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GUIDELINES FOR GAS INSTALLATION AT
LAUNDERETTES AND PREMISES USING SIMILAR TYPE
OF INSTALLATION



GAS SUPPLY ENACTMENT 2023

GUIDELINES FOR GAS INSTALLATION AT LAUNDERETTES AND PREMISES USING SIMILAR TYPE OF INSTALLATION

In exercise of the power conferred by Section 72 of the Gas Supply Enactment 2023, the Energy Commission of Sabah (“Commission”) issues these guidelines.

Citation and Commencement

1. This document may be cited as the Guidelines for Gas Installation at Launderettes and Premises Using Similar Type of Installation (“Guidelines”).
2. These Guidelines shall come into operation effective from 10 July 2023.

Purpose of these Guidelines

- This document serves as a guideline for relevant parties involved in the management and maintenance of gas piping systems and installations at launderettes and premises using similar type of installation to ensure that such systems and installations are in good condition and safe for public use.
- Additionally, these Guidelines can assist local authorities in performing their duties pertaining to gas installation at launderettes or premises using similar type of installation.
- These Guidelines are not intended in any way to circumvent the application of and obligations or requirements under any other written law or standards. Parties relying on these Guidelines are advised to obtain independent advice on the applicability of the same to their installations.

Application of these Guidelines

These Guidelines will address safety aspects of piping systems, LPG storage, installations and other equipment used in the operation and maintenance of gas installations at laundrettes and premises using similar type of installation.

These Guidelines shall apply to owners, tenants and operators of gas installations and at premises using such installations and any of their personnel or a personnel of their contractors or sub-contractors working on the installation.

Amendment and Variation

The Commission may at any time modify, vary, review or revoke these Guidelines.

Dated: 10 July 2023



DATUK Ir. ABDUL NASSER BIN ABDUL WAHID
Chief Executive Officer
Energy Commission of Sabah

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1.0 OBJECTIVE

The objectives of these Guidelines are: -

- to ensure that gas installations at launderettes and at premises using similar type of installation comply with the requirements stipulated in the Gas Supply Enactment 2023, Gas Supply Regulations 2023, and all subsidiary legislation made thereunder, along with Malaysian Standards MS 830:2021 and MS 930:2017.
- to mitigate risks associated with gas installations at launderettes and at premises using similar type of installation.

2.0 DEFINITIONS AND INTERPRETATIONS

2.1 In these Guidelines, the following terms shall bear the following meanings:

“**API**” means American Petroleum Institute;

“**ASTM**” means American Standard Testing Material;

“**ATI**” means an approval to install issued pursuant to Regulation 12 of the Gas Supply Regulations 2023;

“**ATO**” means an approval to operate issued pursuant to Regulation 13 of the Gas Supply Regulations 2023;

“**check valve**” means a mechanical valve to allow a one-way flow of gas;

“**Enactment**” means the Gas Supply Enactment 2023, as amended, modified or supplemented from time to time;

“**Energy Laws**” means the Enactment and all subsidiary legislations made thereunder, as amended, modified or supplemented from time to time;

“**launderette**” means a place of business where clothes and linen can be washed or dried using an electrical equipment for a fee where the operation of the launderette utilises gas supply either from an LPG storage in the form of a cylinder or from a person licensed under section 4 of the Enactment or both;

“**laundry dryer**” is an appliance designed to remove moisture from clothing, linens and other fabrics;

“**LPG**” means liquefied petroleum gas;

“**LPG storage**” means a location to store LPG cylinders which are to be used for operational purposes at or by a launderette or premises using similar installations;

“**Malaysian Standards**” means standards issued by the Department of Standards Malaysia or its successors or assigns;

“**mechanical ventilation system**” means a ventilation system driven by air handling units connected to ductwork within a building that supplies air to and extracts air from interior spaces;

“**pigtail**” means a rubber hose connecting an LPG cylinder to any manifold;

“**premises**” means a building that is used for commercial purposes;

“**responsible person**”, in relation to any premises, means the licensee or consumer, or an occupier of the premises, or where there is no consumer or occupier, the owner of the premises or any person authorized by the consumer or occupier to be in charge of the gas pipeline or gas installation in the premises;

“**similar type of installation**” means an installation which obtains its gas supply from an LPG storage in the form of a cylinder or from a person licensed under section 4 of the Enactment or both;

“**stacked laundry dryer**” refers to a laundry appliance configuration where a dryer is stacked on top of another dryer; and

“**Zone 2**” means a hazardous area classified as a Zone 2 in accordance with Malaysian Standards MS 830:2021.

- 2.2 Subject to paragraph 2.1 and unless expressly indicated to the contrary or unless the context otherwise requires, terms adopted and used in these Guidelines shall bear the same meaning as they are defined in the Energy Laws.
- 2.3 If there are any conflicts between the provisions of these Guidelines and of those contained in the Energy Laws, the provisions in the Energy Laws shall prevail.

3.0 LPG CHARACTERISTICS

The following illustrates typical characteristics of LPG:

Typical LPG Characteristics		
i	Specific Gravity	0.55 @ 15°C; water = 1
ii	Gross Calorific Value (kcal/Sm ³)	28,058
iii	Burning Velocity (m/s)	0.46
iv	Upper Flammability Limit (%)	9.0
v	Lower Flammability Limit (%)	1.8
vi	Auto-ignition Temperature (°C)	>410
vii	Theoretical Air Requirement (m ³ /m ³)	28.81

4.0 REGULATORY REQUIREMENTS

- 4.1 The installing of any piping system shall be carried out by a person holding a valid Certificate of Registration as a Gas Contractor.
- 4.2 Such installation work shall be carried out or directly supervised by a competent person working for the Gas Contractor.
- 4.3 Prior to the installation of a piping system, the owner of the piping system shall obtain an ATI.
- 4.4 Upon completion of the installation, the owner of the piping system shall obtain an ATO. For installations receiving the supply of gas directly from a retail licensee, the ATO shall be displayed at a visible and suitable location within the premises.
- 4.5 In order to supply gas through the piping system, a licence in accordance with Section 4 of the Enactment shall be obtained and displayed at a visible and suitable location within the premises.

5.0 TECHNICAL REQUIREMENTS

5.1 Installation Requirements

- (a) These requirements shall be fulfilled by a Gas Contractor.
- (b) The design of the installation shall follow the requirements stipulated in the latest Malaysian Standards MS 830 and MS 930 or any modifications or substitutions thereto as directed by the Commission.
- (c) Hoses shall not be used to connect a gas appliance to any LPG cylinder. Exemption is only granted to premises utilizing not more than two (2) appliances such as a water heater and dryer and shall be manned at all times during operation provided that:
 - (i) the number of LPG cylinders used shall not exceed two (2); and
 - (ii) only one (1) cylinder may be connected to one (1) appliance.
- (d) If the launderette or premises using similar installations is located in a building containing a continuous row of shop houses, the LPG storage must not contain more than 12 units of 50kg LPG cylinders.
- (e) Gas detectors approved by the Commission shall be installed within the vicinity of all gas appliances, taking into account the operating range of the gas detectors, and in any case shall not exceed three (3) meters.
- (f) All gas detectors shall be connected to a safety alarm located in an area assigned to be frequented by the public and linked to an automatic shut-off device.
- (g) In the case of a stacked laundry dryer with two (2) or more doors (regardless of its number of gas inlet), such appliance shall be considered as two (2) or more gas appliances respectively.
- (h) For a laundry dryer utilising gas but with electric or steam enabled/multipurpose function, such appliance shall be treated as gas appliance.
- (i) The design must also follow any further requirements as issued by the Commission from time to time.

5.2 Piping Requirements

- (a) The material used for any piping shall be of carbon steel complying with the ASTM A 106 or API 5L Grade B standards.
- (b) The piping shall be of a seamless type.
- (c) The minimum grade of the pipes shall be Schedule 40 of API 5L Grade B.
- (d) Any equipment such as valves or regulators connected to the piping shall not be installed higher than two (2) meters above the finished floor level.
- (e) A pressure gauge shall be installed after each regulator to indicate the pressure of the gas in the piping system.
- (f) Any changes in the direction of the piping shall use standard gas fittings. The use of non-standard gas fittings or manually welded parts are strictly prohibited.
- (g) Piping shall be adequately supported in order to ensure that it is securely fixed at the installed position. The support shall be able to withstand the load of the pipes and any vibrations created during the transportation of gas.
- (h) Hoses used to connect pipes to any appliances such as water heater or dryer shall not exceed 1.5 meters in length.
- (i) All piping shall not be in contact with electrical cables, metal parts or any substance or material which may create sparks.
- (j) All piping systems and installations shall comply with Table 14 in Section 14 of Malaysian Standard MS 830:2021 as amended or revised from time to time.
- (k) No other items shall be placed on any piping at any time.

5.3 LPG Storage Requirements:

(a) General Storage Requirements

(i) The LPG storage shall not:

- (aa) be located at the main entrance of the launderette premises unless allowed by the authority having jurisdiction in accordance with Malaysia Standard MS 830:2021;
- (ab) be located in an area where the safety of the public might be jeopardized;
- (ac) be located at the basement of any building;
- (ad) be located under any staircase or ramp;
- (ae) be a storage area for unused LPG cylinders
- (af) contain any mechanical ventilation system unless the ventilation system is a certified explosion-proof type; and
- (ag) be installed with any electrical wiring or equipment, unless such wiring or equipment is a certified explosion-proof type and suitable for a Zone 2 area.

(ii) The LPG storage shall:

- (aa) be located at an area with adequate ventilation;
- (ab) have adequate leg room for the safe loading and unloading of LPG cylinders;
- (ac) have emergency shut-off valves equipped with pullout cables installed at appropriate locations where the pullout cables to activate the shut-off valves shall be placed in suitable conduits;
- (ad) be a Zone 2 area;
- (ae) have standard safety signage installed in accordance with Malaysian Standards MS 830:2021; and

- (af) at all times comply with Malaysian Standards MS 830:2021.
 - (ag) be installed at ground level.
 - (iii) Pigtails connected to any manifold shall be fitted with a check valve.
 - (iv) The space in the opposite direction of the LPG storage shall be clear from any obstruction for easy access to the LPG storage.
 - (v) The public are strictly prohibited from access to the area within the vicinity of the LPG storage area. In the event where it is not possible to block the access from the public, it shall be the responsibility of the consultants, Gas Contractors, launderette franchisors, competent persons and owners or management companies to obtain an expert advice from the relevant local authorities.
- (b) Specific Requirements for LPG Storage Located Within Launderette Premises
- (i) The LPG storage area shall be protected with a 4-hour fire-rated wall (including ceiling), in accordance with Malaysian Standards MS 830:2021.

5.4 Maintenance Requirements

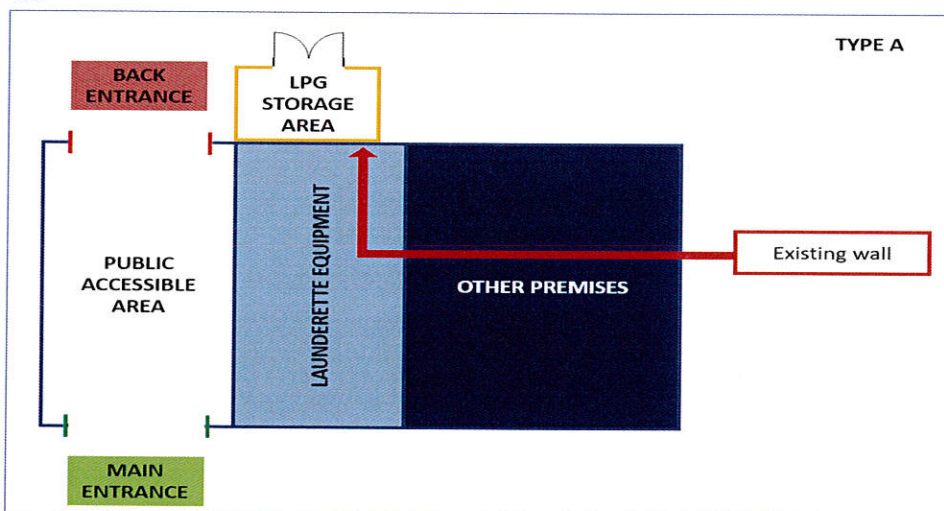
- (a) These requirements shall be fulfilled by the owner of the piping system.
- (b) The piping system or installation shall be maintained in a good condition according to standards prescribed by the Commission, or, if not prescribed by the Commission, according to acceptable prudent industry standards.
- (c) A responsible person shall be assigned to the piping system or installation who shall conduct regular inspections and ensure that the piping system or installation is free from any gas leakage.
- (d) The piping system or installation shall be inspected, tested and certified by a competent person every two (2) years or for such periods as may be determined by the Commission.

5.5 Other Requirements

- (a) These requirements shall be fulfilled by the owner of the piping system.
- (b) All LPG storage cylinders must be those assigned for commercial use by the Ministry of Domestic Trade and Consumer Affairs. The use of LPG storage cylinders for domestic purposes is strictly prohibited.
- (c) Adequate warning and evacuation signs shall be displayed at the premises to facilitate the public in the event of any emergencies.
- (d) “No Smoking” signs shall be placed at appropriate locations within the premises.
- (e) For premises operating on a 24-hour basis, the contact number of the responsible person and other emergency contact numbers such as the police, fire department and other relevant authority shall be displayed at the area frequented by customers.

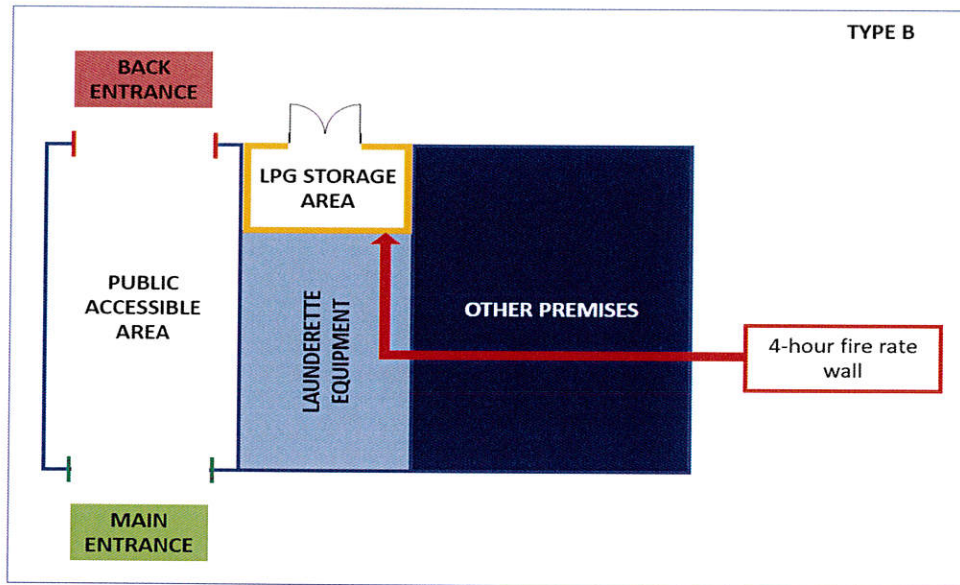
6.0 TYPICAL LAYOUT DIAGRAMS FOR LAUNDERETTES

- 6.1 The following is an example of a layout diagram for laundrettes where the LPG storage is located outside and at the back of the laundrette premises¹ (“Type A”):



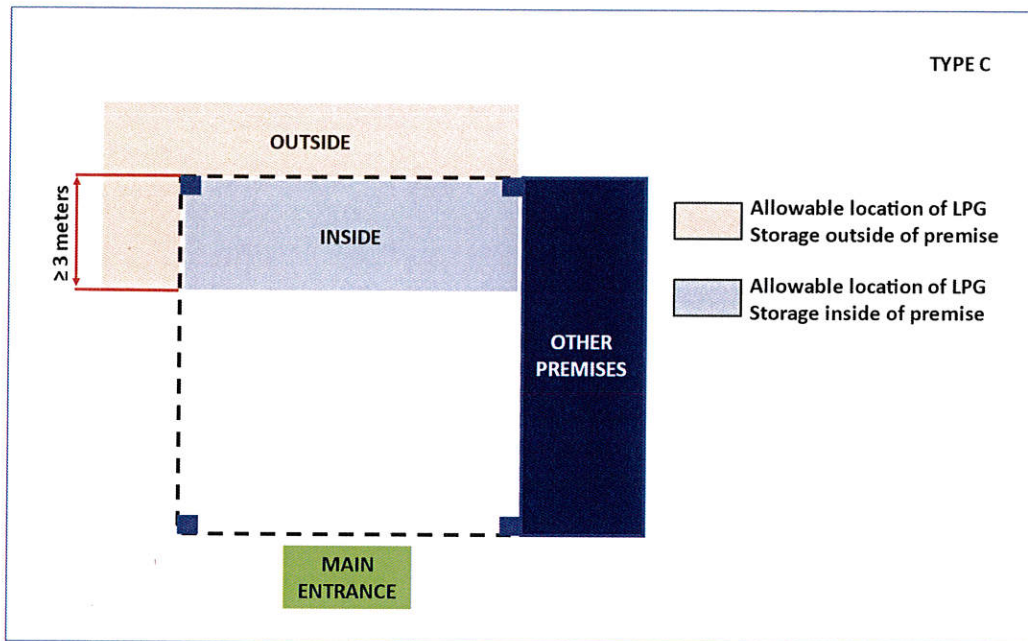
¹ Provided that the owner or occupier of the laundrette or premises using similar type of installation has obtained all the necessary approvals, permits, etc. to build the LPG storage at the said location.

- 6.2 The following is an example of a layout diagram for launderettes where the LPG storage is located within and at the back of the launderette premises² (“Type B”):



² Provided that the owner or occupier of the launderette or premises using similar type of installation has obtained all the necessary approvals, permits, etc. to build the LPG storage at the said location.

- 6.3 The following is an example of a layout diagram of an allowable LPG storage location³ for laundrettes located at the corner or end of a terrace shop house installation ("Type C"):



³Provided that the owner or occupier of the laundrette or premises using similar type of installation has obtained all the necessary approvals, permits, etc. to build the LPG storage at the side location.

- 6.4 For both Type A, Type B and Type C layouts:
- The public accessible area shall be equipped with a safety alarm, in accordance with paragraph 5.1(f) of these Guidelines;
 - Gas detectors approved by the Commission shall be installed within the vicinity of all gas appliances, in accordance with paragraph 5.1(e) of these Guidelines;
 - The contact number of the responsible person and other emergency contact numbers and adequate warning and evacuation signs shall be displayed at public accessible area, in accordance with paragraphs 5.5(c) and 5.5(e) of these Guidelines; and
- 6.5 In addition, for Type B layout and Type C (inside) layout, a 4-hour fire-rated wall (including ceiling) shall be installed in accordance with paragraph 5.3(b)(i) of these Guidelines.

7.0 Effects of Contravention or Non-Compliance

- 7.1 All parties concerned should note that any person who carries out activity of use of gas through a piping system at a launderette or premises using similar type of installation requires a licence to be issued by the Commission. In addition, any licensee, competent person or any person subject to these Guidelines must comply with it.
- 7.2 It is an offence under subsection 4(3) of the Enactment if any person carries out any activity of retail or use of gas through a piping system without any licence. On conviction, the offender will be liable to a fine not exceeding one hundred thousand ringgit (RM100,000.00) or to imprisonment for a term not exceeding three (3) years or to both and to a further fine not exceeding one thousand ringgit (RM1,000.00) for every day or part of a day during which the offence continues after conviction, and any piping system or part thereof used or intended to be used in the commission of the offence shall be liable to forfeiture.
- 7.3 It is an offence under subsection 72(5) of the Enactment if any licensee, competent person or any person fails to comply with these Guidelines. On conviction, the offender shall be liable to a fine not exceeding three hundred thousand ringgit or to imprisonment for a term not exceeding two years or to both.

8.0 Acknowledgement

NAME	ORGANISATION / POSITION
PKPjB Abdul Razak bin Muda	Pengarah, Jabatan Bomba dan Penyelamat Malaysia (JBPM) Negeri Sabah
PPjB Ts. Farhan Sufyan bin Borhan	Timbalan Pengarah, JBPM Negeri Sabah
PgKB II Henry Goliong	Ketua Cawangan, Cawangan Penguatkuasaan, Bahagian Keselamatan dan Kebakaran, JBPM Negeri Sabah
PPgB Zico Mojib	Penolong Penguatkuasa, Cawangan Penguatkuasaan, Bahagian Keselamatan Kebakaran, JBPM Negeri Sabah
Sufinah Yussof	Daya Asal Engineering Sdn. Bhd.
Phang Ah Cheng	Daya Asal Engineering Sdn. Bhd.
Muhammad Qawiem Bin Ab Ghani	Rencana Intelek Sdn. Bhd.
Rasli Bin Ahmad	RNW Engineering Services Sdn. Bhd.
Salleh Dualin	RNW Engineering Services Sdn. Bhd.
Mustar Adik	Technohasil Engineering Sdn. Bhd.
Muhammad Anas Marjunit	WOG Global Sdn. Bhd.
Muhamad Suhaili Yahaya	Suasa Chem Sdn. Bhd.
Lim Chui Soon	JIL Logistics & Engineering Sdn. Bhd.
Ian Lim Jiayu	JIL Logistics & Engineering Sdn. Bhd.
Clement Chong Vui Henn	Mega Energy
Harlina @ Lynn Aman	Dung Kiong Gas Equipment and Piping Sdn. Bhd.
Ilham Rahmandan Bin Wiserman	Dung Kiong Gas Equipment and Piping Sdn. Bhd.
Mohd Badrul Zaman bin Mohamad Yuneh	DMG Energy Sdn. Bhd.
M. Abdul Hadi Bin Ismail	DMG Energy Sdn. Bhd.
Muhamad Nor Zan Bin Jon Nadzim	DMG Energy Sdn. Bhd.
Yee Han Liang	Fastweld Gastech Eng Sdn. Bhd.