

APPLICATION FOR INSTALLATION OF ABOVEGROUND STORAGE TANKS

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ITEM	DESCRIPTION	MANUFACTURER & PART NO.	ITEM	DESCRIPTION	MANUFACTURER & PART NO.
9.	TANK VALVES (LINES ATTACHED): Section 2.3.2.5: Above liquid level requires anti-siphon. Approved non-freeze. Below level 50,000 gallons or less shall have approved heat activated internal or external valve. water drain valve.	_____ _____ _____ _____	15.	OVERFILL PROTECTION: Section 2.6.1: Delivery operator shall have means to determine liquid level. Automatically stop filling before liquid level is 95% of tank capacity and sound audible alarm when liquid level is 90% of tank capacity.	_____ _____ _____ _____
10.	EMERGENCY VENTS: Section 2.2.5.2: Calculated on basis of CFH per multiplied by the amount of square feet of wetted area. Must be normally closed for flammable liquids.	_____ _____ _____ _____	16.	PRODUCT FLOW PROTECTION: Section 3.5.6: Back flow protection - check valve. Additional valves may be required to insure proper product flow in the piping system.	_____ _____ _____ _____
11.	NORMAL VENTS: Section 2.2.5.1: Relieve excessive internal pressure.	_____ _____	17.	PRODUCT ID OR RISER: Section 3.9: Identified by color code or marking.	_____ _____
12.	PUMP VALVES: Section 3.5.10.1: Shall be provided with positive shutoffs on both sides.	_____ _____ _____ _____	18.	UNLOADING/LOADING RISER LOCATION: Section 5.6: Separated from property lines, aboveground tanks, plant buildings a minimum: 25 feet Class I liquid, 15 feet Class II and III liquids.	_____ _____ _____ _____
13.	PUMPS: Section 3.10.2: Shall be provided with relief valve or bypass.	_____ _____ _____ _____	19.	SPILL PROTECTION - LOADING/UNLOADING POINTS: Section 5.6.4: Prevent spills from entering drain systems, waterways, groundwater and/or subsurface soils. Cannot drain into diked area.	_____ _____ _____ _____
14.	FIRE PROTECTION AND IDENTIFICATION: Section 2.6.2.3: Labeled "Flammable Liquid," "Combustible Liquid," or according to NFPA 704.	_____ _____ _____ _____	20.	LOCATION OF WATER WELLS: Section 2.3.2.1.8: Location of drinking water wells and surface water intakes within applicable distances of the proposed storage tank system.	_____ _____ _____ _____

APPLICATION FOR INSTALLATION OF ABOVEGROUND STORAGE TANKS

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SECTION II

The following section applies to aboveground motor vehicle fueling and marina operations, Part 3 of the FL/CL Rules. The requirements in Chapters 1, 2, and 3 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.	DRAINAGE AND WASTE DISPOSAL: Section 9.2.6.3: Prevent spilled liquid from entering interior of service station. Section 9.2.6.4: Area should be protected to minimize spills from entering groundwater, surface water, and subsurface soils.	_____ _____ _____ _____
2.	LOCATION OF DISPENSER: Section 6.2.3: Minimum 10 feet from property lines, combustible building walls, and building openings. Within 100 feet of emergency shutoff switch. Section 9.4.5: In clear view of attendant.	_____ _____ _____ _____	8.	EMERGENCY BREAKAWAY DEVICE: Section 6.5: 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 & 4.3.6.5: Normally closed solenoid valve for elevated tanks.	_____ _____ _____ _____
4.	AREA BENEATH DISPENSER: Section 6.3.4.1: Designed to prevent leaks from entering groundwater, surface water or subsurface soils.	_____ _____ _____ _____	10.	FIRE EXTINGUISHER: Section 9.2.5.2: Minimum of two listed 4A-20BC or one 4A-40BC within 75 feet of dispensers, fill pipes, and dispensing area.	_____ _____ _____ _____
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," "Remain in attendance outside of vehicle and in view of the nozzle." Unlawful to dispense gasoline into unapproved containers. No filling of portable containers in or on a motor vehicle.	_____ _____ _____ _____
6.	DISPENSING NOZZLE: Section 9.6.3: Automatic-closing with or without a latch open device. Section 6.6.6: Splashguard required.	_____ _____ _____	12.	PHYSICAL PROTECTION: Section 4.3.7: Minimum 6-foot high chain link fence. Secure against unauthorized use and vehicular collision.	_____ _____ _____

APPLICATION FOR INSTALLATION OF ABOVEGROUND STORAGE TANKS

(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 Chapters 1 and 2 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.	TANK LOCATION: Section 2.3.2: To important buildings, property lines which may be built upon. Adjacent container: minimum three feet, 20 feet from LPG tank.	_____ _____ _____	9.	NORMAL VENTS: Section 2.2.5.1: Relieve excessive internal pressure.	_____ _____ _____
2.	SECONDARY CONTAINMENT: Part 2, Section 2.3.2.3: Control of spills; diking, alternative methods.	_____ _____ _____	10.	EMERGENCY VENTS: Section 2.2.5.2: Calculated on basis of CFH per multiplied by the amount of square feet of wetted area. Must be normally closed for flammable liquids.	_____ _____ _____
3.	TANK DESIGN/ CONSTRUCTION: Section 2-2: No open tanks for liquid storage. UL142, API 650, and ASME standards.	_____ _____ _____	11.	UNLOADING/ LOADING RISER LOCATION: Section 5.6 & Part 5, Section 5-8.5: Separated from property lines, aboveground tanks, plant buildings a minimum: 25 feet Class I liquid, 15 feet Class II and III liquids.	_____ _____ _____
4.	CORROSION PROTECTION: Section 2.2.6: Tank bottom installed on grade must be protected against corrosion.	_____ _____ _____	12.	SPILL PROTECTION - LOADING/UNLOADING POINTS: Section 5.6.4: Prevent spills from entering drain systems, waterways, groundwater and/or subsurface soils. Cannot drain into diked area.	_____ _____ _____
5.	TANK SUPPORTS/ FOUNDATIONS: Section 2.2.4: rest on ground, concrete, masonry, piling, or steel. Section 2.3.1: Anchorage areas subject to buoyant forces; each tank shall be safeguarded against movement by anchoring or other secure means.	_____ _____ _____	13.	OVERFILL PROTECTION: Section 2.6.1: Delivery operator shall have means to determine liquid level. Automatically stop filling before liquid level is 95% of tank capacity and sound audible alarm when liquid level is 90% of tank capacity.	_____ _____ _____
6.	PIPING MATERIAL: Section 3.3: Liquid-tight, steel, nodular iron. Section 3.5.4: protected against corrosion. Section 3.6: pipe testing. Section 3.5.8.3: gravity flow prevention.	_____ _____ _____	14.	FIRE PROTECTION AND IDENTIFICATION: Section 2.6.2.3: Labeled "Flammable Liquid," "Combustible Liquid," or according to NFPA 704.	_____ _____ _____
7.	PIPE SUPPORTS: Section 3.5.1: Constructed of non-combustible material.	_____ _____ _____	15.	FIRE EXTINGUISHER: Section 9.2.5.2: Minimum of two listed 4A-20BC or one 4A-40BC within 75 feet of dispensers, fill pipes, and dispensing area.	_____ _____ _____
8.	LOCATION OF WATER WELLS: Section 2.3.2.1.8: Location of drinking water wells and surface water intakes within applicable distances of the proposed storage tank system.	_____ _____ _____	16.	PRODUCT ID OR RISER: Section 3.9: Identified by color code or marking.	_____ _____ _____

PART I – ITEMS

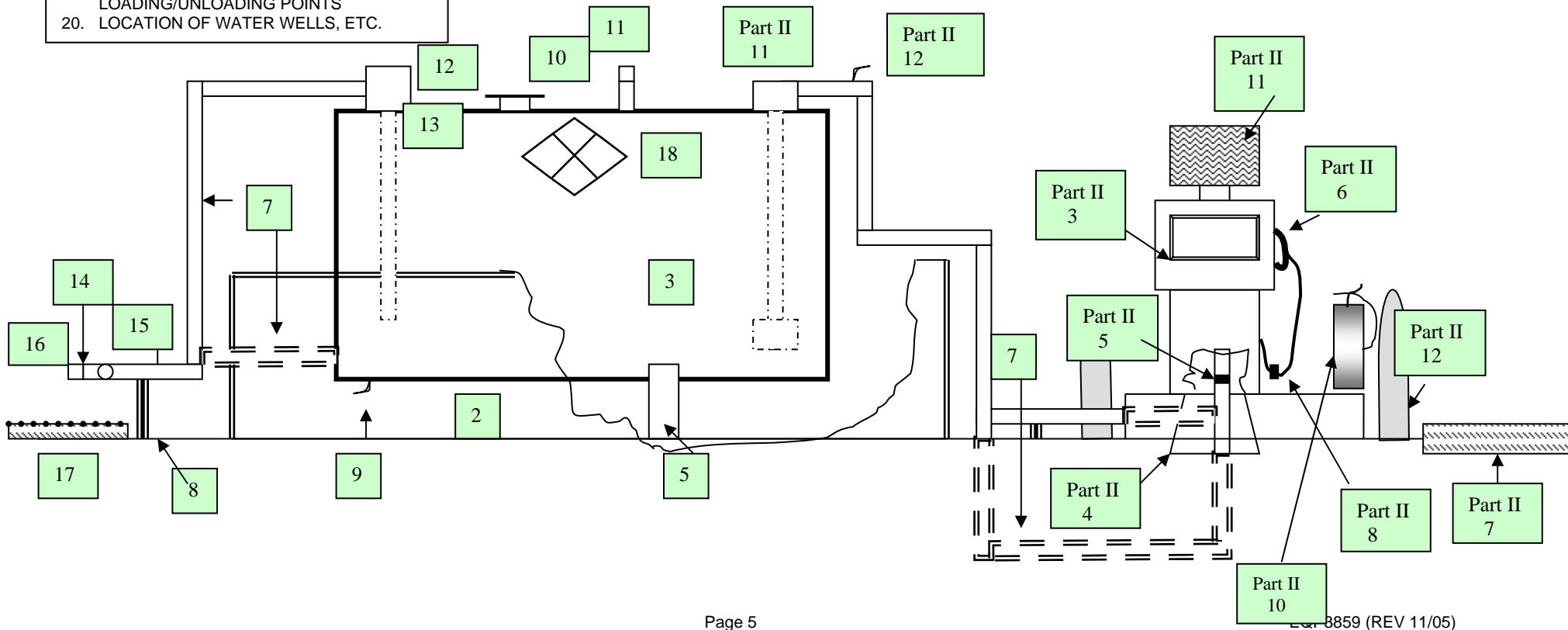
1. TANK LOCATION
2. SECONDARY CONTAINMENT
3. TANK DESIGN/CONSTRUCTION
4. CORROSION PROTECTION
5. TANK SUPPORTS/FOUNDATIONS
6. SPACING BETWEEN TANKS
7. PIPING MATERIAL
8. PIPE SUPPORTS
9. TANK VALVES
10. EMERGENCY VENTS
11. NORMAL VENTS
12. PUMP VALVES
13. PUMPS
14. FIRE PROTECTION AND IDENTIFICATION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

TYPICAL INSTALLATION OF ABOVEGROUND STORAGE TANK STORING FLAMMABLE AND COMBUSTIBLE LIQUIDS

(Numbers corresponds to the item numbers on the application)

PART II – ITEMS

1. TYPE OF SERVICE STATION
2. LOCATION OF DISPENSER
3. DISPENSING DEVICE
4. AREA BENEATH DISPENSER
5. EMERGENCY SHEAR/FIRE VALVE
6. DISPENSING NOZZLE
7. DRAINAGE AND WASTE DISPOSAL
8. EMERGENCY BREAKAWAY DEVICE
9. ANTI-SIPHON
10. FIRE EXTINGUISHER
11. SIGNS
12. PHYSICAL PROTECTION





A plan review must be completed on any tank with a storage capacity greater than 1,100 gallons storing flammable and 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.
 - g) The location of **surface water** and wetlands within 25 feet of the installation.
 - h) The location of single-family drinking **wells**, and community and non-community public drinking water wells.
- 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 3, NFPA 30, 2000 edition, requirements for gravity releases, emergency operation, and anti-siphon. Please show specific valves, vents and locations.
- 6) Tanks that do not have secondary containment shall not be installed in a **delineated wellhead** protection area. Tanks that do not have secondary containment shall not be installed in a **source water** protection area **critical assessment zone**, or 300 feet from a **surface watershed** delineated critical assessment zone.
- 7) A tank of more than **4,000** gallons shall not be installed within the **critical** assessment zone.
- 8) A plan review fee of \$203 (checks made payable to the State of Michigan) **per** tank.
Send the application to:
DEQ OFFICE OF FINANCIAL MANAGEMENT
REVENUE CONTROL UNIT
PO BOX 30657
LANSING, MI 48909
- 9) Section I shall be completed for bulk facilities.
- 10) Sections I and II shall be completed for motor fueling facilities.
- 11) Section III shall be completed for emergency generator facilities.

The facility cannot be operated without approval from the Waste and Hazardous Materials Division. If you have any additional questions concerning this matter, please contact the Storage Tank Unit at 517-335-7211, or e-mail DEQ-STD-TANKS@michigan.gov.