

Department of Licensing and Regulatory Affairs, Bureau of Fire Services, Storage Tank Division

P.O. Box 30033, Lansing, MI 48909

APPLICATION FOR INSTALLATION OF ABOVEGROUND STORAGE TANKS

This information is required under Act 207 of the Public Acts of 1941, as amended, being Section 29.5c of the Michigan Compiled Laws Annotated. Any owner who knowingly fails to notify or submits false information shall be subject to a misdemeanor and/or civil penalties not to exceed \$200 per violation

INSTRUCTIONS: The item numbers are referenced in the attached typical installation of an Aboveground Storage Tank. The system must be in compliance with the Storage and Handling of Flammable and Combustible Liquids (FL/CL) Rules, 2014 AACRS R 29.5601 et seq. The manufacturer and part number must be indicated next to the appropriate item. For installations involving container and portable tank storage, please see Part 2, Chapter 9 through 19 of the FL/CL Rules for additional requirements. For bulk plants, industrial plants, chemical plants, processing plants, refineries and distilleries, please refer to Part 2, Chapter 21 thru 29 of the FL/CL Rules for additional requirements. For emergency generator tanks please see Part 5 of the FL/CL Rules for additional requirements, and complete Section III of this form. Please direct any questions to the Bureau of Fire Services, Storage Tank Division, at 517-241-8847. For detailed instructions, see Page 6.

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|---|------------------------------|--|
| FACILITY NAME | NEW ASSIGNED TANK NUMBER(S) | FACILITY ID NUMBER |
| FACILITY STREET ADDRESS (PO BOX NOT ACCEPTABLE) | CONTACT PERSON (AT LOCATION) | AREA CODE & TELEPHONE NUMBER () |
| CITY | COUNTY | STATE MI |
| OWNER NAME | OWNER ADDRESS | AREA CODE & TELEPHONE NUMBER () |
| CITY | STATE | ZIP CODE |
| SUBMITTER'S NAME | STREET ADDRESS | AREA CODE & TELEPHONE NUMBER () |
| CITY | STATE | ZIP CODE |

SECTION I The following section applies to aboveground tank installations, Part 2 of the FL/CL Rules.

| ITEM | DESCRIPTION | MANUFACTURER & PART NO. | ITEM | DESCRIPTION | MANUFACTURER & PART NO. |
|------|---|-------------------------|------|---|-------------------------|
| 1. | TANK LOCATION: Section 22.4.1: To important buildings, property lines which may be built upon. Adjacent container: minimum three feet, 20 feet from LPG tank. | _____ | 5. | TANK SUPPORTS/ FOUNDATIONS: Section 22.5.1 & 22.5.2: rest on ground, concrete, masonry, piling, or steel. Areas subject to buoyant forces; each tank shall be safeguarded against movement by anchoring or other secure means. | _____ |
| 2. | SECONDARY CONTAINMENT: Section 22.11.: Diking/remote impoundment and alternative methods. Section 4.3.3 of Part 3: Vaults and special enclosures. Liquid-tight, non-combustible (walls and floors). Capacity: 100% largest tank plus volume occupied by other tanks to top of dike wall. | _____ | 6. | SPACING BETWEEN TANKS: Section 22.4.2. & Table 22.4.2.1: Class I, II, IIIA minimum 3 feet from dike wall to LPG tank. Minimum 20 feet between FL/CL tank and LPG tank. | _____ |
| 3. | TANK DESIGN/ CONSTRUCTION: Section 21.4.2: No open tanks for liquid storage. UL142, API 650, and ASME standards. | _____ | 7. | PIPING MATERIAL: Section 27.3: Liquid-tight, steel, nodular iron. Section 27.6.4: protected against corrosion. Section 27.7: pipe testing. Section 5.2.4 of Part 3: pipe in building. | _____ |
| 4. | CORROSION PROTECTION: Section 21.4.5 & 22.5.2.2: Minimize corrosion for any part of tank in contact with foundation. | _____ | 8. | PIPE SUPPORTS: Section 27.6.2: Constructed of non-combustible material. | _____ |

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| ITEM | DESCRIPTION | MANUFACTURER & PART NO. | ITEM | DESCRIPTION | MANUFACTURER & PART NO. |
|------|---|----------------------------------|------|--|----------------------------------|
| 9. | TANK VALVES (LINES ATTACHED): Section 22.13.1: each connection thru which liquid can normally flow shall be provided with an internal or external valve located as close as possible to the shell of the tank. 22.11.4.3 Secondary containment tanks require anti siphon valves | _____ _____ _____ _____ | 15. | OVERFILL PROTECTION: Section 22.7.1: Required on tanks over 1320 gallons capacity, approved method for the prevention of overfilling of tanks. 21.11.4.5 Secondary containment tanks require both an alarm and a shutoff valve. | _____ _____ _____ _____ |
| 10. | EMERGENCY VENTS: Section 22.7.: Calculated on basis of CFH multiplied by the amount of square feet of wetted area. Must be normally closed for flammable liquids. | _____ _____ _____ _____ | 16. | PRODUCT FLOW PROTECTION: Section 27.6.6.3: Back flow protection – check valve. Additional valves may be required to insure proper product flow in the piping system. | _____ _____ _____ _____ |
| 11. | NORMAL VENTS: Section 21.4.3.: Relieve excessive internal pressure. Require P/V vent for class I liquids | _____ _____ | 17. | PRODUCT ID OR RISER: Section 27.10: Identified by color code or marking. | _____ _____ |
| 12. | PIPE VALVES: Section 27.6.6: Shall be provided such to isolate equipment in the event of an emergency. | _____ _____ _____ _____ | 18. | UNLOADING/ LOADING RISER LOCATION: Section 28.4.1: Separated from property lines, AST's, and buildings a minimum: 25 feet Class I liquid, 15 feet Class II and III liquids. | _____ _____ _____ _____ |
| 13. | COLLISION PROTECTION: Section 22.15.: Shall be provided for tanks exposed to vehicular traffic. | _____ _____ _____ _____ | 19. | SPILL PROTECTION - LOADING/UNLOADING POINTS: Section28.9: Provided with means to contain spills Section 4.3.2.8 Part 3: Tank fill connections shall be provided with a non combustible spill containment device | _____ _____ _____ _____ |
| 14. | FIRE PROTECTION AND IDENTIFICATION: Section 21.6 & 21.7.2: Labeled "Flammable Liquid," "Combustible Liquid," or according to NFPA 704. | _____ _____ _____ _____ | 20. | TANK BUILDINGS & CANOPIES: Section 28.5 & Chapter 24: | _____ _____ _____ _____ |

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(Continued from Page 2)

SECTION II

The following section applies to aboveground motor vehicle fueling and marina operations, Part 3 of the FL/CL Rules. The requirements of Part 2 of the FL/CL Rules must also be met. Inventory records shall be kept for all Class I, Class II, and Class IIIA storage.

| ITEM | DESCRIPTION | MANUFACTURER & PART NO. | ITEM | DESCRIPTION | MANUFACTURER & PART NO. |
|------|---|---|------|---|---|
| 1. | TYPE OF SERVICE STATION: Attended qualified supervisor. Unattended self-service. Inside building. Marine service station. | _____ _____ _____ _____ _____ | 7. | DISPENSING HOSE: Section 6.5.: Listed hose assembly not to exceed 18 feet. | _____ _____ _____ _____ _____ |
| 2. | LOCATION OF DISPENSER: Section 6.2.1: Minimum 10 feet from property lines, combustible building walls, and building openings. Within 100 feet of emergency shutoff switch. Section 9.4.2: In clear view of attendant. | _____ _____ _____ _____ _____ | 8. | EMERGENCY BREAKAWAY DEVICE: Section 6.5.2: Installed on each hose that dispenses a liquid into motor vehicles. Designed to retain liquid on both sides of the breakaway point. | _____ _____ _____ _____ _____ |
| 3. | DISPENSING DEVICE: Section 6.3.2: Must be listed and identified as to product it dispenses. Section 6.3.3: Equipped to allow control of flow. Section 6.3.4: Mounted on concrete island and protected from collision. | _____ _____ _____ _____ _____ | 9. | ANTI-SIPHON DEVICE: Section 4.2.4 & 4.3.6.4: Normally closed solenoid valve for elevated tanks. | _____ _____ _____ _____ _____ |
| 4. | PUMP & PUMP LEAK DETECTION DEVICE: Section 6.4.1 & 6.4.2: Pump shall be listed. Each pump shall have installed on the discharge side a listed leak detection device(not required if piping is visible) | _____ _____ _____ _____ _____ | 10. | FIRE EXTINGUISHER & EMERGENCY DSCONNECT: Section 9.2.5.2: Fire extinguishers shall be provided in compliance with NFPA 10 based on the hazard category for the system and site. Section 6.7: clearly identified ESD 20 to 100 feet away | _____ _____ _____ _____ _____ |
| 5. | EMERGENCY SHEAR/FIRE VALVE: Section 6.3.9: Required on submerged pumping systems, rigidly anchored. Section 6.3.10: Suction systems require check valve or pressure regulating valve under the dispenser. | _____ _____ _____ _____ _____ | 11. | SIGNS: Section 9.2.5.4: Warning signs posted: "No Smoking," "Stop Motor," "No filling of portable containers in or on a motor vehicle." "Place container on ground before filling." "Discharge static electricity before fueling." "Do not reenter your vehicle while fueling." Plus others. | _____ _____ _____ _____ _____ |
| 6. | DISPENSING NOZZLE: Section 6.6: Automatic-closing with or without a latch open device. | _____ _____ _____ _____ _____ | 12. | PHYSICAL PROTECTION: Section 4.3.7: Minimum 6-foot high chain link fence. Secure against unauthorized use and vehicular collision protection. | _____ _____ _____ _____ _____ |

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(Continued from Page 3)

SECTION III The following section applies to aboveground emergency generator operations. Part 5 of the FL/CL Rules. The requirements in Part 2 of the FL/CL Rules must also be met.

| ITEM | DESCRIPTION | MANUFACTURER & PART NO. | ITEM | DESCRIPTION | MANUFACTURER & PART NO. |
|------|--|---|------|---|---|
| 1. | TANK LOCATION: Section 22.4.1: To important buildings, property lines which may be built upon. Adjacent container: minimum three feet, 20 feet from LPG tank. | _____ _____ _____ _____ | 9. | EMERGENCY VENTS: Section 22.7.: Calculated on basis of CFH multiplied by the amount of square feet of wetted area. Must be normally closed for flammable liquids. | _____ _____ _____ _____ |
| 2. | SECONDARY CONTAINMENT: Part 2, Section 22.11: Control of spills; diking, alternative methods. | _____ _____ _____ | 10. | NORMAL VENTS: Section 21.4.3.: Relieve excessive internal pressure. Require P/V vent for class I liquids | _____ _____ _____ |
| 3. | TANK DESIGN/ CONSTRUCTION: Section 21.4.2: No open tanks for liquid storage. UL142, API 650, and ASME standards. Size of tank (gallons). | _____ _____ _____ _____ | 11. | UNLOADING/ LOADING RISER LOCATION: Section 28.4.1: Separated from property lines, AST's, and buildings a minimum: 25 feet Class I liquid, 15 feet Class II and III liquids. | _____ _____ _____ _____ |
| 4. | CORROSION PROTECTION: Section 21.4.5 & 22.5.2.2: Minimize corrosion for any part of tank in contact with foundation.. | _____ _____ _____ _____ | 12. | SPILL PROTECTION - LOADING/UNLOADING POINTS: Section 28.9: Provided with means to contain spills. | _____ _____ _____ _____ |
| 5. | TANK SUPPORTS/ FOUNDATIONS: Section 22.5.1 & 22.5.2: rest on ground, concrete, masonry, piling, or steel. Areas subject to buoyant forces; each tank shall be safeguarded against movement by anchoring or other secure means. | _____ _____ _____ _____ _____ | 13. | OVERFILL PROTECTION: Section 22.7.1: Required on tanks over 1320 gallons capacity, approved method for the prevention of overfilling of tanks. 21.11.4.5 Secondary containment tanks require both an alarm and a shutoff valve. | _____ _____ _____ _____ _____ |
| 6. | PIPING MATERIAL: Section 27.3: Liquid-tight, steel, nodular iron. Section 27.6.4: protected against corrosion. Section 27.7: pipe testing. Section 6.8.1 and 6.8.2.1 | _____ _____ _____ _____ | 14. | FIRE PROTECTION AND IDENTIFICATION: Section 21.6 & 21.7.2: Labeled "Flammable Liquid," "Combustible Liquid," or according to NFPA 704. | _____ _____ _____ _____ |
| 7. | PIPE SUPPORTS: Section 6.8.2: Constructed of non-combustible material. | _____ _____ _____ | 15. | PRODUCT ID OR RISER: Section 27.10: Identified by color code or marking. | _____ _____ _____ |
| 8. | COLLISION PROTECTION: Section 22.15.: Shall be provided for tanks exposed to vehicular traffic | _____ _____ _____ _____ | 16. | FUEL FLOW CONTROL: Section 6.5 Systems shall be designed and installed to minimize accidental discharge of fuel | _____ _____ _____ _____ |

PART I – ITEMS

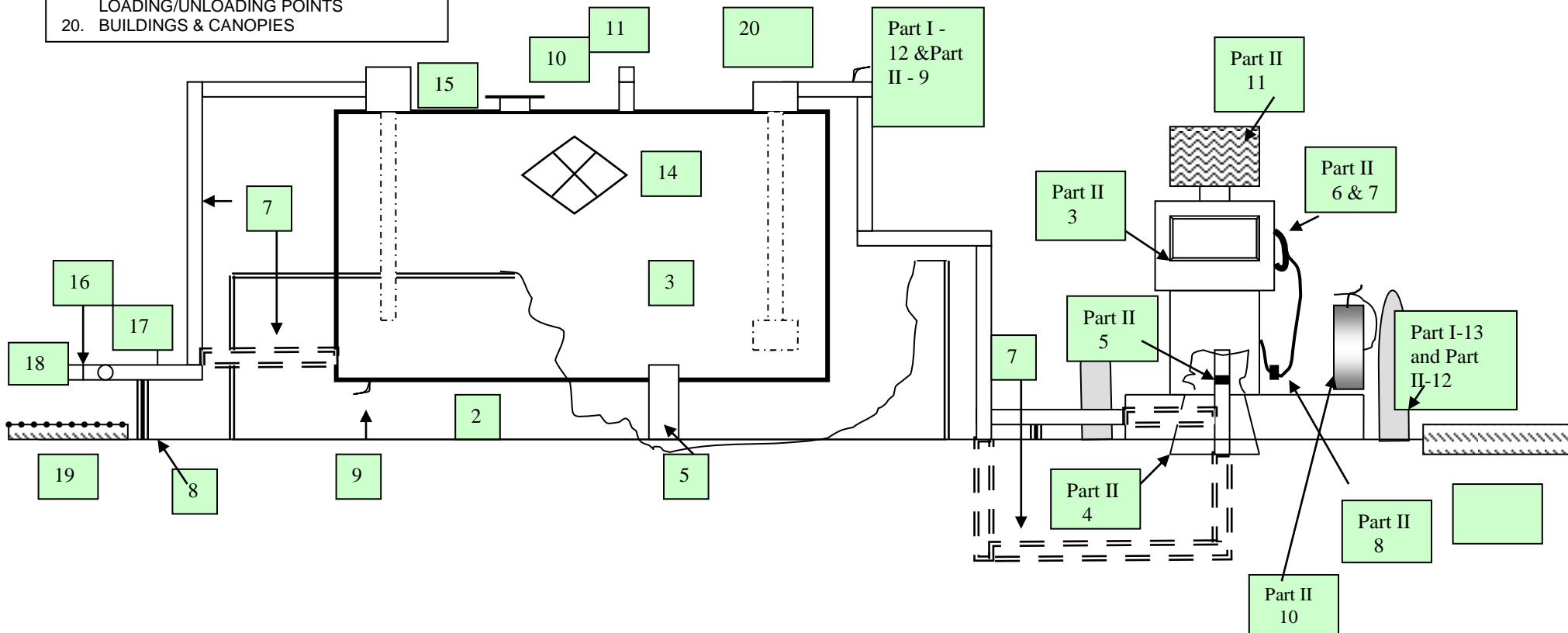
1. TANK LOCATION
2. SECONDARY CONTAINMENT
3. TANK DESIGN/CONSTRUCTION
4. CORROSION PROTECTION
5. TANK SUPPORTS/FOUNDATIONS
6. SPACING BETWEEN TANKS
7. PIPING MATERIAL
8. PIPE SUPPORTS
9. TANK VALVES
10. EMERGENCY VENTS
11. NORMAL VENTS
12. PIPE VALVES
13. COLLISION PROTECTION
14. FIRE PROTECTION AND IDENTIFICATION
15. OVERFILL PROTECTION
16. PRODUCT FLOW PROTECTION
17. PRODUCT ID OR RISER
18. UNLOADING/LOADING RISER LOCATION
19. SPILL PROTECTION—
LOADING/UNLOADING POINTS
20. BUILDINGS & CANOPIES

TYPICAL INSTALLATION OF ABOVEGROUND STORAGE TANK STORING FLAMMABLE OR COMBUSTIBLE LIQUIDS

(Numbers correspond to the item numbers on the application)

PART II – ITEMS

1. TYPE OF SERVICE STATION
2. LOCATION OF DISPENSER
3. DISPENSING DEVICE
4. PUMP & PUMP LEAK DETECTION
5. EMERGENCY SHEAR/FIRE VALVE
6. DISPENSING NOZZLE
7. DISPENSING HOSE
8. EMERGENCY BREAKAWAY DEVICE
9. ANTI-SIPHON
10. FIRE EXTINGUISHER & EMERGENCY
DISCONNECT
11. SIGNS
12. PHYSICAL PROTECTION



APPLICATION FOR INSTALLATION OF ABOVEGROUND STORAGE TANKS

A plan review must be completed on any tank with a storage capacity greater than 1,100 gallons storing flammable or combustible liquids. A request for plan review must include:

- 1) Size of existing tank(s) and product stored, flash point. The material of construction, the dimension, and the capacity of each tank.
- 2) Type of impoundment (diking) provided. Provide dike calculations with the available capacity calculated.
- 3) A completed parts and materials list for each tank with vent manufacturer, model number and flow rate (gpm, SCFH) as appropriate.
- 4) A plot map showing the following information:
 - a) Location of buildings, public roadways, railroad mainlines, public sidewalks, and property lines.
 - b) Storm sewers, sanitary sewers, manholes, and catch basins.
 - c) Proposed location of the container(s) and loading/unloading risers.
 - d) Location of property lines.
 - e) Location of existing tanks, above and underground, within 50 feet of the installation.
 - f) Location of fuel dispensers and canopy footings.
- 4) A separate piping diagram for each tank with pipe, vent and valve specification identified on the diagram. Include manufacturer and model numbers where appropriate.
- 5) Pipe systems must meet Chapter 27, National Fire Protection Association (NFPA) 30, 2012 edition, requirements for gravity releases, emergency operation, and anti-siphon. Please show specific valves, vents and locations.
- 6) A plan review fee of \$203 per tank for any substance not defined as a refined petroleum product. A plan review will not be completed without the plan review fee.
- 7) Make checks payable to the "State of Michigan". Mail the completed application and fee to:

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| LARA Cashiers Office UST/AST P.O. Box 30033 Lansing, MI 48909 | <u>Overnight Mail</u> LARA Cashiers Office UST/AST 2407 North Grand River Avenue Lansing, MI 48906 |
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- 8) Section I shall be completed for bulk facilities.
- 9) Sections I and II shall be completed for motor fueling facilities.
- 10) Section III shall be completed for emergency generator facilities.

The facility cannot be operated without approval from the Bureau of Fire Services. Please direct any questions to the Bureau of Fire Services, Storage Tank Division, at 517-241-8847.