

## TANK FARM CONTAINMENT VOLUME CALCULATION

Storage included in these three areas: Fifteen Aboveground Steel Tanks

| AREAS | A | B | C | D | E | F |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Outside Tank <br> Farm | Inside Poly <br> Tanks | Tank Area in <br> Drivethrough | new <br> concrete top <br> triangle | new concrete <br> rectangle | Full <br> Rectangle | Spillway |
|  | Area A | Area B | Area C-O | Area C-1 | Area C-2 A | Area C-2B | Area C-3 |
|  | 35.0 | 33.67 | 60.7 | 2.5 | 2.5 | 3.0 | 2 |
| Length, ft | 47.0 | 17 | 16.5 | 2.5 | 13.5 | 16 | 0.5 |
| Width, ft | 20.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 20.0 |
| Effective Height, in | 20 | 0 | 0 | 0 | 0 | 4.00 |  |
| Elevation, Base, in | 4.00 | 0 | 14,974 | 47 | 505 | 718 | 9 |
| Volume (Gallons) | 20,509 | 8,564 |  |  |  |  |  |


| Area Displaced by Tanks |  |  |  |  | Notes |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Tank Number | Volume (Gallons) | Tank Shell | Cont. Section | Dimensions |  |
| 1\&2 | 25,454 | steel | AREA A | $127{ }^{\text {" D x 480" H }}$ |  |
| 3 | 25,600 | steel | AREA A | 132" D x 432" H | Tank Not Used |
| 4 | 28,800 | steel | AREA A | 120" D x 594" H |  |
| 5 \& 6 | 45,690 | steel | AREA A | $141{ }^{\prime \prime} \mathrm{D} \times 720$ H | Tank Not Used - bottom 6' of 60' height has no tank storage |
| 7 | 24,881 | steel | AREA C | 132" D x 432" H |  |
| 8 \& 9 | 19,430 | stainless steel | AREA C | $141{ }^{\text {" D x } 360 " ~ H ~}$ |  |
| 10 \& 11 | 25,260 | steel | AREA C | $126 " \mathrm{D} \times 540 \mathrm{H}$ | Tanks Not Used - bottom 6' of 45' height has no tank storage |
| 12 | 1,500 | poly | AREA B | 64"" D x 116" H | Relocating Tanks From Ecolube Tacoma Plant |
| 13 \& 14 | 6,100 | poly | AREA B | 119" D x 140" H | Relocating Tank From Ecolube Tacoma Plant |

Largest Tank is Tank 4
Tank 4 Capacity, gal 28,800

| Estimated Displacement Volume Calculations |  |  |  |
| :---: | :---: | :---: | :--- |
| Tank | gal/ft | Displaced, gal |  |
| Tank 1 | 636 | 1,061 |  |
| Tank 2 | 636 | 1,061 |  |
| Tank 3 | 731 | 1,219 |  |
| Tank 4 | 606 | 1,010 |  |
| Tank 5 | 0 | 0 | open bottom |
| Tank 6 | 0 | 0 | open bottom |
| Tank 7 | 691 | 1,382 |  |
| Tank 8 | 648 | 1,295 |  |
| Tank 9 | 648 | 1,295 |  |
| Tank 10 | 0 | 0 | open bottom |
| Tank 11 |  | 0 | open bottom |
| Tank 12 | 155 | 310 |  |
| Tank 13 | 523 | 2,048 |  |
| Tank 14 | 523 | $\mathbf{8 7 1}$ |  |
|  |  |  |  |
|  |  |  |  |
|  | Total | $\mathbf{1 1 , 5 5 3}$ | Gallons |

containment capacity $=$ Length $(\mathrm{ft}) \times$ Width $(\mathrm{ft}) \times \mathrm{h}$ (in) $/ 12$ (in $/ \mathrm{ft}) \times 7.4805$ in use
Containment Capacity: $\mathbf{4 5 , 3 2 6}$ gallon
Precipitation Allowance:
$\begin{array}{lcl}\text { Precipitation Allowance: } \\ 25-\text {-year, } 24 \text {-hour amount }{ }^{*} \text {, in. } & 4 & \text { (Basis: NOAA 100yr-24hr Rainfall Event }=3.8 ")\end{array}$
Precipitation Area ft2
1733
Precipitation Amount, gal
*Puyallup, WA (Western Regional Climate Center)
Total Available Secondary Containment:
Available Containment = Capacity $\boldsymbol{-}$ Precipitation $\boldsymbol{-}$ Displacement $=$
29,452 gal.
"Excess capacity" = Available Containment - Largest Tank Capacity =
652 gal.
at 100\% of Largest Tank
TANKER CONTAINMENT VOLUME CALCULATION
Length ( ft )
722
Depth (in)
Volume (gal)
2,475 Gallons Holdup in Truck Loading Station

| City of Puyallup <br> Development \& Permitting Services <br> ISSUED PERMIT |
| :---: | :---: |
| Building Planning <br> Engineering Public Works <br> Fire Traffic |



