procedures involved for the use of the burn tower. The course will cover *Live Fire Training Safety and Conducting Live Fire Training Evolutions* per NFPA 1403 Standard on Live Fire Training Evolution, activity report, live burn checklist, facility use request form, and the burn tower.
- Instructors shall complete the facility use request form which can be found on the [www.greengovernment.com](http://www.greengovernment.com) web site and submitted to Deputy Coordinator George Lackie.
- An activity report must be filled out by officer in charge within 7 days and on file with the Deputy Coordinator George Lackie and Director of Emergency Services or in the absence of the Deputy Director. Failure to do so will result in that

- company being denied any future use until paperwork has been filled out and on file. This form can be found at [www.greenegovernment.com](http://www.greenegovernment.com) web site as well.
- Any misuse or failure to comply with procedures will result in that department to not be allowed use of facility until they have an officer attend a scheduled training session dealing with the proper use and procedures.

## **Section 10: PRE-BURN BRIEFING SESSIONS**

- Prior to conducting live burn, a briefing session must be conducted for all participants. All evolutions to be conducted must be discussed and assignments for personnel involved will be discussed.
  - a. Personnel involved must have a familiarity with the layout of the building prior to entry within burn tower. A walk through of all individuals participating will accomplish this prior to the ignition of any material.
  - b. A post burn or critique should be conducted with personnel to discuss and evaluate the evolutions performed.
- The Safety Officer should be supplied with a live burn check list to ensure evolution meets standards and can progress to ignition within burn tower.

## **Section 11: SPECTATOR SAFETY**

- All spectators must be prohibited from the fire ground area and restricted to the outside perimeter as established by safety officer.
- Any visitor within the operations area must be equipped with protective clothing and escorted at all times. This shall be provided by individual in charge of training evolution.
- All vehicles shall be parked outside the gated facility in designated parking areas. No personal vehicles of any kind are allowed within the gated area.

## **Section 12: FIREFIGHTER SAFETY**

- All participants shall be equipped with full protective clothing and SCBA. All participants will be inspected by Safety Officer prior to ignition and to ensure clothing is properly worn.
- All participants within live burns shall breath from approved SCBA whenever one or more of the following exist:
  - a. Operating in an atmosphere that is oxygen deficient or contaminated by products of combustion, or both,
  - b. Operating in an atmosphere that is suspected of being oxygen deficient or contaminated by products or combustion or both.
  - c. Operating in any atmosphere that may become oxygen deficient or contaminated, or both.

- Participants with beards or facial hair that interfere with the face piece seal shall be prohibited from evolutions requiring the use of SCBA.
- Participants shall be physically qualified with a class “A” interior designation.
- Thermal Imaging camera is encouraged during evolutions.

### **Section 13: SCHEDULING**

- Scheduling will be on a first come basis. Requests should be made at least two weeks in advance of the use date. If this time frame is not met, approval will be at discretion of Deputy Coordinator George Lackie.
- All requests for use shall be made by the facility use request form. This form can be found online at [www.greenegovernment.com](http://www.greenegovernment.com).
- In the event that there is a county scheduled course the county course will take priority.

### **Section 14: ROOF TRAINING SIMULATOR**

The burn tower is equipped and designed for roof ventilation training. The “A” side of building is designed with a 4’x4’ section of roof for cutting. This area is the only permitted area for cutting in this section. The “C” side of roof is designed with a 4’x8’ section of roof for cutting. This is the only permitted area for cutting in this section.

#### **Replacement:**

The sections on the “A” side and “C” side are designed for replacement of materials. The replaceable materials consist of plywood sheathing, roofing felt and asphalt three tab shingles. The framing within these areas consist of untreated 2’x6’ wood beams that are attached to a steel tubular framing and roof joists. The wood and steel framing can be damaged in these areas and caution used. All evolutions shall be conducted using full turnout gear and approved eye protection. Eye protection per NFPA shall consist of a PRIMARY and SECONDARY eye protection. The face shield located on helmets does not constitute eye protection. These are classified as SECONDARY protection only. Enclosed eye protection is PRIMARY and consists of an approved face style goggle for firefighting or a SCBA face mask.

- Proper technique will be needed to avoid damage to structural members of building. Any agency conducting the training shall replace all materials that were damaged and supplied by the agency conducting training. Damage to framing of wood and/or steel will require notification to Deputy Coordinator George Lackie and Director of Emergency Services or in the absence the Deputy Director.

- All materials from said evolutions shall be cleaned off the roof and within the attic space area and disposed of in supplied dumpster located near burn tower building.
- Shovels and brooms are located in storage container located on site.
- Roof sheathing, felt, and shingles shall be fastened using proper building techniques. All prior fasteners shall be removed before installation of new materials.
- Access to roof area shall be through chained areas on the “A” and “C” side only. These areas shall be SECURED during evolutions when operating on the roof. No access shall be permitted to roof line on the “D” side via grated floor landing or roof line on the “B” side of the roof via the concrete landing located on second level.

### **Section 15: WALL SIMULATOR**

The burn tower is equipped with a wall simulator located on the first floor of the “A” side of building. The simulator consists of a 4’x8’ section of drywall wall with 2’x4 wood framing. This area is designed for replacement. The wood and steel framing can be damaged in these areas and caution used during evolutions. All evolutions shall be conducted using full turnout gear and approved eye protection when cutting. Eye protection per NFPA shall consist of a PRIMARY and SECONDARY eye protection. The face shield located on helmets does not constitute eye protection. These are classified as SECONDARY protection only. Enclosed eye protection is PRIMARY and consists of an approved face style goggle for firefighting or a SCBA face mask.

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- All materials from said evolutions shall be cleaned and disposed of in supplied dumpster located near burn tower building.
- Shovels and brooms are located in storage container located on site.
- Drywall shall be installed using appropriate fasteners of drywall screws of nails. All fasteners should be removed prior to installation of any new drywall.
- Drywall shall be installed after evolution so next agency can use.

### **Section 16: CEILING/FLOOR SIMULATOR**

The burn tower is equipped with two ceiling/floor simulators. The first is located on the second level of the floor on the “A” side or ceiling of the first level adjacent to burn room #1. The second simulator is found on the floor of the attic area of the roof



simulator or ceiling of room located on the “D” side of building below the attic. The simulator consists of a 2’x2’ section of plywood sheathing with 2’x’8 wood framing attached to steel framing. This area is designed for replacement. The wood and steel framing can be damaged in these areas and caution used during evolutions. All evolutions shall be conducted using full turnout gear and approved eye protection if cutting. Eye protection per NFPA shall consist of a PRIMARY and SECONDARY eye protection. The face shield located on helmets does not constitute eye protection. These are classified as SECONDARY protection only. Enclosed eye protection is PRIMARY and consists of an approved face style goggle for firefighting or a SCBA face mask.

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- All materials from said evolutions shall be cleaned and disposed of in supplied dumpster located near burn tower building.
- Shovels and brooms are located in storage container located on site.
- Proper fasteners shall be used when installing plywood sheathing. All fasteners should be removed prior to installation of any new drywall.
- Plywood shall be installed after evolution so next agency can use.

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

Course Name \_\_\_\_\_ Course Number (If Applicable) \_\_\_\_\_

(If Applicable)

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 personnel 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/Officer Signature:** \_\_\_\_\_ **Date** \_\_\_\_\_

**FAST TEAM EQUIPMENT**

- 2 sets of forcible entry tools (halligan/flat ax)
- 2 six foot hooks (**steel recommended**)
- 2 search ropes - 150' X 1/4" dia.
- 1 cut off saw (w/blade appropriate for structure type) or ventilation chain saw
- 1 reciprocating saw (**battery operated recommended**)
- 1 Stokes style basket
- 2 Fire Service Ground Ladders appropriate for the size of structure
- 1 Thermal Imaging Camera (Optional)
- Spare SCBA
- Spare SCBA bottles
- 1 Rescue Rope - 150' X 1/2" dia Life Safety
- 6 pieces 24' X 1" tubular webbing

- 2 - 2" and 2 - 4" split pulleys
- 6 large gate carabiners
- BLS EMS Equipment (C-collars, AED (**if available**), O2, 1<sup>st</sup> aid kit)
- Charged hose line availability

## INDIVIDUAL FAST TEAM MEMBER'S EQUIPMENT

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



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<b>ACTIVITY REPORT</b>	
Company, Department or Agency	
Officer in Charge	
# of Personnel in Attendance	
Date of Use	
Time Start & Finish	/
Subject Taught	

<b>FACILITIES USED {Y/N}</b>					
Parking Area		Pond		Dumpster	
Dry Pond Hydrant		Wood Tower		Tanker	
Bus Pad		Car Pads		Burn Tower	
Roadway		Square Gas Pits		Live Fire Hydrant	
Hydrants		"Z" Gas Pit			

**FACILITIES SECURED AT COMPLETION {Y/N}**

Hydrants Drained		Square Pit Drained		Gates Locked	
Propane Tank Valves Closed		“Z” Pit Drained		Key Returned	
Burn Tower					
Problems/Damages:					
Comments:					
Officer in Charge(Please Sign)					

PLEASE RETURN TO E.O.C. UPON COMPLETION