

OIL & GAS REGULATORY AUTHORITY (OGRA)

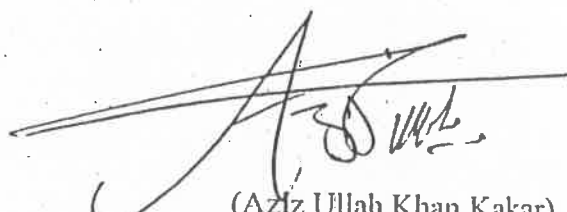
No. OGRA-23 (266)/2014-Enf
January 30, 2017

M/s. Attock Refinery Limited	M/s. Ocean Pakistan Limited, (Formerly OPII),	M/s. National Refinery Limited
M/s. Pakistan Refinery Limited	M/s. Pakistan Oilfields Limited	M/s. Jamshoro Joint Venture Limited
M/s. Oil & Gas Development Co. Limited	M/s. Pak-Arab Refinery Limited	M/s. Pakistan Petroleum Limited
M/s. Byco Petroleum Pakistan Ltd.,	M/s. United Energy Pakistan Limited,	M/s. MOL Pakistan Oil and Gas Company
M/s. Engro Vopak Terminal Limited	M/s SSGC LPG Terminal	

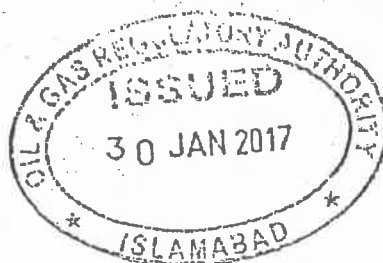
Subject: **STANDARD OPERATING PROCEDURE FOR FILLING OF LPG BOWZERS**

Further to OGRA's earlier letter of even number dated March 15, 2016 regarding the above subject.

2. Please find enclosed herewith a comprehensive SOP (standard operating procedure) for filling of LPG bowzers at your premises for immediate strict compliance. In case non-compliance is observed throughout the supply chain (from filling to decanting of the bowzer), the concerned licensee/company shall be held accountable under the provisions of LPG (Production & Distribution) Rules, 2001.


(Aziz Ullah Khan Kakar)
Deputy Executive Director (Enforcement)

Cc:
➤ All LPG Marketing Companies



STANDARD OPERATING PROCEDURE (SOP)
FOR FILLING LPG BOWZERS AT LPG TERMINALS / LOCAL LPG PRODUCERS

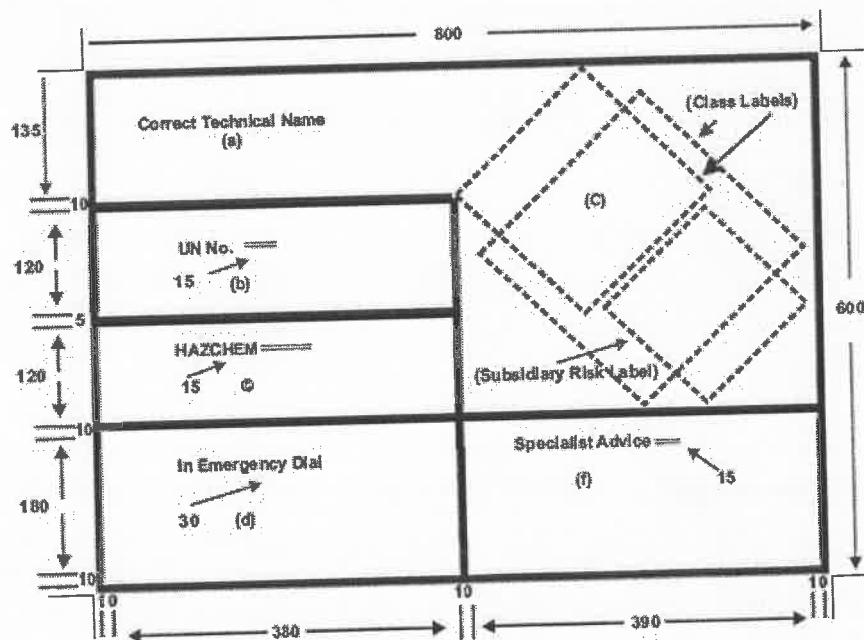
Following minimum safety procedures shall be documented and duly complied by all LPG terminals / local LPG producers for filling LPG Bowzers along with their existing SOPs:

STEP No.1 LPG BOWZER PRE-FILLING:

- i. Following documents shall be checked before allowing LPG bowzer to enter the facility:
 - a) Valid Computerized National Identity Card (CNIC) of the driver.
 - b) Valid HTV Driving Licence of the driver.
 - c) Valid authorization letter of the licensee (consignee).
 - d) Registration documents of the prime mover.
 - e) Valid Fitness Certificate of the vehicle issued by Motor Vehicle Examiner.
 - f) Valid Explosive License of the bowzer.
 - g) Necessary Insurance Documents of LPG product.
 - h) Undertaking from LPG bowzer owner that internal safety valves / excess flow valves are installed inside the bowzer.

- ii. Hazchem Codes (Emergency Action Codes) for LPG must be painted on all three sides of the bowzer.

SAMPLE FORMAT



(All dimensions are expressed in millimeters)

- a) Technical Name: LPG b) UN No. 1075 c) Hazchem: 2WE

- iii. Driver should have all necessary safety appliances including Personal Protective Equipment (PPE) which are in good condition.
- iv. Bowzer shall be fitted with minimum two Dry Powder Fire Extinguishers for fire category B / C at easily accessible location(s) and the capacity of each cylinder shall not be less than 9 Kg.
- v. One portable fire extinguisher shall be installed in driver cabin for prime mover fires / sparks etc.
- vi. Bowzer (vessel) external damage shall be thoroughly checked by an authorized skilled person.
- vii. Bowzer valves must be protected by the protected box, welded around the valves.
- viii. Run-away barrier below bowzer must be available for protection minimizing road clearance along with the fog lights and reflectors.
- ix. All gauges (rota gauge, temperature gauge, pressure gauge etc) and calibration certificates shall be checked / verified.
- x. Bowzer vessel data plate shall be affixed on the bowzer and the same shall be checked.
- xi. Valid Hydro Test and Pressure Relief Valve(s) test certificates of bowzer/vessel shall be checked / verified.
- xii. Approved quality flame arrester should be provided on the engine exhaust and muffler / silencer should be properly bolted without any leaks.
- xiii. Bowzers cabin should be checked whether there are any source of ignition like match box / Explosive / flammable substance in the cabin.

STEP-2:

LPG BOWZER FILLING PROCEDURE:

- i. Bowzer should be properly parked in the filling area under the supervision of filling supervisor / staff.
- ii. Ensure that the engine is switched off and key has been removed from the ignition switch.
- iii. Driver has left the cabin and moved away from the bowzer and be available at suitable place near the bowzer.

- iv. Grounding clamps are installed properly and earthing / grounding shall be disconnected just before the release of bowzer.
- v. Fire extinguishers shall be placed near the tank trucks during operations in a designated marked place.
- vi. Ensure that no mobile phones and any other source of ignition shall be permitted near the filling plant / gantry.
- vii. Bowzer should be parked on loading / filling bay and place **wheel chokes** at front and rear wheels. Keep the truck in neutral mode with hand brakes "ON" / Applied.
- viii. Verify correct hook-up of loading and vapor line of LPG hoses with a corresponding bowzer connections.
- ix. Ensure all loading and vapor lines valves are in open position before start of filling operation.
- x. Ensure all flange connections involved in loading setup from loading arm to bowzer connections are adequately tightened.
- xi. Ensure emergency stop spring loaded valves are in operable condition.
- xii. The operator ensures that only brass tools are used in the filling area.
- xiii. Ensure bowzer inside pressure is sufficient, i.e. 80-90 psig; and there must be no vacuum inside the bowzer to avoid any explosive mixture formation and mishap.
- xiv. Open vapor recovery valve to equalize the pressure after lining up the dispatch tank.
- xv. Once the pressure is equalized start LPG filling.
- xvi. Verify tank level at different intervals through Rota Meter.
- xvii. If any leak is observed during filling of bowzer, filling shall be stop immediately and bowzer shall be decanted through decanting line up available. Moreover, Filling/transfer operations should be suspended immediately in the event of:

- Uncontrolled leakage occurring
- A fire occurring in the vicinity
- Lightning and thunder storm

- xviii. Bowzer shall be filled as per Section 4-4 (quantity of LP Gas in container) of NFPA-58 and under no circumstances the bowzer shall be filled above 85 % of its filling capacity.
- xix. During filling monitor and log temperature.
- xx. Close inlet and vapor recovery valves and secure the valve tank and seal it.
- xxi. When vapors are left in the hose depressurized it by opening the bleed valve.
- xxii. Slowly loosen the bolts for removal of the hoses.
- xxiii. Check again that there is no connection of hoses or earth wire between the bowzer and fixed installations.
- xxiv. Supervisor should ensure before handing over the key to bowzer driver that all connections are secure and the bowzer is in position to leave the premises.

STEP-3:

POST FILLING CHECKS:

- i. Close inlet and vapor recovery valves and remove ground clamp, ensuring that the cable remains away from bowzer's path.
- ii. Apparent leakage(s) from the bowzer must be checked.
- iii. All outlets are tightly sealed with the clean seal number.
- iv. Delivery challan should include the destination, client / product details.
- v. After cross checking compliance of the procedure, allow driver to move the bowzer away from the filling area.
