



TECHNICAL BULLETIN

PERMIT AND RESOURCE MANAGEMENT DEPARTMENT

M-2

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Liquefied Petroleum Gas Fired Equipment In Basement and Underfloor Locations

INTRODUCTION

Liquefied Petroleum Gas (LP-Gas) is a heavier than air gas that has the potential to be explosive if not properly used. Equipment burning LP-Gas is prohibited from installation in areas where the vapor fuel might unsafely collect unless provided with safe disposal method.

LP-Gas equipment installed in a pit or *basement* will require approval of the Building Official. A plan detailing the mitigation measures must be submitted for approval prior to any installation of equipment. Installation of LP-Gas equipment in caves or other subterranean occupancies is considered extremely hazardous and will not be considered for approval under a strict reading of Section 304.7 of the California Mechanical Code.

When installed in an underfloor area a “Smitty Pan” and drain are required.

TECHNICAL DETAILS

Underfloor installations require the following:

- I. Minimum 26 gauge sheetmetal pan or concrete slab on grade with 6" high curbs, providing a minimum 9" clearance on all sides of the unit with a minimum 4" pipe drain to daylight. The end of the drain shall be screened with ¼" mesh and protected from blockage.
- II. In addition to required underfloor ventilation, combustion air calculated at one square inch per 4000 BTU with a minimum 200 square inches be provided.
- III. Sufficient access and working space is provided.

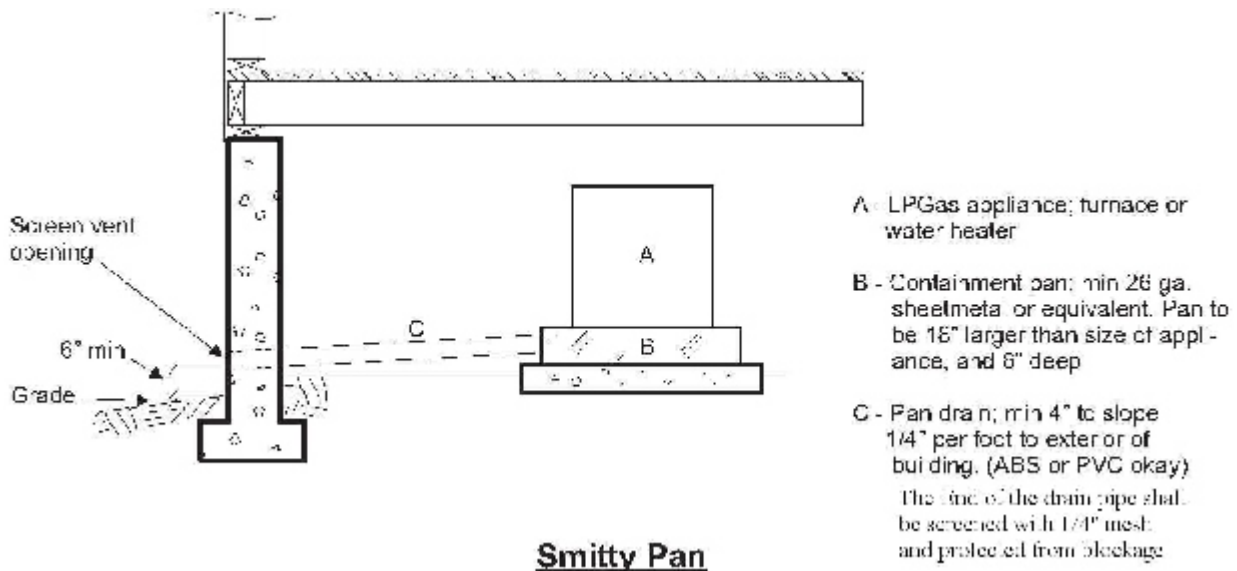
Basement installation plans should include the following for consideration:

- I. Adequate exiting from the area.
- II. Sufficient room ventilation.

- III. Sufficient combustion air provisions.
- IV. Floor drain to exterior minimum 4" pipe to vent unburned gas.
- V. Leak detection system with automatic shut-off valves.
- VI. Installation of smoke detectors with audible alarms throughout the structure.
- VII. Other mitigation measures.

Liquid Petroleum Appliances

Liquified petroleum gas burning appliances shall not be installed in a pit, basement or similar location where heavier than air gas might collect. Appliances so fueled shall not be installed in an above grade under-floor space or basement unless such location is provided with an approved means for removal of unburned gas.



REFERENCES

1998 California Mechanical Code Sections 304.5, 703.2 and 1314
1998 California Plumbing Code Section 1213.6

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