



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 an approved means for the removal of unburned gas..

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.

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.

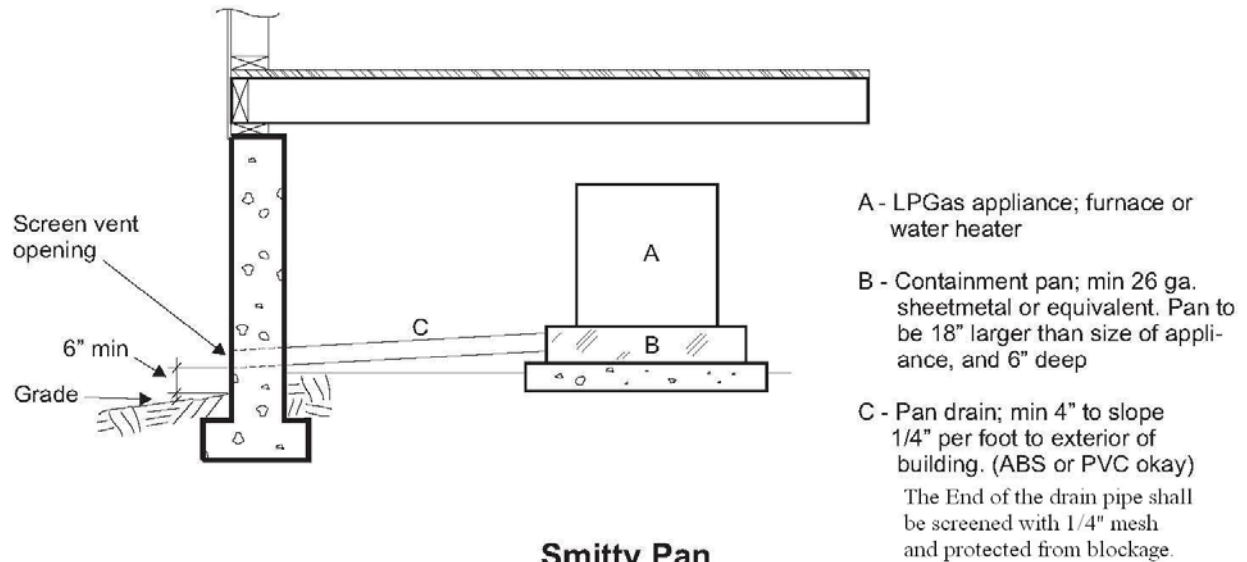
Basement installation plans should include the following for consideration:

- 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

Liquefied 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