## State of Wisconsin
Department of Natural Resources

### STORAGE TANKS
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-105  11-93

**Information attached? (y/n)**

#### 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**
6. **Date of Installation or Last Modification**

7. **Tank Height**
8. **Tank Diameter**
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?**
   
   **at what vacuum is it set?**

12. **Type of Storage Tank (check one)**
   
   - Open Top Tank
   - Fixed Roof
   - Pressurized Tank
   - External Floating Roof
   - Other (specify)

13. **For all Fixed Roof Tanks:**

   - **Tank Configuration (check one):**
     - Vertical (upright cylinder)
     - Horizontal

   - **Tank Roof Type (check one):**
     - Cone Roof - Indicate tank roof height (feet)
     - 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
     - Gunite Lined

15. **For External Floating Roof Tanks:**

   - **Tank Construction (check one):**
     - Welded Tank
     - Riveted Tank

   - **Average Wind Speed at Tank Site:**
     - (mph)

   - **Rim Seal System Description (check one):**
     - Shoe Mounted Primary
     - Shoe Primary, Rim Secondary
     - Shoe Primary, Shoe Secondary

   - **Roof Type (check one):**
     - Pontoon Roof
     - Double Deck Roof

   - **Roof Fitting Types (indicate the number of each type):**

   - **Access Hatch (24” diameter well):**
     - Bolted cover, gasketed
     - Unbolted cover, ungasketed
     - Unbolted cover, gasketed

   - **Gauge-Hatch/sample well (8” diameter):**
     - Weighted mechanical actuation, gasketed
     - Weighted mechanical actuation, ungasketed

   - **Slotted guide-pole/sample well (8” diameter):**
     - Ungasketed sliding cover, without float
     - Ungasketed sliding cover, with float
     - Gasketed sliding cover, without float
     - Gasketed sliding cover, with float

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**Continued on following page**
16. For Internal Floating Roof Tanks:
   a. Rim Seal System Description (check one):  __ Vapor Mounted Primary   __ Vapor Mounted Primary plus Secondary Seal
       __ Liquid Mounted Primary   __ Liquid Mounted Primary plus Secondary Seal
   b. Number of Columns: _______________________________
   c. Effective Column Diameter: _____________________ (feet)
   d. Deck Type (check one):   __ Welded   __ Bolted
   e. Total Deck Seam Length: ________________ (feet)
   f. Deck Area: ________________________________ (square feet)
   g. Deck Fitting Types (indicate the number of each type):
      Access Hatch (24" diameter)  Automatic gauge float well
      __ Bolted cover, gasketed      __ Bolted cover, gasketed
      __ Unbolted cover, gasketed  __ Unbolted cover, gasketed
      __ Unbolted cover, ungasketed __ Sliding cover, ungasketed
      Ladder Well (36" diameter)
      __ Bolted cover, gasketed  __ Bolted cover, gasketed
      __ Unbolted cover, gasketed __ Sliding cover, ungasketed
      __ Unbolted cover, ungasketed
      Column Well (24" diameter)  Sample pipe or well (24" diameter)
      __ Builtup column-sliding cover, gasketed  __ Slotted pipe-sliding cover, gasketed
      __ Builtup column-sliding cover, ungasketed __ Slotted pipe-sliding cover, ungasketed
      __ Pipe column-flexible fabric sleeve seal __ Sample well-slit fabric seal 10% open area
      __ Pipe column-sliding cover, gasketed __ Stub drain (1" diameter)
      __ Pipe column-sliding cover, ungasketed
      Roof leg or hanger well
      __ Builtup column-sliding cover, gasketed __ Slotted pipe-sliding cover, gasketed
      __ Builtup column-sliding cover, ungasketed __ Slotted pipe-sliding cover, ungasketed
      __ Pipe column-flexible fabric sleeve seal __ Sample well-slit fabric seal 10% open area
      __ Pipe column-sliding cover, gasketed __ Stub drain (1" diameter)
      __ Pipe column-sliding cover, ungasketed
      Vacuum breaker (10" diameter)
      __ Weighted mechanical actuation, gasketed
      __ Weighted mechanical actuation, ungasketed

17. For Variable Vapor Space Tanks:
   Volume Expansion Capacity ________________ (gallons)

18. Complete the following table for materials to be stored in this tank:

<table>
<thead>
<tr>
<th>Material Stored</th>
<th>Annual Throughput (gal/yr)</th>
<th>Daily Average Amount Stored (gallons)</th>
<th>Material Molecular Weight (lb/lb-mole)</th>
<th>Material Vapor Pressure (psia)</th>
<th>Storage Pressure (psia)</th>
<th>Average Storage Temperature (°F)</th>
<th>Material Liquid Density (lb/gal)</th>
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19. Maximum Liquid Loading Rate of Tank: ________________ (gallons)

20. Can this tank be loaded at the same time other tanks are loaded?  __ Yes  __ No

   If yes, indicate which other tanks can be loaded at the same time: __________________________________________

21. Describe the operations this tank will serve:
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.

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

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.

a. Check the appropriate tank construction.

b. 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.

c. Check the appropriate rim seal type.

d. Check the appropriate roof type.

e. 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.

a. Check the appropriate rim seal type.

b. Indicate the number of fixed roof support columns. Enter "0" if the fixed roof is self supported.

c. 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 [column perimeter (in feet)/3.14]. If you don't know the dimensions, use 1.0 feet.

d. Check the appropriate deck type.

e. Indicate the total deck seam length.

f. Indicate the deck area.

g. 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.