Texas Commission on Environmental Quality

Table 7(c)

External Floating Roof Storage Tank Summary

| **Applicant's Full Name** |
| --- |
|  |
| **I. Tank Identification** *(Use a separate form for each tank)*. |
| Location *(indicate on plot plan and provide coordinates)* |
| Tank No.: |  |
| Emission Point No. (EPN) *(from flow diagram)*: |  |
| Facility Identification Number (FIN): |  |
| Control Identification Number (CIN): |  |
| Status of the tank |
| [ ]  New Tank | [ ]  Altered Tank | [ ]  Relocation | [ ]  Change of Service |
| Previous Permit No.: |  |
| Previous Permit by Rule No.: |  |
| Previous Exemption No.: |  |
| **II. Tank Physical Characteristics** |
| Dimensions of the Tank |
| Shell Height (*ft.*): |  |
| Maximum Liquid Height (*ft.*): |  |
| Diameter (*ft.*): |  |
| Nominal Capacity or Tank Volume (*gallons*): |  |
| Turnovers per year: |  |
| Net Throughput (*gallons/year*): |  |
| Maximum Pumping Rate *(gallons/hour[[1]](#footnote-2))*: |  |
| Shell and Paint Characteristics |
| Shell Condition |
| [ ]  Light Rust | [ ]  Dense Rust | [ ]  Gunite Lining |
| Paint Color/Shade |
| [ ]  White/White | [ ]  Aluminum/Specular | [ ]  Aluminum/Diffuse |
| [ ]  Gray/Light | [ ]  Gray/Medium | [ ]  Red/Primer |
| [ ]  Other *(Describe)*: |  |

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External Floating Roof Storage Tank Summary

| **II. Tank Physical Characteristics *(continued)*** |
| --- |
| Paint Condition.  |
| [ ]  Good | [ ]  Poor |
| Tank Construction and Rim-Seal System |
| Tank Construction |
| [ ]  Welded | [ ]  Riveted |
| Primary Seal |
| [ ]  Vapor-mounted | [ ]  Liquid-mounted | [ ]  Mechanical Shoe |
| Secondary Seal: |
| [ ]  Rim-mounted | [ ]  Shoe-mounted | [ ]  None |
| Roof Type |
| [ ]  Pontoon | [ ]  Double Deck |
| Roof Fitting Loss Factor (lb-mole/year): |  |
| Based Upon |
| [ ]  Typical Fittings | [ ]  Controlled Fittings | [ ]  Actual Fittings |
| *Complete Section IV, Fittings Information, to record fittings count used to calculate the roof fitting loss factor.* |
| **III. Liquid Properties of Stored Material** |
| Chemical Category |
| [ ]  Organic Liquids | [ ]  Petroleum Distillates | [ ]  Crude Oils |
| Single *(complete Section III.1.)* or Multi-Component Liquid *(complete Section III.2.)* |
| [ ]  Single  | [ ]  Multiple  |
| 1. Single Component Information |
| Chemical Name: |  |
| Average Liquid Surface Temperature (*°F*): |  |
| True Vapor Pressure at Average Liquid Surface Temperature (*psia*): |  |
| Liquid Molecular Weight: |  |

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External Floating Roof Storage Tank Summary

| **III. Liquid Properties of Stored Material *(continued)*** |
| --- |
| 2. Multiple Component Information |
| Mixture Name: |  |
| Average Liquid Surface Temperature (*°F*): |  |
| Minimum Liquid Surface Temperature (*°F*): |  |
| Maximum Liquid Surface Temperature (*°F*): |  |
| True Vapor Pressure at Average Liquid Surface Temperature (*psia*): |  |
| True Vapor Pressure at Minimum Liquid Surface Temperature (*psia*): |  |
| True Vapor Pressure at Maximum Liquid Surface Temperature *(psia*): |  |
| Liquid Molecular Weight: |  |
| Vapor Molecular Weight: |  |
| **Chemical Components Information** *(Below)* |
| **Chemical Name** | **CAS Number** | **Percent of Total Liquid Weight *(typical)*** | **Percent of Total Vapor Weight *(typical)*** | **Molecular Weight** |
|  |  |  |  |  |
|  |  |  |  |  |
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|  |  |  |  |  |
|  |  |  |  |  |
| Permit No.: |  |
| Tank No.: |  |

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External Floating Roof Storage Tank Summary

| ***IV. Fitting Information*** |
| --- |
| **Fitting Type(1)** | **Fitting Status** | **Quantity** | **Deck Fitting Loss Factor KF(2)(3)** | **Quantity x KF** |
| Access Hatch  | Bolted Cover, Gasketed |  |  |  |
| Access Hatch  | Unbolted Cover, Ungasketed |  |  |  |
| Access Hatch  | Unbolted Cover, Gasketed |  |  |  |
| Column Well  | Round Pipe - Sliding Cover, Ungasketed |  |  |  |
| Column Well  | Round Pipe - Sliding Cover, Gasketed |  |  |  |
| Column Well  | Round Pipe - Flex. Fabric Sleeve Seal |  |  |  |
| Column Well  | Built-Up Col. - Sliding Cover, Ungask. |  |  |  |
| Column Well  | Built-Up Col. - Sliding Cover, Gasketed |  |  |  |
| Unslotted Guidepole and Well | Sliding Cover, Ungasketed |  |  |  |
| Unslotted Guidepole and Well | Sliding Cover, Ungasketed w/Pole Sleeve |  |  |  |
| Unslotted Guidepole and Well | Sliding Cover, Gasketed |  |  |  |
| Unslotted Guidepole and Well | Sliding Cover, Gasketed w/Pole Wiper |  |  |  |
| Unslotted Guidepole and Well | Sliding Cover, Gasketed w/Pole Sleeve |  |  |  |
| Slotted Guidepole/Sample Well | Ungasketed or Gasketed Sliding Cover |  |  |  |
| Slotted Guidepole/Sample Well | Ungask. or Gask. Sliding Cover w/Float |  |  |  |
| Slotted Guidepole/Sample Well | Gasketed Sliding Cover, w/Pole Wiper |  |  |  |
| Slotted Guidepole/Sample Well | Gasketed Sliding Cover, w/Pole Sleeve |  |  |  |
| Slotted Guidepole/Sample Well | Gasketed Sliding Cover, w/Pole Wiper and Sleeve |  |  |  |
| Slotted Guidepole/Sample Well | Gasketed Sliding Cover, w/Float and Pole Wiper |  |  |  |

*Note (1): Document any fittings not listed above in blank rows and include in total loss factor.*

*Note (2): Refer to current EPA AP-42 Chapter 7 for deck fitting loss factors (KF).*

*Note (3): For external floating roof tanks, KF should reflect the sum of the zero wind speed loss factor and the wind speed*

*dependent loss factors as specified in Equation 2-7 of AP-42 Chapter 7 (November 2006 Edition).*

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External Floating Roof Storage Tank Summary

| ***IV. Fitting Information (continued)*** |
| --- |
| **Fitting Type(1)** | **Fitting Status** | **Quantity** | **Deck Fitting Loss Factor KF(2)(3)** | **Quantity x KF** |
| Slotted Guidepole/Sample Well | Gasketed Sliding Cover, w/Float, Pole Wiper, and Pole Sleeve |  |  |  |
| Slotted Guidepole/Sample Well | Flexible Enclosure |  |  |  |
| Automatic Gauge Float Well | Unbolted Cover, Ungasketed |  |  |  |
| Automatic Gauge Float Well | Unbolted Cover, Gasketed |  |  |  |
| Automatic Gauge Float Well | Bolted Cover, Gasketed |  |  |  |
| Gauge Hatch/Sample Port | Gasketed, Weighted Mech. Actuation |  |  |  |
| Gauge Hatch/Sample Port | Ungasketed, Weighted Mech. Actuation |  |  |  |
| Gauge Hatch/Sample Port | Slit Fabric Seal, 10% Open Area |  |  |  |
| Vacuum Breaker  | Ungasketed, Weighted Mech. Actuation |  |  |  |
| Vacuum Breaker  | Gasketed, Weighted Mech. Actuation |  |  |  |
| Deck Drain | Open |  |  |  |
| Deck Drain | 90% Closed |  |  |  |
| Deck Drain  | Stub Drain (1-inch Diameter) |  |  |  |
| Deck Leg – Pontoon Area of Pontoon Roof | Ungasketed |  |  |  |
| Deck Leg – Pontoon Area of Pontoon Roof | Gasketed |  |  |  |
| Deck Leg – Pontoon Area of Pontoon Roof | Sock |  |  |  |
| Deck Leg – Double Deck Roof and Center Area of Pontoon | Ungasketed |  |  |  |
| Deck Leg – Double Deck Roof and Center Area of Pontoon | Gasketed |  |  |  |

*Note (1): Document any fittings not listed above in blank rows and include in total loss factor.*

*Note (2): Refer to current EPA AP-42 Chapter 7 for deck fitting loss factors (KF).*

*Note (3): For external floating roof tanks, KF should reflect the sum of the zero wind speed loss factor and the wind speed*

*dependent loss factors as specified in Equation 2-7 of AP-42 Chapter 7 (November 2006 Edition).*

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External Floating Roof Storage Tank Summary

| ***IV. Fitting Information (continued)*** |
| --- |
| **Fitting Type(1)** | **Fitting Status** | **Quantity** | **Deck Fitting Loss Factor KF(2)(3)** | **Quantity x KF** |
| Deck Leg – Double Deck Roof and Center Area of Pontoon | Sock |  |  |  |
| Deck Leg or Hanger (no opening) | Fixed |  |  |  |
| Rim Vent | Ungasketed, Weighted Mech. Actuation |  |  |  |
| Rim Vent | Gasketed, Weighted Mech. Actuation |  |  |  |
| Ladder Well  | Sliding Cover, Ungasketed |  |  |  |
| Ladder Well  | Sliding Cover, Gasketed |  |  |  |
| Ladder-Guidepole Combo Well | Sliding Cover, Ungasketed |  |  |  |
| Ladder-Guidepole Combo Well | Ladder Sleeve, Ungasketed Sliding Cover |  |  |  |
| Ladder-Guidepole Combo Well | Ladder Sleeve, Gasketed Sliding Cover |  |  |  |
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|  |  |  |  |  |
|  |  |  |  |  |
|  Total deck fitting loss factor, lb-mole/year |  |

*Note (1): Document any fittings not listed above in blank rows and include in total loss factor.*

*Note (2): Refer to current EPA AP-42 Chapter 7 for deck fitting loss factors (KF).*

*Note (3): For external floating roof tanks, KF should reflect the sum of the zero wind speed loss factor and the wind speed*

*dependent loss factors as specified in Equation 2-7 of AP-42 Chapter 7 (November 2006 Edition).*

1. *Use the higher of the maximum fill rate or maximum withdrawal rate.* [↑](#footnote-ref-2)