

**Fauquier County Fire Rescue System  
Training Division**

**Burn Building  
Use, Care & Maintenance  
Manual**



**(March 2024)**

**Created In Association with Operating Procedure 601**

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## SECTION 1: GENERAL DESCRIPTION

General Description of the Class “A” Burn Building and Class “B” Mobile Fire Training Trailer.

### (Class “A” Burn Building)



The Fauquier County Fire and Rescue Burn Building is designed for use during Live Fire training exercises. The building is built using materials which are fire resistant. Cinder Block, Mortar, and Poured Concrete make-up the construction materials used.

In Addition to the primary construction materials used, all designated burn rooms are lined with high temperature tiles on the walls and ceilings. These tiles are designed to withstand temperatures beyond what would typically be encountered during a structure fire. Fires during training exercises range in relative heat signatures between 800-1200 degrees.

While the building is built to withstand high heat temperatures, it is not immune to damage from prolonged high temperatures. Therefore operating personnel have an onus to understand the use care and maintenance of the structure.

**(Class “B” Mobile Fire Trainer)**



The Fauquier County Fire and Rescue Mobile Live Fire Training Trailer is designed to provide simulated structural fire training utilizing propane training props. This Training Trailer LP gas which is stored on the unit. There are three fire generating props on the interior of the unit which are designed to be operated remotely from a control panel.

This unit provides a clean burning environment which prevents the need for personal protective equipment decontamination after use. The burn compartment at each end of the trailer is designed for radiant and convective heat up to 1100 degrees at the ceiling and 500 degrees at 5 feet off the floor.

While designed to be mobile, the unit has been stationary for a length of time which is not conducive to maintaining a mobile functionality. Any personnel wishing to utilize this unit would have to use it in its current stationary position. During the use of this unit a member of the training cadre who is trained in the operation of the unit shall be present to assist with facilitation of training evolutions.

## SECTION 2: Live Fire Evolution Pre-Planning Requirements

Personnel shall be required to submit a training plan for any training which occurs at either the burn building or burn trailer. The training shall include the intent of training, and whether the training is part of a state certification course, or for skills and proficiency training of already certified personnel.

The training plan shall consist of the following criteria:

- a. Type of Evolutions
- b. Timeline for Evolutions
- c. Date Requested for Use
- d. Breakdown of Evolutions if Multiple are Planned
- e. Face Sheet Which Includes Position Assignments
- f. Student/Participant Names
- g. Compliance Officer Information
- h. Request for Assistance
  - i. Apparatus/Equipment
  - ii. Facilitation Personnel
- i. Explanation of Each Individual Evolution
- j. Safety Plan
  - i. EMS Personnel
  - ii. Evacuation of Structure
  - iii. Termination of Scenarios
  - iv. Reporting Safety Concerns
    - i. During the Event
    - ii. Injury/Illness Documentation Procedures

Any training plan should be submitted to the Training Division a minimum of 30 days prior to the requested date of use.

Any identified discrepancies within the submitted training plan will be resolved at least 15 days prior to the requested use date.

Anyone who needs assistance in the creation of the required training plan for evolutions can contact the officer in charge of the training division. The Training Division will assist as necessary.

### **SECTION 3: Respiratory Protection Requirements**

In accordance with OSHA 29 CFR 1910 and 1926 all personnel will comply with respiratory protection requirements as set forth on departmental SOP No. 711, Respiratory Protection.

Any training evolution with encompasses real smoke or fire use in the training environment shall be considered an Immediately Dangerous to Life and Health environment. Therefore the appropriate personal protective equipment shall be worn to include self-contained breathing apparatus.

All personnel who are participating in a live fire training evolution must have a current SCBA face-piece fit test. Current is defined as within one year from the date of the training evolution. Any out of county personnel should comply with their departmental policy on respiratory protection and fit testing of face-pieces prior to participation in live fire training evolutions.

The following items must be completed prior to participation in training evolutions.

- a. All personal protective equipment must be inspected by participant and safety personnel
- b. Self-Contained Breathing Apparatus must be inspected and a functional test completed prior to use during any evolutions.
- c. All personnel are required to complete a medical assessment prior to donning PPE and SCBA. Medical assessment includes,
  - i. Pulse
  - ii. Blood Pressure
  - iii. Temperature and Skin Presentation
  - iv. SpO2
  - v. General Impression
- d. Personnel shall have been provided the minimum amount of respiratory protection training as required by the Virginia Department of Fire Programs for structural firefighting training.

Personnel will adhere to a “no drop” procedure for SCBA while conducting after burn cleaning and maintenance within the training structure until such time as all smoke, visible particulates have been removed and the building has been properly ventilated.

Any personnel in violation of the recommended procedures defined herein may be subject to elimination from participation, reassignment to a facilitating position outside of the IDLH, or removal from the training ground.

## SECTION 4: Live Fire Positions and Position Responsibilities

In an effort to facilitate a successful live fire training evolution there are several key factor. Properly trained and educated facilitating personnel are essential to a positive training experience. The following positions are required during any live fire training evolution.

- a. 1403 Compliance Officer (1)
- b. Outside Safety (1)
- c. Inside Safety (1 per floor)
- d. Igniter (2 per floor)
- e. Rapid Intervention Team (2 Personnel)
- f. EMS/Rehab (minimum 2 personnel)
  - i. 1 Ambulance Driver
  - ii. 1 EMT or Higher
- g. Group Leader (1 per student team)
- h. Evolution/Incident Commander (1)
- i. Apparatus Operator (2 minimum)
  - i. 1 Engine Operator, 2 preferred
  - ii. 1 Tanker Operator

Each required position serves a specific function as defined in this manual. In an effort to better understand the function of each position, personnel should read and understand their role and how they fit into the overall facilitation of the training evolution.

## 1403 Compliance Officer

The 1403 compliance officer is the individual with the highest level of authority on the training ground. The Compliance Officer shall do the following,

- a. Ensure all personnel which will be participating, inspect PPE and SCBA
- b. Ensure all personnel participating, complete medical evaluation/rehab prior to participation
- c. Visually inspect the exterior of the burn building prior to use
- d. Visually inspect materials which will be utilized by ignition crews
- e. Ensure all interior crews are aware of evacuation procedures
- f. Review fire ignition procedures and materials usage with interior crews
- g. Ensure a radio test occurs and channel assignment is dictated prior to evolution start
- h. Visually inspect the interior of the structure prior to start of evolutions
- i. Facilitate a safety briefing to include a thorough walk-through of the structure with students and instructors
- j. Ensure adequate understanding by students and instructors of safety message and procedures
- k. Coordinate with Command Officer and Safety Officers throughout the duration of the event to ensure any unsafe activities are addressed
- l. Ensure all/any injuries or illness are documented as required at the end of the training event
- m. Ensure Rehab/EMS personnel are maintaining records of participants medical evaluations
- n. Ensure temperature guidelines are being adhered to at all times
- o. Ensure Temperature system functional test is conducted prior to beginning of the training event
- p. Ensures all temperature are recorded for each evolution
- q. Ensures beginning/end time and duration of each evolution is recorded.
- r. Ensures someone is responsible for recording any equipment failures or deficiencies before, during, and after the training event
- s. Ensures completed burn training packet is recorded for historical documentation



## Outside Safety (1)

- a. Coordinates with Compliance Officer to ensure Medical evaluations are completed
- b. Coordinates with Compliance Officer to ensure outside visual inspection of building and grounds is completed
- c. Assists with inspection of student and instructor personal protective equipment including SCBA
- d. Ensures all grounds in proximity of Burn Structure are free of hazards
- e. Ensures apparatus operators are aware of evolutions and responsibilities
- f. Ensures apparatus operators are aware of emergency evacuation procedures
- g. Ensures apparatus operators are clear on the safe operation of assigned apparatus and aware of safety devices which should be in use
- h. Monitors outside evolution activities and stops, corrects, or educates participants during perceived unsafe acts
- i. Ensures personnel are wearing the required personal protective equipment based on their assigned roles during an evolution
- j. Reports any unsafe acts to the Compliance Officer or Command
- k. Continues reevaluation of events to ensure safe operation and policy, procedures are adhered to at all times

### Inside Safety (1 per floor)

- a. Each Interior Safety will be assigned to a floor (1<sup>st</sup> or 2<sup>nd</sup>)
- b. Responsible for ensuring Ignition Teams comply with rules and regulations as determined by this manual
- c. Responsible for safety inspection of their assigned floor prior to the start of each evolution
- d. Responsible to coordinate with 1403 Compliance Officer to ensure initial safety inspection occurs prior to start of training evolutions
- e. Responsible to assist 1403 Compliance Officer with functional test of temperature recording and alarm systems prior to burn evolutions
- f. Ensures Ignition teams comply with Respiratory and Personal Protective Equipment rules and regulations
- g. Coordinates with Team Leaders/Officers to ensure all personnel operate safely during each evolution
- h. Interior Safety should NOT interfere with instruction provided to students or participants during any evolution unless deemed to be a safety concern
- i. Ensure coordination between Ignition Team and Instructors to provide essential time for Ignition Teams to evacuate from burn rooms prior to student teams entering to extinguish fires
- j. Work with other Inside Safeties to ensure all ingress/egress are free from obstructions
- k. Work with other Inside Safeties to ensure interior stairwells are clear of obstructions
- l. Coordinates with 1403 Compliance Officer and Incident Command to ensure interpretation of temperature alarms and prevent excessive temperatures from occurring by following instructions set forth in this manual and as provided by 1403 Compliance Officer

## Crew Leaders

- a. Will be assigned to all groups participating in the training evolutions
- b. For Initial Certification Training Courses, Crew Leaders shall be certified at the Instructor 1 level or higher and it is preferred that each Crew Leader also be certified as a Firefighter 1 & 2 Train the Trainer
- c. The Crew Leader position should be actively engaged in teaching during each evolution
- d. Ensure the safety of all crew/team members at all times
- e. Ensures all team/crew members are in compliance with respiratory protection and personal protective equipment requirements
- f. Monitors crew/team members at all times
- g. Ensures crew/team members comply with rehab/medical assessment requirements as assigned during training evolutions
- h. Reports any injuries or illnesses which occur to team/crew members during training evolutions
- i. Coordinates with Interior Safeties to ensure ignition teams are clear of burn rooms prior to entering for extinguishment
- j. Ensures compliance with assigned responsibilities during each prescribed evolution
- k. Maintains crew integrity during evolutions and reports any missing/unaccounted for crew members immediately
- l. Maintains radio communications during evolutions to ensure objectives are completed and relayed to Incident Command
- m. Reports any perceived unsafe acts immediately to 1403 Compliance Officer or Incident Command
- n. Takes steps to correct unsafe actions immediately as necessary to prevent catastrophic events, injuries, or death of participating personnel
- o. Conducts crew/team hotwash after each evolution to ensure learning occurs
- p. Supports end of training day hotwash to include student/participant engagement and review of exercises as well as instructor review of exercises without students/participants present

## Incident/Evolution Command

- a. Provides overall review of scenarios prior to beginning of training evolutions
- b. Monitors Temperature System during evolutions
- c. Provides Simulated dispatching during scenarios
- d. Coordinates separation of arrival times for team/crew arrival during evolutions
- e. Acknowledges radio traffic from participating team/crew leaders to address evolution objectives
- f. Time Stamps each evolution start and end time within burn day packet
- g. Records high temperature for wall and ceiling sensors in burn room utilized during each evolution
- h. Reports any temperature alarms to 1403 Compliance Officer
- i. Coordinates with ignition crews and Interior Safeties to ensure readiness prior to evolution starting
- j. Terminates each scenario once objectives have been met by each team/crew
- k. Conducts Personnel Accountability (PAR) checks at conclusion of each evolution/scenario
- l. Announces timeline for continuation of evolutions prior to beginning of each evolution to ensure readiness of crew/team members
- m. Ensures any reported personnel injury or illness is assessed by medical crew onsite and requests additional medical unit response from ECC if transport to a medical center is necessary
- n. In coordination with 1403 Compliance Officer, has the ability to terminate any scenario or evolution immediately if deemed necessary due to unsafe acts or catastrophic events
- o. Communicates with Outside Safety to ensure any perceived safety concerns are addressed immediately to prevent injury
- p. Participates in end of training day hotwash with students and instructors to provide positive feedback

## Apparatus Operators

- a. Ensure safe operation of apparatus at all times
- b. Reports any apparatus deficiencies to Incident Command or 1403 Compliance Officer
- c. Ensures correct placement of apparatus as dictated by training plan
- d. Ensures water supply is established and all supply/attack connections are secured and adequate
- e. Ensures use of wheel chocks
- f. Maintains awareness of equipment utilized from apparatus and ensures equipment is returned to correct location after use
- g. Reports any broken or deficient equipment which is found during the duration of the training event to the Incident Commander or 1403 Compliance Officer
- h. Ensures attack lines are charged as necessary and when necessary, in coordination with crew/team leaders
- i. Discontinues water supply to attack lines at the end of each evolution
- j. Maintains a water supply to safety lines at all times
- k. Assists/Instructs crew/team members on the correct way to re-rack lines onto apparatus and ensures it is completed correctly
- l. Ensures all tools and equipment are thoroughly cleaned after the conclusion of the training exercise
- m. Ensures apparatus is cleaned interior/exterior prior to returning to stations or training center
- n. Reports any perceived unsafe acts to the Incident Commander or 1403 Compliance Officer

## Instructors/Igniters

- a. Ensure all safety rules & regulations are adhered to at all times
- b. Conduct safety checks in compliance with 1403
- c. Assist 1403 Compliance Officer with functional temperature system checks
- d. Ensures building is free and clear of obstructions prior to starting evolutions
- e. Ensures all ingress/egress points are free of obstructions
- f. Builds fire sets in accordance with 1403 and local rules and regulations
- g. Once fires are set and stoked, coordinates with interior safety personnel to vacate burn rooms prior to student team entry for extinguishment
- h. Coordinates with 1403 Compliance and Incident Command to ensure any temperature alarms are immediately resolved by following guidance provided in this manual
- i. Maintains accountability of self and partner to ensure for the safety and well-being of each other
- j. Inspects each other's personal protective equipment and SCBA prior to entering the building for the purposes of lighting fires
- k. Monitors air supply of self and partner for duration of training event
- l. Monitors heat conditions in burn rooms and building and acts appropriately for the circumstances
  - i. High heat = exit room or get low
  - ii. High heat = NO standing up in the burn room, crouching and kneeling should be used to prevent damage to PPE or injury to self and others
  - iii. Personnel should not hover over and around the fire set during evolutions
  - iv. Stoking of fires during evolutions can occur from an arm's length away at minimum
- m. If temperature alarms sound ignition teams shall
  - i. Discontinue stoking or feeding materials to the fire set
  - ii. Open a ventilation point (window or door) to allow heat to escape
  - iii. Exit the area immediately if temperature exceeds allowable levels
  - iv. Utilize safety line to suppress the fire if student team/crew is significantly delayed in arriving to the burn room
- n. Ensure end of day procedures are completed
  - i. Rehab/Medical assessment completed
  - ii. Rooms cleaned and large debris/remnants placed on tables
  - iii. Small debris washed or swept from rooms, hallways, and stairwells
  - iv. Secure leftover materials in storage rooms
  - v. Secure doors and windows in closed position
  - vi. Report any damaged gear, injuries or illnesses to 1403 Compliance Officer
- o. Participate in end of day hotwash with instructors and provide feedback to instructor/team leaders

## **SECTION 5: Fire Set Requirements and Restrictions**

Through the course of several test trials, fire personnel in conjunction with burn building maintenance and design personnel have been able to identify the fire sets which produce the most benefit for the training environment.

The following pictures identify the fire sets which should be utilized to achieve maximum temperatures and conditions conducive to a positive live fire training exercise within the Fauquier County Fire and Rescue Burn Building. Instructors should ensure they adhere to the designs listed below.

It is imperative that all fire tables and fire sets be arranged in a manner which prevents them from contacting the walls within the burn rooms, and facilitate adequate air flow to all four sides of the fire set. Adequate air flow is key to the successful design, ignition, and free burn stages of each fire set.

All fire sets shall consist of no more than 4 pallets and 1 ½ bales of straw to create an adequate fire fuel load for simulation scenarios.

Ignition Crews and Inside Safeties shall ensure all personnel adhere to the maximum allowable fuel loads as set forth in this manual. Any personnel found exceeding the allowable fuel load per scenario shall be removed from eligibility to perform interior position responsibilities.

It is important to note that after each evolution, it is acceptable to reengineer the fire sets to include a full (new) compliment of materials to ensure adequate fuel load is used.

**FIRE SET 1 – picture**



**DEVIL'S TRIANGLE**

Constructed of two vertically positioned pallets which create a horizontal pyramid with a center stabilized pallet and singular top cap pallet.

½ - ¾ of a bale of straw should be utilized to fill the void spaces within the pallet structure and provide incipient fuel load.

In addition to filling void spaces, straw may be “fluffed” and piled on the top cap pallet to ensure adequate burn and roll-over of fire within the room space.

Center Stabilizer

Vertical Pyramid Walls

Top Cap Pallet

Igniters and Inside Safeties shall ensure that burn tables are moved away from walls and doors to allow for adequate air flow which will inhibit better fire growth.

Straw should be dry and placed away from the burn set, in an area which it can be accessed to allow ignition teams to “stoke” fires after ignition and produce fires suitable to the learning environment.



**FIRE SET 2 – picture**



**PANDORA'S BOX**

Created by utilizing a pallet top cap and base plate with two vertical pallet walls.

$\frac{1}{2}$  -  $\frac{3}{4}$  of a bale of straw should be utilized to fill the void spaces within the pallet structure and provide incipient fuel load.

In addition to filling void spaces, straw may be "fluffed" and piled on the top cap pallet to ensure adequate burn and roll-over of fire within the room space.

Vertical Wall Pallets

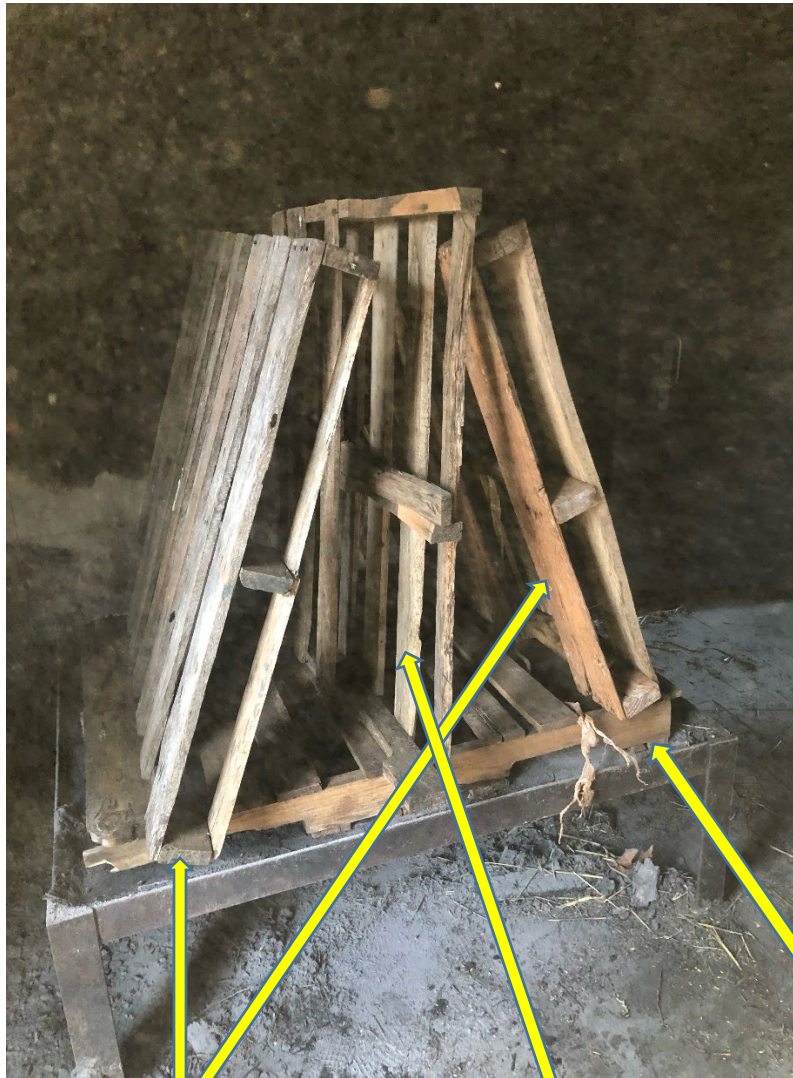
Pallet Base Plate

Pallet Top Cap

Igniters and Inside Safeties shall ensure that burn tables are moved away from walls and doors to allow for adequate air flow which will inhibit better fire growth.

Straw should be dry and placed away from the burn set, in an area which it can be accessed to allow ignition teams to "stoke" fires after ignition and produce fires suitable to the learning environment.

**FIRE SET 3 – picture**



**O'BRIENS TRIANGLE**

Created by utilizing a pallet base plate and a singular upright pallet which is secured by leaning two additional pallets to the center of the structure for stability.

$\frac{1}{2}$  -  $\frac{3}{4}$  of a bale of straw should be utilized to fill the void spaces within the pallet structure and provide incipient fuel load.

In addition to filling void spaces, straw may be “fluffed” and piled on the top cap pallet to ensure adequate burn and roll-over of fire within the room space.

Side Leaning Stabilizers

Center Upright

Base Plate Pallet

Igniters and Inside Safeties shall ensure that burn tables are moved away from walls and doors to allow for adequate air flow which will inhibit better fire growth.

Straw should be dry and placed away from the burn set, in an area which it can be accessed to allow ignition teams to “stoke” fires after ignition and produce fires suitable to the learning environment.

## **SECTION 6: Temperature Monitoring System Function and Testing**

The Fauquier County Burn Building is equipped with a full facility temperature monitoring system. This systems consist of temperature sensors on both walls and ceilings of burn rooms and alarms located on the building and two remote visual alarm posts.

The temperature probes are a low voltage transmission sensor which is designed to provide real-time temperature monitoring within each room of the structure.

While the building is governed by NFPA 1403, NFPA 1402, and VDFP regulations, the pre-designated alarm points on the temperature system are defined as the below.

**Ceiling Temperature Probes = 1000 Degrees for Yellow (caution) Alarm**

**Ceiling Temperature Probes = 1200 Degrees for Red (stop) Alarm**

**Wall Temperature Probes = 350 Degrees for Yellow (caution) Alarm**

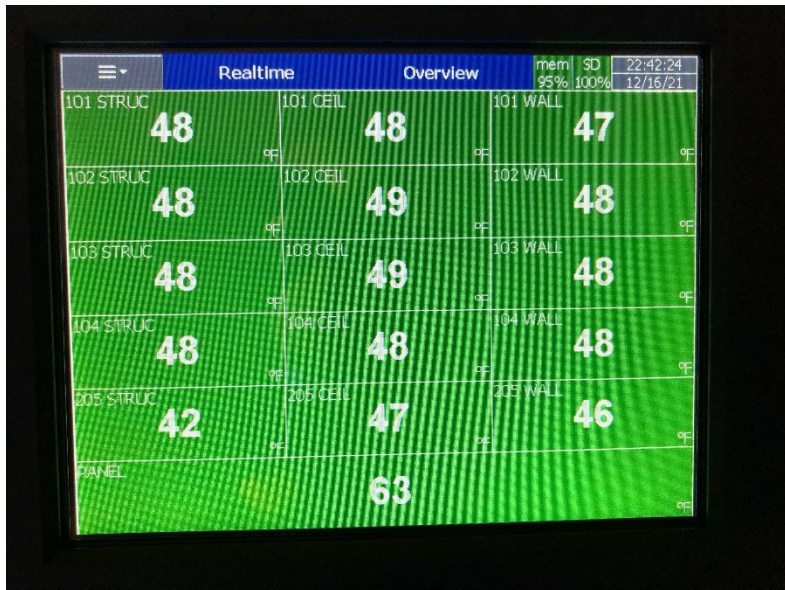
**Wall Temperature Probes = 450 Degree for Red (stop) Alarm**

In addition to the ceiling and wall probes which are positioned in all rooms of the building, there are additional structure alarms which cannot be seen within the building. These temperature probes are located behind the heat tiles, in between the heat lining and block wall.

These sensors are designed to monitor the overall building temperature which is being absorbed into the structural components of the building. The structural temperatures should never rise to a point of alarm. Should a structural alarm be sounded, the burn evolutions for the day shall be discontinued and the building shall be opened to allow for cooling and fire extinguishment.

The evolution/incident commander and 1403 Compliance Officer are responsible for the overall management of any training events which occur at the Burn Building. They will monitor temperatures and announce the need for alleviation of extensive temperatures by extinguishment or ventilation.





**Figure 1:**

Display shows the ambient temperature of each room prior to the beginning of evolutions within the building.

Each rooms ceiling, wall, and structure sensor can be seen displayed

The display is touch screen and the top left icon will lead to additional screens as necessary.

Each wall and ceiling sensor should be functionally tested prior to any burn evolution. Functional testing can be completed by utilizing the following steps.

**Step 1:** Ignition Team Member holds a propane torch below the temperature probe

**Step 2:** 1403 Compliance Officer monitors the Figure 1 screen and awaits temperature increase to the pre-designated temperatures.

**Step 3:** 1403 Compliance Officer ensures alarms both visual and audible alert at the designated temperatures

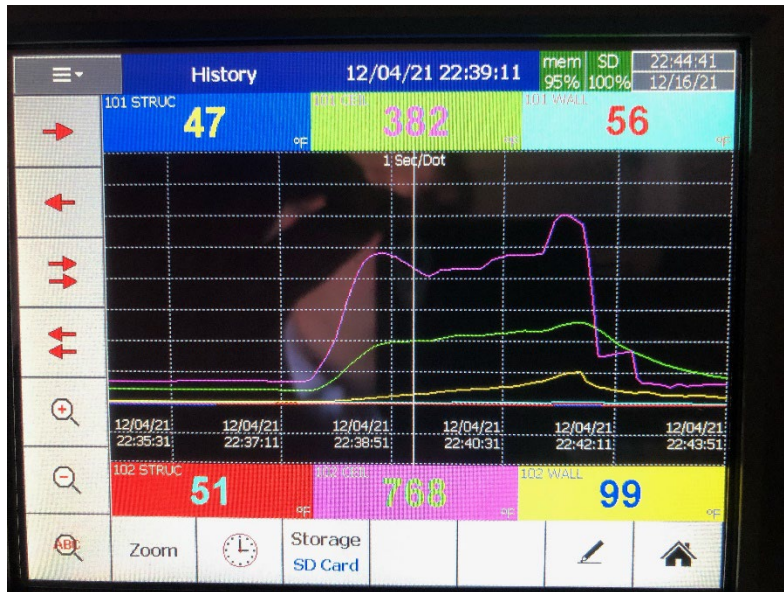
**Step 4:** Process is repeated in each room being utilized during the day's evolutions.



**Figure 2:**

This figure shows the secondary screen which portrays Burn Room 101 & 102 simultaneously.

This screen permits the user to see temperature rise in real time both numerically and on the graph line. This can potentially allow users to forecast a high temperature event & conclude the event prior to occurrence.



**Figure 3:**

Figure 3 shows the real time graph which provides data both during the event/scenario and can be stored and referred to historically.

You can see both real time temperatures and the graph line with spikes which indicate when the ignition teams have added fuel to the fire set.

Remote access to the temperature monitoring system can be achieved by following the below steps.

1. Go to settings on device which you intend to use
2. In settings, select WiFi
3. When in proximity to the burn building, you will be able to select,

MikroTik-2434BF

4. After you have connected to the WiFi you can select the following web link

192.168.88.10

After connecting you will have access to the monitoring system from your preferred device. On phones or tablets it is best to view the information with the screen selection of landscape to ensure all materials are visible.

The Training Incident Command and 1403 Compliance Officer can both benefit from being able to review the real time data provided by the recorder. This can allow those in charge to verify interior actions are occurring both with ignition teams and student fire extinguishment.

This will also allow those in charge to verify any potential significant heat related events during fire growth which could lead to catastrophe. The benefit of being able to forecast a catastrophic event can be critical to preventing the event from happening or personal injury or death during live fire training evolutions.

## SECTION 7: Apparatus and Water Supply Expectations

As required by NFPA 1403, training divisions are required to provide for two water supplies during every live fire evolution. As Fauquier County Fire and Rescue does not have pressurized hydrants at the training building, we provide two alternative water supplies during every live fire exercise.

It is imperative to understand the science behind having an adequate water supply for every training evolution we conduct. Below provides a brief explanation of how to define what is considered an adequate water supply.

Calculating BTU's and converting to GPM needed for complete extinguishment.

1. Dry aged Oak wood produces approximately 36.6 million BTU's per cord of wood.
2. A cord of Dry aged Oak wood weighs approximately 4840lbs & equals 128cuft.
3. 4 Oak Wood Pallets is equivalent to approximately 8cuft of burn materials

$$36,600,000/4840 = 7561.98$$

$$7561.98/128 = 59.07$$

$$59.07/8 = 7.38 \text{ gallons per minute (theoretical)}$$

Utilizing the IOWA Fire Flow Formula to calculate necessary gallons per minute for extinguishment.

1. Calculating the cubic feet of area involved with fire.

$$\text{Length} \times \text{Width} \times \text{Height} = \text{Cubic Feet}$$

$$\text{Example. } 12' \times 14' \times 10' = 1680 \text{ Cubic Feet}$$

2. IOWA Fire Flow Formula.

$$\text{Cuft}/100 = \text{gallons per minute}$$

$$\text{Example. } 1680/100 = 16.8 \text{ gallons per minute}$$

When conducting live fire training evolutions, Fauquier County Fire and Rescue will require two (2) static water supplies which can be utilized for the event

1. There will be a 1500-gallon minimum size porta-pit dump tank filled completely and positioned such that both the attack apparatus and secondary apparatus can access this if needed.
2. The primary attack apparatus will maintain a full tank of water and be supplied by the secondary apparatus at all times.
3. The secondary apparatus will draft water from the porta-pit and supply the attack pumper as necessary while also supplying water to the safety lines which shall be in place prior to beginning any evolution.
4. Safety lines shall be deployed from the secondary apparatus at all times.
5. A Tanker will standby and serve as the secondary water supply for the evolutions. The Tanker shall be a minimum of 2500-gallons
6. Dry Supply lines shall be positioned from the Tanker to the primary attack apparatus during all evolutions. This is done to prevent or minimize a disruption to the water supply being utilized for fire attack.
7. All apparatus operators shall remain with their apparatus at all times. The only acceptable time to not comply with this rule is in the event of imminent danger to self or others
8. Apparatus Operators are also responsible to ensure that all lines are operating at the correct pressures at all times.
9. Apparatus Operators should assist students as necessary to ensure apparatus is prepared in a state of readiness after each evolution and at the conclusion of the training event.
10. Apparatus Operators should arrive to training prepared to assume other roles and responsibilities as dictated by the event and as necessary to ensure a successful training event.

In addition to water supply apparatus, Ambulance personnel are to be positioned on stand-by at all times during live fire evolutions. A staffed Ambulance at a minimum is required. Staffed is defined as having one (1) personnel certified at the EMT level or higher, and one (1) personnel certified as an apparatus driver.

The primary goal of the Ambulance crew on site is to provide rehabilitation resources, emergency care and treatment of the ill or injured, and provide documentation of vitals checks back to the lead instructor prior to departing the training ground.

Ambulance crews shall remain on site at all times. In the event a patient requires transport, the Ambulance crew shall coordinate through the Incident Command to ensure another transport unit is requested and ensure adequate transfer of care occurs.

If an injury or illness is of a significant nature and requires immediate transport to definitive care, the Ambulance unit may leave the training ground. Should this occur all training is to cease immediately and until an additional Ambulance unit can be secured for the training ground.

Rehabilitation Personnel shall conduct the following vitals checks on all participants at predesignated intervals in the training event.

#### **Pulse/Blood Pressure/Temperature/SpO2/Skin Condition/General Impression**

Any person on the training ground who fails to comply with Rehab personnel, will immediately be removed from any further evolutions until such time as they have complied.

Rehabilitation Personnel have the right and responsibility to remove any participant from continuing in the day's events based on their medical assessment findings. If a participant is to be removed from service, Rehab will immediately notify Incident Command of the situation via face-to-face communication.

Personnel removed from service shall be monitored at all times until such time as their vitals return to within normal limits and Rehab is sufficiently convinced that the participant is medically cleared to return to duty.

Vitals must be taken at the end of the training event in an effort to document final medical clearance for all personnel who have participated in the event. The final medical clearance is conducted to minimize the potential of a serious after training medical event which could require an individual to need emergency care.

Any personnel who experience an injury or illness while on the training ground, who are checked by Rehab/EMS personnel, shall complete an Industry Safe report in compliance with Department policy. In addition, all personnel who require completion of an Industry Safe report are required to contact the Nurse On-Call to provide information for the purposes of Worker's Compensation Reporting.



## **SECTION 8: Non-IDLH Training Evolutions**

Any department within Fauquier County who wishes to utilize the burn building for training evolutions can do so as necessary. Departments shall provide a detailed training plan to the Training Division which includes the following.

1. Proposed Use
2. Lead Instructor Name & Department
3. Time and Date of Use
4. Approximate number of participants
5. Duration of Training
6. Request for Additional Resources (if applicable)
7. Request for Additional Training Personnel (if applicable)

The Training Division requires all requests for use of the burn building be provided in writing no less than 14 days prior to the requested date.

All requests for use can be sent to the Officer In-Charge of the Training Division.

All out-of-jurisdiction departments who wish to request use of the burn building will comply with the above detailed training plan. Out of county jurisdiction use requires additional permissions from county administration.

Out-of-County Departments shall provide a use request no less than 60 days prior to the requested date of use.

During non-IDLH use of the burn building the following shall be adhered to at all times.

1. No Combustible materials shall be ignited within the building
2. No smoke pots will be utilized inside of the building at any time
3. All ingress/egress points shall remain unlocked and capable for use as emergency exits
4. No railings or window sills/shutters shall be used for the purposes of anchoring for descent by ropes or other methods
5. Stairwells must remain free of obstructions
6. FOG Machines may be used to enhance the zero-visibility environment
7. Water may be flowed within the building to simulate fire attack but caution should be used to ensure direct hose streams do not create damage to the facility
8. Helmets shall be worn by all personnel who are operating within the yellow line markings
9. A safety plan must be in place to ensure that in the event of a true emergency, help is requested and any injury or illness is treated in a timely manner.

10. In the event of any emergency on the training ground, the Officer-In-Charge of the Training Division will be notified as soon as the event will allow. Do not delay emergency care for any reason.

## SECTION 9: Cleaning, Care, and Maintenance

As with any equipment we utilize in the fire service, it is of utmost importance to ensure we provide the cleaning, maintenance, and care of the burn building facility to ensure its longevity.

Cleaning the facility is simple in nature, but complex in facilitating.

After each day of training evolutions which utilize live fire, the facility needs to be cleaned and cared for. The simplest way to clean the facility is to utilize the remaining water on site and attack lines which have been used for the training.

Personnel should follow the steps as outlined at the conclusion of each live fire burn day.

1. Ensure complete extinguishment of combustible materials
2. Open all ventilation points and allow any smoke or unburned particles to vent from the structure
3. Remove any large debris which remains, from the floor and place on the burn tables.
4. Personnel should ensure that respiratory protection is worn during cleaning phase to minimize the potential of acute and chronic illnesses.
5. Any unused materials should be removed to one of the storage rooms or the exterior of the building.
6. Beginning on the top floor of the facility, personnel will begin to utilize hose-lines to wash walls and floors of remaining debris
7. Debris can be washed out through the floor scuttles in each room or down the hallway to one of the exit doorways or stair-well.
8. Upon completion of second floor washing, crews can then wash remaining debris from interior stair-well
9. Cleaning of the first-floor interior of the structure will proceed the same as the second floor. Debris will be washed to scuttle holes or doorways and out of the structure.
10. Once crews are content that all debris has been removed to the exterior of the building, hose-lines can be utilized to wash debris from concrete apron and asphalt roadway surrounding the building.
11. Crews should ensure that no nails or other sharp debris are remaining in the roadway which could puncture apparatus tires upon departure.
12. All debris should be washed away from the building to the curb and gutter where it can be collected or into the storm drains which empty into the retention pond outside of the fence-line.
13. After washing is complete the building should be re-secured with all doors and windows affixed in the closed and locked position prior to units departing the training ground.
14. The Lead Instructor shall ensure the building and roadway gates are secured after all units have departed.

## **SECTION 10: Mobile Live Fire Training Trailer**

The Fauquier County Mobile Live Fire Training Trailer is a tractor drawn burn facility which utilizes Class (B) materials to reproduce fire scenarios for the purposes of training.

This fire trainer takes roughly 45 minutes to bring on-line for use and is a great alternative to the Class (A) burn building for basic, on-going and remedial training. Because this facility does not incorporate the use of Class (A) combustibles there is not need to decontaminate personnel and personal protective equipment after use.

The use of this facility can be requested by following the same procedures as listed in Section 8 of this manual.

A Training Division employee will need to be present during all uses of the mobile fire trainer to aide in facilitation of use. This person will operate the trailer according to training they have received by the product vendor and in compliance with all NFPA 1403 guidelines.

Any out of county Departments who wish to use this facility may be subject to a usage fee which is designed to recuperate the cost of LP Gas utilized during scenarios.

Anyone with questions on this facilities design, use, and function can contact the Fauquier County Fire and Rescue Department Training Division.

## Contact Information

Fauquier County Department of Fire and Rescue

Headquarters:

30 John Marshall Street, Warrenton Va. 20186

Phone: 540-422-8800

Fauquier County Department of Fire and Rescue

Training Division:

210 Hospital Drive, Warrenton Va. 20186

Phone: 540-422-8820

[www.Fauquierfirerescue.org](http://www.Fauquierfirerescue.org)

Fauquier County Department of Fire and Rescue

Burn Building Location:

8890 Green Road, Warrenton Va. 20187