

SEE ATTACHED SHEET FOR INSTRUCTIONS

1. Facility Name \_\_\_\_\_ 2. Facility Identification Number \_\_\_\_\_ 3. Storage Tank Number \_\_\_\_\_

4. Control Device Number (use number from appropriate Form(s) 4530-110, 111, 112, 113, 114, 115, 116, or 117) \_\_\_\_\_ 5. Storage Tank Capacity \_\_\_\_\_ gallons 6. Date of Installation or Last Modification \_\_\_\_\_

7. Tank Height \_\_\_\_\_ feet 8. Tank Diameter \_\_\_\_\_ feet 9. Color of Tank (check one)  
 White  Other \_\_\_\_\_  Underground

10. Is this tank equipped with a submerged fill pipe?  Yes  No 11. Is this tank equipped with a pressure/vacuum conservation vent?  Yes  No  
If yes; at what pressure is it set? \_\_\_\_\_ (psia)  
at what vacuum is it set? \_\_\_\_\_ (psia)

12. Type of Storage Tank (check one)  
 Open Top Tank  Fixed Roof  Fixed Roof w/Internal Floating Roof  Other (specify) \_\_\_\_\_  
 Pressurized Tank  External Floating Roof  Variable Vapor Space \_\_\_\_\_

13. For all Fixed Roof Tanks:  
a. Tank Configuration (check one):  Vertical (upright cylinder)  Horizontal  
b. Tank Roof Type (check one):  Cone Roof - Indicate tank roof height \_\_\_\_\_ (feet)  
(required if vertical was selected)  Dome Roof - Indicate tank roof height \_\_\_\_\_ (feet) - Indicate tank shell radius \_\_\_\_\_ (feet)

14. For all Floating Roof Tanks (both internal and external) - Shell Condition (check one):  
 Light Rust  Dense Rust  Gunitite Lined

15. For External Floating Roof Tanks:  
a. Tank Construction (check one):  Welded Tank  Riveted Tank  
b. Average Wind Speed at Tank Site: \_\_\_\_\_ (mph)  
c. Rim Seal System Description (check one):  
 Shoe Mounted Primary  Vapor Mounted Primary  Liquid Mounted Primary  
 Shoe Primary, Rim Secondary  Vapor Primary, Rim Secondary  Liquid Primary, Rim Secondary  
 Shoe Primary, Shoe Secondary  Vapor Primary w/Weather Shield  Liquid Primary w/Weather Shield  
d. Roof Type (check one):  Pontoon Roof  Double Deck Roof  
e. Roof Fitting Types (indicate the number of each type):  
Access Hatch (24" diameter well) Unslotted guide-pole well Gauge-float well (20" diameter)  
 Bolted cover, gasketed  (8" diameter unslotted pole, 21" diameter well)  Unbolted cover, ungasketed  
 Unbolted cover, ungasketed  Ungasketed sliding cover  Unbolted cover, gasketed  
 Unbolted cover, gasketed  Gasketed sliding cover  Bolted cover, gasketed  
Gauge-Hatch/sample well (8" diameter) Vacuum Breaker (10" diameter well) Roof Drain (3-inch diameter)  
 Weighted mechanical actuation, gasketed  Weighted mechanical actuation, gasketed  Open  
 Weighted mechanical actuation, ungasketed  Weighted mechanical actuation, ungasketed  90% closed  
Slotted guide-pole/sample well (8" diameter diameter slotted pole, 21" diameter well) Roof leg (3" diameter) Roof leg (2-1/2" diameter)  
 Ungasketed sliding cover, without float  Adjustable, pontoon area  Adjustable, pontoon area  
 Ungasketed sliding cover, with float  Adjustable, center area  Adjustable, center area  
 Gasketed sliding cover, without float  Adjustable, double-deck roofs  Adjustable, double deck roofs  
 Gasketed sliding cover, with float  Fixed  Fixed



**STORAGE TANKS -- Form 4530-105**  
**AIR POLLUTION CONTROL PERMIT APPLICATION INSTRUCTIONS**

NOTE: Use of this form is required by the Department for any air pollution control permit application filed pursuant to ss. 285.61, 285.62 or 285.66, Wis. Stats. Completion of this form is mandatory. The Department will not consider or act upon your application unless you complete and submit this application form. It is not the Department's intention to use any personally identifiable information from this form for any other purpose.

Complete one form for each significant storage tank.

- Item 1 Provide the name of the facility.
- Item 2 Provide the facility identification (FID) number that appears on the annual emission inventory reports.
- Item 3 Assign an identification number to this storage tank (e.g., T21). Use the existing identification number from the Air Emissions Inventory. Use this number on other forms related to this unit.
- Item 4 If the storage tank is controlled, assign a control device number (e.g., C30) to the air pollution control device associated with it. Use this number on the appropriate form(s) 4530-110 through -117.
- Item 5 Enter the storage tank capacity (in gallons).
- Item 6 Record the date of installation or last modification of the emissions unit. Provide the month and date if possible. Write in "00" if unknown (e.g., 00/00/56). Indicate if this is a new source.
- Item 7 Provide the tank shell height (in feet).
- Item 8 Provide the tank diameter (in feet).
- Item 9 Check the appropriate space. If you select "other," enter the color.
- Item 10 A submerged fill pipe is any pipe with a discharge opening that is entirely submerged when the liquid level is six inches (15.2 centimeters) above the tank bottom.
- Item 11 Check the appropriate space. If you select "yes," enter the pressure and vacuum (in psia).
- Item 12 Check the appropriate tank type. See instruction booklet for details.
- Item 13 Answer only if you have a fixed roof. Check the appropriate spaces and provide information. To calculate the tank roof height of a cone roof tank, use the following equation. If you don't know the slope, use the standard value of 0.0625 ft/ft.

$$\text{Tank roof height (in feet)} = \text{slope of cone roof (in ft/ft)} \times \text{tank shell radius (in feet)}$$

To calculate the tank roof height of a dome roof tank, use the following equation:

$$H_R = R_R - (R_R^2 - R_S^2)^{0.5}$$

Where:  $H_R$  = the tank roof height (in feet),  $R_R$  = the tank dome roof radius (in feet), and  $R_S$  = the tank shell radius (in feet).

- Item 14 Answer only if you have an internal or external floating roof tank. Check the shell condition.

- Item 15 Answer only if you have an external floating roof tank.
- Check the appropriate tank construction.
  - List the average wind speed at the tank site. The average wind speed in Green Bay is 10.0 mph, in La Crosse is 8.8 mph, in Madison is 9.9 mph, and in Milwaukee is 11.6 mph. If you don't know the average wind speed, choose the wind speed for the city located closest to the tank site.
  - Check the appropriate rim seal type.
  - Check the appropriate roof type.
  - Indicate the total number of each appropriate roof fitting type in the space provided.
- Item 16 Answer only if you have an internal floating roof tank.
- Check the appropriate rim seal type.
  - Indicate the number of fixed roof support columns. Enter "0" if the fixed roof is self supported.
  - Indicate the effective column diameter (in feet). If you have a 9-inch by 7-inch built-up column, enter 1.1 feet. If you have an 8-inch diameter pipe column, enter 0.7 feet. If you have a dimension other than these standards, use the equation  $[\text{column perimeter (in feet)} / 3.14]$ . If you don't know the dimensions, use 1.0 feet.
  - Check the appropriate deck type.
  - Indicate the total deck seam length.
  - Indicate the deck area.
  - Indicate the total number of each appropriate deck fitting type in the space provided.
- Item 17 Answer only if you have a variable vapor space tank. Indicate the volume expansion capacity of the variable vapor space achieved by roof lifting or diaphragm flexing.
- Item 18 Complete this table for all materials that are stored in this tank. Vapor pressures should be given as real vapor pressures at the tank conditions given. Do not supply Reid vapor pressures.
- Item 19 Indicate the maximum gallons of liquid that can be fed to the tank in one hour. If the tank is being loaded from tank trucks or railcars, and more than one truck or railcar can be unloaded in one hour, take into account the time it takes to unhook one truck or railcar and hook up another.
- Item 20 Indicate whether other tanks can be loaded at the same time, and if so, which ones.
- Item 21 Describe the operations that this tank will serve. Also indicate here if this tank will serve operations at: a bulk terminal which receives gasoline from refineries, a bulk gasoline plant which receives gasoline from bulk gasoline terminals for subsequent distribution to dispensing facilities, or a pharmaceutical manufacturing facility.

