MIDLAND FIRE DEPARTMENT REQUIREMENTS FOR ABOVE-GROUND FUEL TANKS FOR FUEL-FIRED EQUIPMENT/GENERATORS (Not for Dispensing)

This document is intended to provide guidance regarding compliance with Flammable and Combustible Liquids Tank Permit requirements for fuel tanks for fuel-fired equipment, such as emergency generators, in accordance with the City of Midland Fire Code. This document does not address tanks installed for the purpose of dispensing fuel or underground tanks – reference the City of Midland Fire Code Chapters 23 and 57 (2015 International Fire Code) for requirements associated with these types of installations. All Section Numbers indicated in this document refer to the City of Midland Fire Code, unless noted otherwise. The following is only intended as a guide and does not include all Fire Code or referenced standard requirements for such installations.

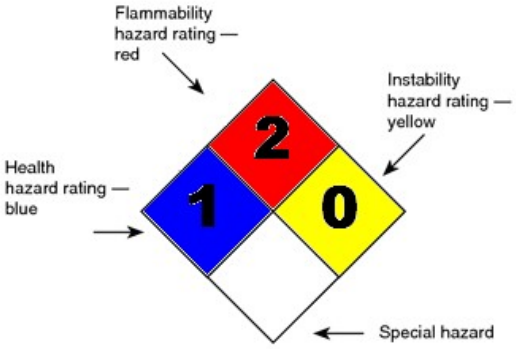
1. **Flammable and Combustible Liquids Construction Permit/ Plan Review** is required to install, alter, remove, or abandon a fixed tank installation containing flammable or combustible liquids. Submittals to the Midland Fire Marshal Office are to include:
    1. To-scale site plan identifying location of tank on property to verify setbacks to buildings and lot lines,
    2. Tank specification identifying UL 142 double-wall (Class IIIB only) or UL 2085 fuel tank, and
    3. Copy of TCEQ Construction Notification Form required for any fuel AST >1,100 gallons.

2. **Outside** above-ground storage tank (AST) shall be either a UL 2085 (listed protected secondary containment tank) or a UL 142 (listed secondary containment tank) fuel tank and comply with all the following:
    a. Normal vent shall extend to 12 ft. above adjacent grade.
    b. All vents shall extend to discharge directly to atmosphere, i.e. outside of generator housing, and be located at least 5 ft. from any ignition source, including engine exhaust.
    a. The fill connection inlet shall be provided with a minimum 5-gallon spill container with drain.
    c. All tanks require vehicular impact protection per Section 312 where subject to such potential damage.
    d. Minimum setback requirements from buildings and property lines must comply with NFPA 30, dependent on size and type of tank.

3. **Inside** AST shall comply with Chapter 6 and Chapter 57. Again, either UL 142 or UL 2085 (listed secondary containment tank) fuel tank is required. Maximum capacity is 660 gallons in a non-sprinklered building, 1,320 gallons in a fully sprinklered building, or 3,000 gallons for a UL 2085 tank in a fully sprinklered building. If tank is proposed to exceed those identified capacities, construction requirements change to H-3 occupancy classification. Additional requirements for interior fuel tanks include, but are not limited to:
    a. All fill and vent lines, including all emergency relief vents, shall terminate outside of the building, located at least 5 ft. away from building openings, the property line, and ignition sources, including engine exhaust. Normal vent shall extend to at least 12 ft. above adjacent grade.
    b. The fill connection inlet shall be provided with a minimum 5-gallon spill container with drain and appropriate signage (NFPA 704).
    c. The room containing the tank shall be separated from the rest of the building by a minimum 1-hour fire barrier – such must be permitted via appropriate Building Permit and comply with adopted Building Code.

4. **All** tanks require overfill prevention, including 90% high level alarm and 95% automatic shut-off.
    Exception: Outside tanks ≤ 1,320 gallons shall only require the 90% alarm. 95% automatic shut-off is an acceptable alternate to the 90% alarm.

5. **All** tanks require signage:
    a. Provide sign at the fill point for the tank, documenting the filling procedure, which shall require the fueling operator to determine the volume required for 90% capacity prior to filling, and tank calibration chart.
    b. Provide “No Smoking / No Open Flames” type signage, tank contents label, and NFPA 704 diamond hazard signs for all installations. NFPA 704 signs shall have hazards labeled as per the Material Safety Data Sheet associated with that commodity and having minimum letter height of 6 inches for outside installations and 4 inches for inside installations. NFPA 704 signs shall be located on the tank, at entrances to facilities where the tank is located, and at locations specified by the fire code official. Format example for typical Diesel:



6. **All** tanks require Fire Inspection **PRIOR TO FILLING THE TANK**.
    a. Fire Inspector shall witness soap test (air test at 110% for a minimum of 10 minutes) of all piping (fuel and vents), unless the tank is located outside and/or is integral to the generator, i.e. belly tank.
    b. Fire Inspector shall witness tightness test of all fuel tanks (air test between 3 and 4 psi for not less than 1 hour, or as per manufacturer requirements).
    c. Preparations should be made to have a fuel truck present upon completion of all tightness testing of piping/tank to fill the tank for verification of the overfill protection to be witnessed by the Fire Inspector.
    d. Confirmation that CFH rating of emergency vents meets or exceeds that required by the UL label on the tank for both primary and secondary (interstitial).
    e. Verification that leaks detection system is operational and functioning properly, as required for tank interstitial space.
    f. Contact the Midland Fire Marshal Office 432-685-7335 to schedule Fire Inspections.

Reference the City of Midland Fire Code for additional information concerning requirements associated with these types of installation.

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