Foam Operations

Activity: Related to Topic 2-1: Extinguishing an Ignitable Liquid Fire with Foam

Format: Small group (maximum 10 students)

Time Frame: Open (based on a total of 08:00 hours for skills practice and completion)

Description
This exercise measures a firefighter’s ability to operate as a member of a team to extinguish an ignitable liquid fire by identifying escape routes and safety zones prior to advancing, selecting the correct type of foam concentrate for the given fuel and conditions, applying a properly proportioned foam stream to the surface of the fuel to create and maintain a foam blanket, extinguishing the fire, preventing re-ignition, maintaining team protection, and facing hazards until the team successfully retreats to a safety zone.

Materials
- Adequate hose lines (500’ length / 1½” width min or larger)
- Adequate nozzles
  - Standard
  - Foam capable
- Eductor (must match nozzle)
- BC fire extinguisher
- Minimum of two (2) water sources
- Adequate water supply
- Adequate Class B foam or foam substitute
- FLAG trailer or equivalent fixed props
  - Flammable liquid pan or prop
- Adequate propane supply or Flammable Liquids
- Air supply (if necessary)
- Communication equipment (including batteries)
- Emergency medical equipment (AED recommended)
- Lavatory and hand washing facilities
- Site security (if applicable)
- Rehabilitation area and supplies

Instructions
Working in groups, students will demonstrate the following foam operation skills:
1. Prepare foam concentrate supply for use
2. Assemble foam stream components
3. Approach the spill as part of a coordinated team
4. Demonstrate foam application techniques
• Roll on or bounce
• Bank down or deflect
• Rain down
5. Retreat from spills as part of a coordinated team
**Gas Cylinder Fires**

**Activity:** Related to Topic 3-1: Controlling a Flammable Gas Fire involving Cylinders

**Format:** Small group (maximum 10 students)

**Time Frame:** Open (based on a total of 08:00 hours for skills practice and completion)

**Description**
This exercise measures a firefighter’s ability to operate as a member of a team to control a flammable gas cylinder fire by maintaining crew integrity, identifying contents, identifying escape routes and safety zones prior to advancing, closing any open valves, and extinguishing flames only when leaking gas is eliminated, the cylinder is cooled, cylinder integrity is evaluated, hazardous conditions are recognized and acted upon, and the cylinder is faced during approach and retreat.

**Materials**
- Adequate hose lines (500’ length / 1½” width)
- Adequate nozzles  
  - Standard
- BC fire extinguisher
- Minimum of two (2) water sources
- Adequate water supply
- FLAG trailer or equivalent fixed props
- Adequate propane supply
- Air supply (if necessary)
- Communication equipment (including batteries)
- Emergency medical equipment (AED recommended)
- Lavatory and hand washing facilities
- Site security (if applicable)
- Rehabilitation area and supplies

**Instructions**
Working in groups, students will demonstrate the following access and egress skills:
1. Execute effective advances
2. Apply various water application techniques
3. Assess cylinder integrity and changing cylinder conditions
4. Operate control valves
5. Choose effective procedures when conditions change
6. Execute effective retreats
Meter Fires

**Activity:** Related to Topic 3-1: Controlling a Flammable Gas Fire involving Gas Meters

**Format:** Small group (maximum 10 students)

**Time Frame:** Open (based on a total of 08:00 hours for skills practice and completion)

**Description**
This exercise measures a firefighter’s ability to operate as a member of a team to control a flammable gas meter fire by maintaining crew integrity, identifying contents, identifying escape routes and safety zones prior to advancing, closing any open valves, and extinguishing flames only when leaking gas is eliminated, meter integrity is evaluated, hazardous conditions are recognized and acted upon, and the meter is faced during approach and retreat.

**Materials**
- Adequate hose lines (500’ length / 1½” width)
- Adequate nozzles
  - Standard
- BC fire extinguisher
- Minimum of two (2) water sources
- Adequate water supply
- FLAG trailer or equivalent fixed props
- Adequate propane supply
- Air supply (if necessary)
- Communication equipment (including batteries)
- Emergency medical equipment (AED recommended)
- Lavatory and hand washing facilities
- Site security (if applicable)
- Rehabilitation area and supplies

**Instructions**
Working in groups, students will demonstrate the following access and egress skills:
1. Execute effective advances
2. Apply various water application techniques
3. Assess Meter integrity and changing conditions
4. Operate control valves
5. Choose effective procedures when conditions change
6. Execute effective retreats
**Fire Control 4**  
Skills Exercise 4: Controlling a Flammable Gas involving Valves/Flanges and Piping

---

## Gas Fire Involving Valves/Flanges and Piping

**Activity:** Related to Topic 3-1: Controlling a Flammable Gas Fire involving Valves/Flanges and Piping

**Format:** Small group (maximum 10 students)

**Time Frame:** Open (based on a total of 08:00 hours for skills practice and completion)

**Description**  
This exercise measures a firefighter’s ability to operate as a member of a team to control a flammable gas fires involving valves/flanges and piping by maintaining crew integrity, identifying contents, identifying escape routes and safety zones prior to advancing, closing any open valves, and extinguishing flames only when leaking gas is eliminated, valves/flanges and piping integrity is evaluated, hazardous conditions are recognized and acted upon, and the valves/flanges and piping is faced during approach and retreat.

**Materials**
- Adequate hose lines (500’ length / 1½” width)
- Adequate nozzles  
  - Standard
- BC fire extinguisher
- Minimum of two (2) water sources
- Adequate water supply
- FLAG trailer or equivalent fixed props
- Adequate propane supply
- Air supply (if necessary)
- Communication equipment (including batteries)
- Emergency medical equipment (AED recommended)
- Lavatory and hand washing facilities
- Site security (if applicable)
- Rehabilitation area and supplies

**Instructions**  
Working in groups, students will demonstrate the following access and egress skills:
1. Execute effective advances
2. Apply various water application techniques
3. Assess Valves /flanges and piping integrity and changing conditions
4. Operate control valves
5. Choose effective procedures when conditions change
6. Execute effective retreats