

PROGRAM DIRECTIVE

Program Directive A-75
Issued April 1, 1980
Revised May 4, 2000

SUBJECT: Welding, Cutting and Heat Treating Operations in Tunnels and Shafts

**AFFECTED CODES/
DIRECTIVES:** 29 CFR 1926.800(m)(5)(i), Fire Prevention and Controls

PURPOSE: To establish guidelines for compliance personnel to use in the enforcement of 29 CFR 1926.800(m)(5)(i) in the context of the rules described in the following paragraphs which permit gas welding and cutting underground under carefully circumscribed conditions.

BACKGROUND: A. From the following rules, the conclusion is that liquefied petroleum gases are prohibited underground in tunnels and shafts, whereas, other fuel gases containing less than a predominant amount of LP Gases are allowed underground in tunnels and shafts. This conclusion is based on the definition of LP Gas.

1. 29 CFR 1926.800(m)(5)(i) Tunnels and Shafts, Fire Prevention and Control, General, states:

"Gasoline or liquefied petroleum gases shall not be taken, stored or used underground."
2. 29 CFR 1926.155(j) definition states:

""Liquefied petroleum gases," "LPG" and "LP Gas" include any material which is composed predominantly of any of the following hydrocarbons, or mixtures of them, such as propane, propylene, butane (normal butane or isobutane), and butylenes."

- B. The following rule does not prohibit the use of LP Gas underground:

29 CFR 1926.350(i) Gas Welding and Cutting, Additional Rules, adopts applicable technical portions of American National Standards Institute (ANSI), Z49.1-1967, Safety in Welding and Cutting. (See ANSI Z49.1-1967, Section 9; Industrial Applications, Part 1-Construction Industry, G. Tunnels, Shafts and Caissons.)

- C. Opinions from the scientific sector of the academic community and independent testing laboratories agree that there are essentially no differences in the safe use of MPS, propane or propylene gases. Nevertheless, strict enforcement of 29 CFR 1926.800(m)(5)(i) would lead to the anomalous result that LP Gas cannot be used underground while its equivalents, which are at least as hazardous, may be used underground. In addition, were OR-OSHA to apply the strict requirements of 29 CFR 1926.800(m)(5)(i) to all gases which are substitutes for LP Gas, it would substantially prevent gas welding and cutting within tunnels, thereby interfering with all underground work.

ACTION:

Where oxygen and fuel gases are used underground in tunnels and shafts for welding, cutting and heat-treating operations, all applicable ventilation standards shall be enforced to prevent the accumulation of flammable or hazardous gases. These ventilation standards are found in 29 CFR 1926.800(j) through 1926.800(k)(13) Air Quality and Ventilation and ANSI Z49.1-1967, Safety in Welding and Cutting, as adopted by 29 CFR 1926.350(i).

**EFFECTIVE
DATE:**

This directive is effective immediately and will remain in effect until cancelled or superseded.