

NB08-0701

S7.9 REQUIREMENTS FOR CHANGE OF SERVICE FROM ABOVEGROUND TO UNDERGROUND SERVICE

ASME LPG storage vessels may be altered from aboveground (AG) service to underground (UG) service subject to the following conditions.

1. Vessels that have been previously used in anhydrous ammonia service are not permitted to be converted to LPG service.
2. The outside surface of the vessel shall be cleaned to bare metal for an external inspection of the vessel under the guidelines of this Supplement. Prior to placing underground, the outside surface of the vessel shall be prepared consistent with the paint manufacturer's specification and coated with a coating suitable for UG service. Any touch-up coating shall be the same coating material. All corrosion shall be repaired in accordance with the NBIC.
3. Verify that there is no internal corrosion due to valves having been removed while the container was out of service.
4. Any unused connections located on the vessel shall be closed by seal welding around a forged plug or moved using a flush patch. If a flush patch is used the material shall be the same material thickness and material grade as the original code of construction.
5. All connections on top of the vessel, except for the liquid withdrawal opening, shall be replaced with a riser pipe with multi-valve suitable for UG LPG service. The valve shall be enclosed in a protective housing and placed underground in accordance with jurisdictional requirements.
6. The liquid withdrawal opening shall be located within the protective housing.
7. The liquid level tube in the multivalve shall be the length required according to jurisdictional requirements.
8. The NBIC nameplate shall be made of stainless steel and continuously welded to the vessel wall. The nameplate shall also have the information from the original nameplate. This shall include the manufacturer's name, container serial number, National Board number, if registered with the NBIC, MAWP, year built, head and shell thickness stamped for "UG service", the "liquid level tube length= _____ inches" and the National Board "R" stamp. The original manufacturer's nameplate shall remain attached to the vessel. See Part 2-5.2, Part 3-5.7 for additional stamping requirements.
9. The support legs and lifting lugs may remain in place and shall be welded around the entire periphery to prevent crevices that create a potential area for corrosion. Unused attachments shall be removed and welds ground flush.
10. A connection shall be added for the attachment of an anode for cathodic protection.
11. All welding shall be performed by a qualified "R" stamp holder using a qualified welding procedure.

