

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	11865
City:	Giddings
State:	Texas
Company:	Salty Dog Service Co., LLC
Type of Tank:	Vertical Fixed Roof Tank
Description:	Meisenheimer SWD. Parallel tanks for storage modeled as a single flow path.

Tank Dimensions

Shell Height (ft):	16.00
Diameter (ft):	14.00
Liquid Height (ft) :	15.00
Avg. Liquid Height (ft):	13.00
Volume (gallons):	18,506.89
Turnovers:	7.20
Net Throughput(gal/yr):	133,182.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	Gray/Light
Shell Condition	Good
Roof Color/Shade:	Gray/Light
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	2.00
Slope (ft/ft) (Cone Roof)	0.29

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Austin, Texas (Avg Atmospheric Pressure = 14.41 psia)

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Liquid Contents of Storage Tank

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Giddings, Texas

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mc Weigl
		Avg.	Min.	Max.		Avg.	Min.	Max.				
Crude oil (RVP 5)	All	76.35	66.81	85.89	70.77	3.9288	3.2838	4.6712	50.0000			207.0

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Detail Calculations (AP-42)

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Annual Emission Calculations	
Standing Losses (lb):	789.2317
Vapor Space Volume (cu ft):	564.4395
Vapor Density (lb/cu ft):	0.0342
Vapor Space Expansion Factor:	0.1978
Vented Vapor Saturation Factor:	0.5671
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	564.4395
Tank Diameter (ft):	14.0000
Vapor Space Outage (ft):	3.6667
Tank Shell Height (ft):	16.0000
Average Liquid Height (ft):	13.0000
Roof Outage (ft):	0.6667
Roof Outage (Cone Roof)	
Roof Outage (ft):	0.6667
Roof Height (ft):	2.0000
Roof Slope (ft/ft):	0.2900
Shell Radius (ft):	7.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0342
Vapor Molecular Weight (lb/lb-mole):	50.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	3.9288
Daily Avg. Liquid Surface Temp. (deg. R):	536.0201
Daily Average Ambient Temp. (deg. F):	68.5250
Ideal Gas Constant R (psia cu ft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	530.4350
Tank Paint Solar Absorptance (Shell):	0.5400
Tank Paint Solar Absorptance (Roof):	0.5400
Daily Total Solar Insulation Factor (Btu/sqft day):	1,540.2401
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.1978
Daily Vapor Temperature Range (deg. R):	38.1684
Daily Vapor Pressure Range (psia):	1.3874
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	3.9288
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	3.2838
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	4.6712
Daily Avg. Liquid Surface Temp. (deg R):	536.0201
Daily Min. Liquid Surface Temp. (deg R):	526.4780
Daily Max. Liquid Surface Temp. (deg R):	545.5622
Daily Ambient Temp. Range (deg. R):	20.6667
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.5671
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	3.9288
Vapor Space Outage (ft):	3.6667
Working Losses (lb):	
Working Losses (lb):	467.1873
Vapor Molecular Weight (lb/lb-mole):	50.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	3.9288
Annual Net Throughput (gal/yr.):	133,182.0000
Annual Turnovers:	7.1963
Turnover Factor:	1.0000
Maximum Liquid Volume (gal):	18,506.8900
Maximum Liquid Height (ft):	15.0000
Tank Diameter (ft):	14.0000
Working Loss Product Factor:	0.7500
Total Losses (lb):	
Total Losses (lb):	1,256.4190

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Individual Tank Emission Totals

Emissions Report for: Annual

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	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Crude oil (RVP 5)	467.19	789.23	1,256.42