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| Minnesota Pollution Control Agency (MPCA), 520 Lafayette Road North, St. Paul, MN 55155-4194 | GI-05C  Tank information  Air Quality Permit Program  *Doc Type: Permit Application* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1a)** AQ Facility ID number: | |  | **1b)** Agency Interest ID number: |  |
| **2)** Facility name: |  | | | |

**3) Fill in a column in the table below for each new or modified tank.** **Form GI-05F *Emission Source Association* must also be submitted whenever this form is required.** If multiple copies of this table are used, indicate which number this page is over the total number of pages (e.g., 1/3, or page 1 of 3, etc.):

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **3a)** | **Tank ID number** |  |  |  |
| **3b)** | **Description** |  |  |  |
| **3c)** | **Product(s) stored** |  |  |  |
| **3d)** | **Specific product** |  |  |  |
| **3e)** | **Interior height (ft.)** |  |  |  |
| **3f)** | **Interior diameter (ft.)** |  |  |  |
| **3g)** | **Capacity (gals.)** |  |  |  |
| **3h)** | **Construction type** |  |  |  |
| **3i)** | **Number of columns  (column-supported only)** |  |  |  |
| **3j)** | **Column diameter (ft) (column-supported only)** |  |  |  |
| **3k)** | **Support type  (floating roof only)** |  |  |  |
| **3l)** | **Deck type (floating roof only)** |  |  |  |
| **3m)** | **Seal type  (floating roof only)** |  |  |  |
| **3n)** | **Maximum true vapor pressure (psia)** |  |  |  |
| **3o)** | **Date installed or constructed (mm/dd/yyy)** | to be determined | to be determined | to be determined |
| **3p)** | **Status** |  |  |  |
| **3q)** | **Removed date** |  |  |  |
| **3r)** | **Reason for changes/ modifications** |  |  |  |

# Instructions for Form GI-05C

All fields as directed by the form are **mandatory** except the Agency Interest ID number (if unknown). **If you submit your application with blank mandatory fields or attachments, it will be deemed incomplete and returned.**

**Note:** TANKS Emissions Estimation Software, Version 4.09d is no longer supported by U.S. Environmental Protection Agency (EPA). EPA stated that they have observed reliability issues, and anticipate further problems with the software, on more current Windows operating systems. Since the Minnesota Pollution Control Agency (MPCA) cannot verify emissions data from Tanks 4.09d, the MPCA will no longer be accepting emissions data using the software in permit applications. All existing, permitted tanks which were previously approved using the TANKS software will not be affected. Moving forward if the Permittee is installing a new tank, changing a tank’s substance, or increasing a tank’s throughput, they should use the equations/algorithms from AP-42 Chapter 7 to calculate emissions from the units. These equations/algorithms can be employed with many current spreadsheet/software programs.

**1a) AQ Facility ID number** –Fill in your Air Quality (AQ) Facility Identification (ID) number. This is the first eight digits of the permit number for all permits issued under the operating permit program. If you don’t know this number, leave this line blank.

**1b) Agency Interest ID number** –Fill in your agency interest ID number. This is an ID number assigned to your facility through the Tempo database. If you don’t know this number, leave this line blank.

**2) Facility name** – Enter your facility name.

**3a) Tank ID number** –Fill in the Tank ID number. Number all the tanks consecutively, giving each tank a unique ID number beginning with 001, 002, 003, etc. It may be helpful to group tanks according to area, process, or contents. It is important to use these ID numbers consistently throughout the permit application.

If you are adding new tanks to your permit or replacing existing tanks, it is important not to reuse previously used TK numbers. The new or replacement tanks must be numbered consecutively beginning with the next number after the last one used. Numbers used for removed tanks cannot be reused for new or replacement tanks.

**3b) Description** –Provide a description of the tank.

**3c) Product(s) stored** –List the product category for the material contained in the tank. If the tank contains a mixture, list each in a separate column (with the same tank ID shown in row a).

|  |  |
| --- | --- |
| **Group code** | **Group description** |
| ACHE | Chemical |
| AOTH | Other |
| APET | Petroleum |

**3d) Specific product** –Based on the product category listed in row c, list the material contained in the tank from the three tables below. If the tank contains a mixture, list each individual compound in a separate column (with the same tank number in row a). After the name of the compound, list the CAS number and the approximate weight fraction of that (or groups of chemicals) contained in the tank. The “parameter code” is for internal reference and does not need to be listed.

**ACHE/Chemical:**

| **Specific product** | **Parameter code** |  | **Specific product** | **Parameter code** |  | **Specific product** | **Parameter code** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Acetate, ethyl | VOCS0046 |  | Hexane | OORG0094 |  | Other | OORG0171 |
| Ammonia (anhydrous) | OINC0005 |  | Hydrochloric acid | OINC0062 |  | Phosphoric acid | INOR0134 |
| Ammonia (aqueous) | OINC0006 |  | Hydrogen peroxide | INOR0129 |  | Phthalic anhydride | OORG0130 |
| Chlorine | INOR0040 |  | Isobutyl alcohol (2-methyl-1-propanol) | VOCS0084 |  | Polyethylene glycol | OORG0161 |
| DEF (diesel exhaust fluid) | OORG0165 |  | Isopropyl alcohol | SVOC0107 |  | Potassium hydroxide | OINC0098 |
| Dichloromethane (methylene chloride) | VOCS0005 |  | 1,2-Propanediol | OORG0004 |  | Propionic acid | OORG0133 |
| Ethanol (ethyl alcohol) | SVOC0090 |  | Magnesium chloride | INOR0132 |  | Sodium hydroxide | INOR0137 |
| Ethylene | VOCS0079 |  | Maleic anhydride | SVOC0108 |  | Styrene | VOCS0110 |
| Ethylene glycol | OORG0073 |  | Methanol | OORG0105 |  | Sulfur | INOR0015 |
| Formaldehyde | OORG0001 |  | Methyl isobutyl ketone (4-Methyl-2-pentanone) | VOCS0091 |  | Sulfuric acid | OINC0121 |
| Fuel additive | OORG0166 |  | Methylene diphenyl diisocyanate (MDI) | OORG0111 |  | Toluene | VOCS0114 |
| Glycerin | OORG0170 |  | Muriatic Acid | OINC0082 |  | Toluene-2,4-diisocyanate | OORG0142 |
| Glycol ethers | OORG0087 |  | n-Butyl Acetate | OORG0117 |  | Urea | OINC0129 |
| Heptane | OORG0091 |  | Nitric Acid | OINC0086 |  | Xylene | VOCS0123 |

**AOTH/other:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Specific product** | **Parameter code** |  | **Specific product** | **Parameter code** |  | **Specific product** | **Parameter code** |
| Beet Extract | WORG0001 |  | Oxygen | INOR0090 |  | Vegetable and Plant Oils | OINC0130 |
| Dye | OINC0040 |  | Paper Pulp | WOTH0008 |  | Waste Oil | OORG0150 |
| Non-Contact Cooling Water | OINC0143 |  | Soybean Oil | OINC0146 |  | Water, Sour | OINC0134 |
| Other | OORG0171 |  | Steam or Water | INOR0138 |  |  |  |

**APET/petroleum:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Specific product** | **Parameter code** |  | **Specific product** | **Parameter code** |  | **Specific product** | **Parameter code** |
| Asphalt and asphaltic blends | OORG0162 |  | Ethanol blends (E50-E89) | OINC0147 |  | Hydraulic fluid | OORG0095 |
| Aviation gas | OORG0037 |  | Ethanol blends (E90-E99) | OINC0043 |  | Jet fuel (unspecified) | OINC0066 |
| Biodiesel (B100) | OORG0163 |  | Fuel oil #1 | OORG0079 |  | Kerosene | OORG0103 |
| Crude oil | OORG0055 |  | Fuel oil #2 | OORG0167 |  | Lubricating oils | OINC0145 |
| Denatured ethanol | OORG0056 |  | Fuel oil #6 | OORG0081 |  | Mineral spirits | OINC0077 |
| Diesel >B20 | OORG0059 |  | Gasoline blends (E1-E49) | OORG0168 |  | Other | OORG0171 |
| Diesel blends (B1-B20) | OORG0060 |  | Gasoline, non-oxygenated | OORG0169 |  | Propane | OINC0100 |
| Diesel fuel | OINC0038 |  | Heating oil | OINC0059 |  | Used oil | OORG0148 |

**3e) Interior height (ft.)** –List the interior height of the tank, in feet. For tanks with a cone bottom, fill in the straight-wall height only.

**3f) Interior diameter (ft.)** –List the interior diameter of the tank, in feet. For a tank that is not cylindrical, calculate the area of the top of the tank. Then determine the diameter of a circle with an area equal to that of the top of the tank. List that *effective diameter* (in feet) in this row.

**3g) Capacity (gals.)** –List the maximum capacity of the tank (in gallons). The maximum capacity may be calculated by multiplying the height of the tank by the area of the top of the tank. Be sure to convert to thousands of gallons before writing in the capacity. For example, for a 40,000 gallon tank, fill in "40." If you need to convert from cubic feet to gallons, use the factor of 7.481 U.S. gallons in a cubic foot.

**3h) Construction type** –Tanks are constructed in many ways. Describe the method used to fasten the seams of the tank itself (not the roof). Fill in the type of construction from the following list:

1. External floating roof, construction not specified

2. External floating roof with welded tank shell

3. External floating roof with riveted tank shell

4. Internal floating roof

5. Fixed roof

6. Pressure tank

7. Variable vapor space

8. Underground

9. Other. Attach a description to Form GI-05C on a separate sheet.

**3i) Number of columns (floating roof with column-support only)** –If the tank's roof is supported by columns, list the number of columns. If no information on the number of columns in the tank can be found, refer to AP-42, Table 7.1-11. This table lists representative number of columns for internal floating roof tanks.

**3j) Column diameter (ft) –** If the tank has a floating roof and the support type is column support, this is a required field. List the column diameters for the support.

**3k) Support type (floating roof only)** –If the tank is a floating roof, describe the type of tank support used. Fill in the number for the type of support from the following list:

1. Self-supporting fixed roof with no internal support columns

2. Column supported roof, construction type not specified

3. Column supported roof, with 9 by 7 inch built-up columns

4. Column supported roof, with 8 inch diameter columns

**3l) Deck type (floating roof only)** –If the tank has a floating roof, describe the materials and process used to construct the tank deck. Fill in the deck type from the following list:

1. Welded

2. Bolted, 5 feet wide continuous sheet construction

3. Bolted, 6 feet wide continuous sheet construction

4. Bolted, 7 feet wide continuous sheet construction

5. Bolted, 5 by 7.5 feet rectangular panel construction

6. Bolted, 5 by 12 feet rectangular panel construction

7. Bolted, details not specified

**3m) Seal type (floating roof only)** –Describe the seal design used to reduce vapor loss from the floating roof tank. Fill in the seal type from the following list:

1. Mechanical (metallic shoe seal); primary seal only

2. Mechanical (metallic shoe seal); with shoe mounted secondary seal

3. Mechanical (metallic shoe seal); with rim mounted secondary seal

4. Resilient seal (nonmetallic); liquid mounted, primary seal only

5. Resilient seal (nonmetallic); with weather shield

6. Resilient seal (nonmetallic); with rim mounted secondary seal

7. Resilient seal (nonmetallic); vapor mounted, primary seal only

8. Resilient seal (nonmetallic); vapor mounted, with weather shield

9. Resilient seal (nonmetallic); vapor mounted, with rim mounted secondary seal

**3n)** **Maximum true vapor pressure (psia)** – Provide the maximum true vapor pressure in pounds per square inch absolute.

**3o) Date installed or constructed** – Provide the date that construction or installation of the tank began. For tanks that have not been installed or constructed yet, check the box “to be determined.”

**3p) Status** –Provide the status of the emission unit as either active or inactive. If status is inactive, provide a removal date.

**3q) Removal date** – If status is inactive, provide a removal date.

**3r) Reason for changes/modification** – If you edit existing information, you must provide a reason for the changes or modification.