



# Pennsylvania State Fire Academy

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## Minimum Standard for Accreditation (MSA)

July 2000

**Course Title:** Propane Gas Practical Exercises (PPPE)

**Course Length:** 8 hours

**Lecture/Lab:** 1/7

**Prerequisites:** EBM, PPEO

**Referenced Texts:** *Propane Emergency Facilitator's Guide* by Michael Callan, National Propane Gas Association; *Propane Emergencies* by Michael Hildebrand and Gregory Noll, National Propane Gas Association; *Liquefied Petroleum Gas Practical Exercises (LPGP) Instructor Guide*, Pennsylvania State Fire Academy

**Course Goal:** After successfully completing this course, students will have demonstrated the ability to safely and effectively extinguish liquefied petroleum gas (LPG) fires in a variety of scenarios.

**Description of Course:** This course is designed for the student who is competent in basic fire fighting skills such as hose line handling and SCBA, and who has a fundamental knowledge of propane/LNG and LNG container behavior under emergency conditions. It permits the material learned in the prerequisite SFA Local Level Course *Propane Emergencies Operations (PPEO)* to be applied to live-fire LNG scenarios using a variety of props.

**Description of Methodology to be used:** A brief review of key principles learned in the prerequisite, with an emphasis on safety, followed by demonstration and application in a live LNG fire environment.

**Student equipment and supply needs:** Full fire fighter protective clothing ensemble including protective hood, PASS device, and self-contained breathing apparatus.

**Equipment / Audiovisual / supply requirements:** Pre- and post- exercise briefing area with chalkboard; 2 engines w/operators (1 attack lines, 1 safety lines); continuous water supply for attack engine (safety engine may use tank water if tank capacity is 750 gallons or greater); air cascade system; propane release/fire simulators as follows: 100lb cylinder, 300 lb cylinder, pipe tree, broken flange; manifold piping, miscellaneous piping, and valves required to supply propane to props (see diagrams in Instructor Guide); ignition system which permits ignition of props from at least 8-10 feet away; pipe wrenches; minimum of 50 lbs propane gas per each student.

Continued

**IMPORTANT NOTES TO EDUCATIONAL TRAINING AGENCIES:**

1. **Exercises must be conducted IAW Chapter 6 of NFPA # 1403.** This standard requires a maximum ratio of one instructor for every five students actually engaged in the exercise; a safety officer; an instructor with each safety line; and a competent person in a position to immediately shut off the flow of fuel in event of emergency. All instructors and the Safety Officer must be Suppression Instructors. The person controlling the flow should also preferably meet the same qualifications, but where unusual circumstances do not permit this, an experienced fire fighter **who is NOT enrolled in the class as a student** may be so employed.
2. Training sites which already (as of the date this MSA is issued) have propane training props different from those shown in the Instructor Guide may continue to use them to meet course requirements, provided the experience given students is substantially equal. This judgment will be made before-the-fact by the State Fire Academy Field Education Specialist having jurisdiction and, where applicable, the Educational Training Agency conducting the course.
3. This MSA was developed based on a maximum class size of 20 students; therefore **20 students is designated to be the maximum enrollment for this course. No exceptions under any circumstance are permissible.**

**Course Outline**

<b><u>ET/TT</u></b>	<b><u>Topic</u></b>
:30/:30	Registration, equipment set-up
:15/:45	Safety briefing; PPE inspection
:30/1:15	Attack procedures
5:00/6:15	Simulations (live-fire exercises)
:30/6:45	Equipment teardown
1:00/7:45	Personnel rehab and recovery
:15/8:00	Summary/evaluations

**Competency Evaluation Mechanism:** Instructor evaluation of student performance during exercises.

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**Course Objectives:** Upon completion of this course the student, given a propane/LNG fire scenario, will be able to:

1. correctly identify the scenario (i.e. split flange, etc) from observation of fire conditions.
2. properly, safely, and effectively place fire apparatus to deal with the emergency.
3. demonstrate effective and safe use of hand lines and fire streams to control the given scenario.
4. select and safely use appropriate hand tools.
5. Demonstrate proper and safe valve placement for product flow control.