

11 May 2020

To,
The Secretary,
Petroleum and Natural Gas Regulatory Board,
World Trade Centre,
Babar Road,
New Delhi – 110001

Subject: Views on Proposed Amendments in the PNGRB (Technical Standards and Specifications including Safety Standards for Retail Outlets dispensing Petroleum, Auto LPG and CNG) Regulations, 2018

Ref:

1. Public Notice dated 17 February 2020
2. Public Notice dated 2 March 2020
3. Public Notice dated 13 April 2020
4. Public Notice dated 1 May 2020
5. Public Notice dated 5 May 2020

Respected Madam,

In reference to the said public notices, our point wise views/comments on the proposed amendments are attached as Annexure 1.

Submitted for your kind consideration please.

Regards,



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Deputy Manager – (Legal & Compliance)



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Annexure 1

Views on Proposed Amendments in PNGRB (Technical Standards and Specifications including Safety Standards for Retail Outlets dispensing Petroleum, Auto LPG and CNG), Regulations, 2018

Sl. No.	Proposed Amendment	Views/Comments
1.	<p>Schedule IV - Pg. 12 of 21, Clause No. 14.0 – LNG or LCNG Dispensing</p> <p>A. General</p> <p>(1) LNG dispensing sites dispensing saturated LNG with personnel in the immediate vicinity shall provide barrier walls or equal protection in order to protect the dispensing operator and vehicle.</p> <p>(2) All facility piping other than the dispensing hose to the vehicle shall be behind a barrier, which in the case of an equipment or device malfunction deflects the saturated LNG upward.</p>	<p>In the proposed amendment a barrier wall to protect the dispensing operator and vehicle is mentioned. There is no clarity on the location or how high the barrier wall / equal protection is to be provided.</p> <p>The sample layout drawing provided with this schedule, also does not show any barrier wall / equal protection at the LNG Dispensers.</p>
2.	<p>Schedule IV - Pg. 11 of 21, Clause No. 12.0 – Fire Protection facilities</p> <p>Sl. No. 4.: Fire protection shall be provided for all LNG fueling facilities. The extent of such protection shall be determined by an evaluation based on sound fire protection engineering principles, analysis of local conditions, vehicle operations hazards within the facility, exposure to or from other property, and the size of the LNG containers. The evaluation shall determine the following, as a minimum:</p> <p>i. The type, quantity, and location of equipment necessary for the detection and control of fires, leaks, and spills of LNG, flammable refrigerants, or flammable gases or liquids</p> <p>ii. The methods necessary for the protection of vehicles, equipment, and structures from the effects of fire exposure. The equipment and</p>	<p>i. It is not clear as to who would be the evaluation authority. Further, no specific code, standard or guideline is mentioned, it only says sound Fire protection Engineering principles.</p>

processes to be incorporated within the emergency shutdown (ESD) device system.

- iii. The type, quantity, and location of sensors necessary to initiate automatic operation of the ESD system
- iv. The availability and duties of individual facility personnel and the availability of external response personnel during an emergency
- v. The protective equipment and special training required by personnel for emergency duties.

3. Schedule IV - Pg. 2 & 3 of 21, Clause No. 3

3.1 (1) (a) The maximum aggregate capacity of each such LNG installation shall not exceed 1060m³.

Table 1
Distances from Impound Wall and Property Line

Sl. No.	Water Capacity of the largest vessel (m ³)	Minimum distance from edge of impoundment or vessel drainage system to property line	Minimum distance between storage vessels
1.	< 0.5	0 m	0
2.	> 0.5 but < 1.9	3 m	1 m
3.	> 1.9 but < 7.6	4.6 m	1.5 m
6.	>7.6 but < 63	7.6 m	1.5 m
7	> 63 but < 114.0	15.0 m	1.5 m
8	>114.0 but < 265	23.0 m	1/4 of the sum of the diameters of adjacent vessel (minimum 1.5 m)
9	>265.0 but < 379	e vessel diameter (minimum 30.0.m)	

Note: If the aggregate water capacity of a multiple container installation is 1.9 m³ or greater, the minimum distance must comply with the appropriate portion of this table, applying the capacity rather than the capacity per container, If more than one installation is made, each installation must be separated from any other installation by at least 7.6 m. Do not apply minimum distances between adjacent containers to such installation.

1. In Clause No. 3, Table-1, the minimum distance from edge of impoundment or vessel drainage system to property line is not matching with the distances given in the layout drawing.
For example: In Table No. 1, Sl. No. 8, the distance of water capacity of largest vessel (114 to 265m³) is 23 M, whereas it is 26 M in the layout drawing (Page No. 20 of 21).

2. In case of the aggregate water capacity of multiple container installation is more than 379 M³ and up to 1060 M³, the minimum distance from edge of impoundment or vessel drainage system to property line is not mentioned.

3.It is not clear whether Minimum distance between storage vessels is to be applied to largest vessel or aggregate water capacity.

4.In Sl.No.-9, column-3 of Table-1, only the letter ‘e’ is featuring, it seems that some letters are missing.

<p>4.</p>	<p>Schedule IV - Pg. 8 of 21, Clause No. 5</p> <p>Fitments:</p> <p>(1) Each LNG double walled vessel shall have at least 2 numbers of safety relief valves capable of achieving the required relief capacity on standalone basis and shall be sized to relieve the flow capacity determined for the largest single contingency or any reasonable and probable combination of contingencies and shall include conditions resulting from operational upset, vapor displacement and flash vaporization.</p> <p>(2) Relief devices shall be vented directly to the atmosphere. Each safety relief valve for LNG vessel shall be able to be isolated from the vessel for maintenance or other purposes by means of a manual full opening stop valve or a flow diverter valve.</p> <p>(3) Safety relief valve shall be designed and installed to prevent any accumulation of water, or other foreign matter at its end.</p> <p>(4) The minimum pressure relieving capacity in kg/hr shall not be less than 3% of the full tank contents in 24 hours.</p>	<p>i. Relevant Design Codes and Standards of relief valve to be installed on Vessels and pipeline to be indicated.</p> <p>ii. Requesting recommendation on the temperature measurement of LNG Storage tank and rate of pre-cooling.</p>
<p>5.</p>	<p>Schedule IV - Pg. 10 of 21, Clause No. 7</p> <p>Piping System</p> <p>(1) All piping system and components shall be designed to –</p> <p>(a) Accommodate the effects of thermal cycling fatigue to which the systems shall be subjected.</p> <p>(b) Provide for expansion and contraction of piping and piping joints due to temperature changes.</p> <p>(c) Meet the requirements of ASME 31.3</p>	<p>Request for clarification on use of Vacuum Jacketing or Cold proofing insulation for Cryogenic piping to limit the heat input to the LNG System and generation of Boil-off gas as well as a safety measure to avoid direct contact with the cold surfaces</p> <p>Request for recommendation on material of construction for metallic supports for the structure with Fire proofing to ensure the integrity of support structures in case LNG leaks and fire.</p>

6.	Schedule – IV : Pg. 19 of 21, Sr. No. 20 “Safety Inspection / Audit”	Request to give guidelines on the mandatory Studies required for Station safety like SIL, F&G mapping Study, Dyke’s nearby building design study etc. to ensure integrity in case of incident overpressure.
7.	General - Auto LNG Dispensing	1. Request for Detailed guidelines on Auto LNG dispensing - Design, Inspection, Testing, Commissioning, Operations, Maintenance, and consumer safety. 2. Request for Guidelines for Weights & Measure approvals.
8.	General - Testing	Requesting for specific guidelines on Testing requirements for equipment of LCNG facilities in the schedule.
9.	General – Outer Boundary Wall and Separation Wall.	Requesting for guidelines on type and height of outer boundary wall to be installed along property line of LCNG area and separation wall between LNG and CNG area.