

**Instructions for Attachment E204  
VOLATILE LIQUID STORAGE  
Supplemental Application Form**  
(Instructions for Completing DEEP-NSR-APP-204)

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All applications for a permit to construct and operate a stationary source shall include the information listed in Regulations of Connecticut State Agencies (RCSA) section 22a-174-3a(c). This supplemental application form shall be completed for new or modified sources such as storage tank farms, or new or modified storage tanks within an existing source such as a tank farm, which store volatile liquids, e.g., gasoline, benzene, ammonia, etc. A tank farm refers to any premise with any individual storage vessel containing liquids or gases with a capacity equal to or greater than 40,000 gallons.

Complete a separate form for *each* tank farm. Complete each item as appropriate. If a specific item does not apply to your situation indicate N/A (not applicable). If additional space is needed to answer a question stated in the application, attach separate sheet(s) as necessary, clearly identifying the applicant name, form name and Part number, and unit number.

**Note: In lieu of completing Parts II – IV of this form, the output from EPA Tanks Emissions Estimation Software Program may be attached for each tank.**

**Note: The data provided in these forms will be used to define the operating limits in your permit.**

Questions? Visit the [Air Permitting](#) web page or contact the Air Permitting Engineer of the Day at 860-424-4152 (between 8:30 AM and 4:30 PM, Monday through Friday).

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*Applicant Name* - Provide the applicant name as previously indicated on the *Permit Application for Stationary Sources of Air Pollution* form (DEEP-NSR-APP-200).

*Unit Number* - Provide the unit number of the subject unit as previously assigned on the *Permit Application for Stationary Sources of Air Pollution* form (DEEP-NSR-APP-200). Please use a consistent reference number for each unit throughout the application package.

### **Part I: General**

*Tank ID No.* - Assign a reference number to each tank which makes up the tank farm. Base this reference number on the same numbering system that was used in completing Part I: Application Type of the form *Permit Application for New Source Review Stationary Sources of Air Pollution* (DEEP-NSR-APP-200). For example, if the number assigned to the tank farm is U1, the tanks which make up this

particular tank farm would be U1a, U1b, etc. Use separate rows to identify each tank. Enter the number in the Tank ID number column (1a).

*Tank Type* – List if the tank is a fixed roof, variable vapor space, floating roof, or internal floating roof tank. If other, specify type.

*Construction Date* - Provide the tank's actual or anticipated construction date.

*Begin actual construction* means in general, initiation of physical on-site construction activities on an emissions unit which are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying of underground pipework, and construction of permanent storage structures. With respect to a change in method of operating this term refers to those on-site activities other than preparatory activities which mark the initiation of the change.

*Tank Capacity* - Provide the tank's maximum capacity in gallons. This information is specified by the manufacturer or builder and can often be found on the equipment nameplate. If unknown, this information can be obtained from the manufacturer or builder.

*Product Type* - List all the products stored (e.g., premium gasoline, acetone, xylene, etc.) in each tank. If more than one product is stored in one tank, use separate rows to identify each product.

*Is this unit subject to Title 40 CFR Part 60, NSPS?* - Indicate if the unit is subject to Title 40 of the Code of Federal Regulations (CFR) Part 60, New Source Performance Standards (NSPS). If yes, specify the appropriate subpart(s).

*Is this unit subject to Title 40 CFR Part 63, MACT?* - Indicate if the unit is subject to Title 40 CFR Part 63, National Emissions Standards for Hazardous Air Pollutants (NESHAP). If yes, specify the appropriate subpart(s).

Title 40 CFR Part 60 and Title 40 CFR Part 63 regulations can be found on the [U.S. Government Printing Office Website](http://www.gpo.gov).

In lieu of completing Parts II – IV of this form, the output from EPA Tanks Emissions Estimation Software Program may be attached for each tank.

*Is the EPA Tank Software Program Output Attached?* - Indicate if the output from the latest revision of the EPA Tanks Emissions Estimation Software Program is attached as Attachment E204-D. If yes, go to Part V.

## **Part II: Product Information**

*Tank ID No.* - Provide the Tank ID Number as previously indicated in Part I.

*Product Type* - List all the products stored (e.g., premium gasoline, acetone, xylene, etc.) in each tank. If more than one product is stored in one tank, use separate rows to identify each product.

*Density* - Indicate the density, in pounds per gallon, of each product. This information can be obtained from the MSDS or the supplier.

*Molecular Weight* - Indicate each product's molecular weight. This information can be obtained from the MSDS, the supplier, or from standard reference texts.

*True Vapor Pressure* - Indicate each product's true vapor pressure, in psi, at maximum storage temperature and annual average storage temperature, i.e., the ambient temperature at which the product is stored. True vapor pressures can be obtained from the MSDS or from standard reference texts.

Please note: the color of the tank increases the storage temperature of an outdoor tank above ambient temperature by 2.5 °F for aluminum colored paint, 3.5 °F for gray paint, 5 °F for black paint, and 0 °F for white paint.

If the storage temperatures at the tank site are not known, ambient temperature data from the nearest local weather station may be used as an approximation.

## **Part III: Bulk Gasoline Plants or Terminals Only**

*Tank Farm Type* - Indicate whether the tank farm is a bulk gasoline plant or terminal.

Note: if the incoming gasoline is received by tank truck, trailer, or other non-marine vessel, the farm is a bulk gasoline plant. If the incoming gasoline is received by pipeline, barge, or marine tank, the farm is a bulk gasoline terminal.

*Loading Incoming Gasoline* - Indicate if the listed methods are used to load incoming gasoline into the storage tanks. Submerged fill pipe means any fill pipe whose discharge opening is still entirely submerged when the pipe normally used to withdraw liquid from the storage tank can no longer withdraw any liquid. Bottom fill means that a permanent fill pipe is attached to the storage tank bottom. Splash fill

means that the fill pipe dispensing the liquid is lowered only partway into the storage tank.

*Vapor Balance System* - For each filling situation listed, indicate if a vapor balance system exists. A vapor balance system is defined in RCSA section 22a-174-20(a)(1).

*Vapor Recovery System* - Indicate if the bulk gasoline terminal is equipped with a vapor recovery system. A vapor recovery system is defined in RCSA section 22a-174-20(a)(1).

If a vapor recovery system is used, specify the type(s) of vapor control device(s) used by the terminal.

#### **Part IV: Storage Tank Information**

##### ***A: All New, Modified or Replacement Storage Tanks***

*Tank ID No.* - Provide the Tank ID Number as previously indicated in Part I.

*Note: Information for the following items can be obtained from the tank manufacturer or builder.*

*Tank Diameter* - Provide the tank diameter in feet.

*Tank Height or Length* - For vertical tanks, provide the tank height in feet. For horizontal tanks, provide the tank length in feet.

*Maximum Hourly Filling Rate* - Provide the tank's maximum design filling rate in gallons on an hourly basis. This information is a function of the tank's filling hose. If unknown, this information can be obtained from the hose manufacturer.

*Maximum Annual Throughput* - Provide the maximum anticipated annual throughput in gallons. Throughput refers to the number of gallons of product delivered to and dispensed from a tank.

*Tank Capacity* - Provide the tank's maximum capacity in gallons. This information is specified by the manufacturer or builder and can

often be found on the equipment nameplate. If unknown, this information can be obtained from the manufacturer or builder.

##### ***B: Fixed Roof Tanks Only***

*Tank ID No.* - Provide the Tank ID Number as previously indicated in Part I.

*Paint Color* - Provide the paint color of the roof and sides of the tank, e.g., white, aluminum (specular, diffuse), light gray, medium gray, etc.

*Average Vapor Space Height* - Provide the average vapor space height in feet. For most tanks this value is equal to one half the tank height. For a cone roof tank, use one-third the height of the cone.

*Horizontal or Vertical* - Indicate whether the tank is horizontal (H) or vertical (V).

*Underground* - Indicate if the tank is located underground.

##### ***C: Variable Vapor Space Tanks Only***

Variable vapor space tanks are tanks equipped with expandable vapor reservoirs to accommodate vapor fluctuations attributable to temperature and barometric pressure changes. The two most common types of variable vapor space tanks are lifter roof tanks and flexible diaphragm tanks.

*Tank ID No.* - Provide the Tank ID Number As previously indicated in Part I.

*Volume Expansion Capacity* - Provide the volume expansion capacity of the variable vapor space, i.e., the volume of the variable vapor space, in gallons, as a result the roof lifting or diaphragm flexing.

*Number of Transfers into the Tank per Year* - Indicate the number of transfers *into* the tank per year.

### ***D: All Floating Roof Tanks***

*Tank ID No.* - Provide the Tank ID Number as previously indicated in Part I.

*Riveted or Welded* - Indicate whether the tank sides are riveted (R) or welded (W).

*Type of Primary Seal* - Provide the type of primary seal, e.g., metallic shoe, liquid or vapor mounted resilient seal, etc.

*Type of Secondary Seal* - Provide the type of secondary seal, e.g., shoe mounted, rim mounted, weather shield, etc.

*Shell Condition* – Provide the condition of the tank's shell, e.g., light rust, dense rust, gunite lined, etc.

*Number of Support Columns* - Provide the number of support columns for the tank roof. For external floating roof tanks, this number is zero. For internal floating roof tanks, this is a function of tank diameter. This information can be obtained from the manufacturer or builder.

*Effective Column Diameter* - Provide the effective column diameter in feet. This value is obtained by dividing the column perimeter, in feet, by 3.14. (1.1 for 9 inch by 7 inch support columns, 0.7 for 8 inch diameter support columns, or 1.0 if column construction details are not known.)

### ***E: Internal Floating Roof Tanks Only***

*Tank ID No.* - Provide the Tank ID Number as previously indicated in Part I.

*Types of Deck Fittings* - List all types of deck fittings, listing one type per line, e.g., access hatch, automatic gauge float well, column well, ladder well, roof leg or hanger well, sample pipe or well, drain stub, vacuum breaker, etc.

*Number of Each Type* - Provide the quantity of each type of deck fittings used.

*Design of Each Deck Fitting* - Provide the design of each deck fitting, e.g., bolted,

gasketed, or sliding cover; fabric sleeve or seal; weighted mechanical activation.

*Number of Each Design* - Provide the quantity of each design of deck fitting.

*Length of Deck Seam* - For bolted decks only, indicate the length of the deck seam in feet.

### **Part V: Attachments**

This section offers a checklist of all the attachments necessary to complete this application. Not all attachments may be applicable to the application. Where the checklist states “**IF APPLICABLE**”, your particular situation will determine if the attachment is required.

Check the appropriate box by each attachment being submitted as verification that all applicable attachments have been submitted. Please label all attachments as referenced in the permit application form and these instructions and be sure to include the name of the applicant as indicated on the application form.

#### **Attachment E204-A: Process Information and Flow Diagram, REQUIRED**

Submit a process flow diagram indicating all related equipment, air pollution control equipment and stacks, as applicable. Identify all materials entering and leaving each such device indicating quantities and parameters relevant to the proper operation of the device. Indicate all monitoring devices and controls.

#### **Attachment E204-B: Manufacturer Information, REQUIRED**

Submit copies of the manufacturer specification sheets for the unit, the air pollution control equipment and the monitoring systems.

**Attachment E204-C: Manufacturer  
Specification Sheets, REQUIRED**

Submit a Manufacturer Specification Sheet for the degreaser and any air pollution control equipment and monitoring systems. These are available from the manufacturer.

**Attachment E204-D: EPA Tanks Emissions  
Estimation Software Program Output, IF  
APPLICABLE**

Submit the *EPA Tanks Emissions Estimation Software Program* output data for each tank for which such output is in lieu of completing Parts II – IV of this form.