

Leap Year? no

WS and Flashing Losses Report - Monthly Throughput

WS/AP-42 Results	January	February	March	April	May	June	July	August	September	October	November	December	Average
Monthly Throughput (bbls)	4430.00	6341.00	6847.00	5913.00	5320.00	4747.00	4427.00	4065.00	3098.00	7258.00	6295.00	5512.00	--
Solve Status	Converged	Converged	Converged	Converged	Converged	Converged	Converged	Converged	Converged	Converged	Converged	Converged	--
Daily Maximum Ambient Temperature - T _{AX} (°F)	62.90	67.20	73.10	79.90	86.60	91.90	94.00	95.00	89.50	81.60	71.30	64.30	79.78
Daily Minimum Ambient Temperature - T _{AN} (°F)	37.90	41.30	49.70	58.40	65.70	72.60	75.00	74.50	69.20	58.80	48.80	40.80	57.73
Daily Insolation Factor - I (Btu/ft ² /d)	893.00	1083.00	1377.00	1682.00	1821.00	2059.00	2081.00	1961.00	1640.00	1323.00	985.00	825.00	1477.50
Daily Average Ambient Temperature - T _{AA} = (T _{AX} + T _{AN} / 2) (°F)	50.40	54.25	61.40	69.15	76.15	82.25	84.50	84.75	79.35	70.20	60.05	52.55	68.75
Liquid Bulk Temperature - T _B = T _{AA} + 6* - 1 (°F)	52.91	57.05	63.15	70.36	78.03	83.60	85.66	86.15	80.49	71.87	61.40	54.12	70.40
Daily Average Liquid Surface Temperature - T _{LA} = 0.44T _{AA} + 0.56T _B + 0.0079*I (°F)	53.35	57.59	63.84	71.20	78.94	84.63	86.70	87.13	81.31	72.54	61.90	54.53	71.14
Daily Maximum Liquid Surface Temperature - T _{LX} = T _{LA} + 0.25 (0.72(T _{AX} - T _{AN}) - 0.028*I) (°F)	58.18	62.66	69.10	76.57	84.04	89.84	91.95	92.48	86.43	77.65	66.77	59.38	76.25
Daily Minimum Liquid Surface Temperature - T _{LN} = T _{LA} - 0.25 (0.72(T _{AX} - T _{AN}) - 0.028*I) (°F)	48.52	52.53	58.59	65.83	73.84	79.42	81.45	81.79	76.19	67.42	57.02	49.69	66.02
Vapor Pressure at Daily Average Liquid Surface Temperature - P _{VA} (psia)	11.57	12.13	13.00	13.45	13.48	13.45	13.44	13.43	13.47	13.49	12.72	11.72	12.94
Vapor Pressure at Daily Maximum Liquid Surface Temperature - P _{VX} (psia)	12.21	12.83	13.76	14.27	14.27	14.27	14.27	14.27	14.27	14.27	13.42	12.37	13.71
Vapor Pressure at Daily Minimum Liquid Surface Temperature - P _{VN} (psia)	10.95	11.46	12.26	12.67	12.72	12.67	12.65	12.62	12.71	12.74	12.05	11.10	12.22
RVP Method Used	no	no	no	no	no	no	no	no	no	no	no	no	
Flashing Emissions by Month (Ton)	--	--	--	4.16	13.66	21.18	24.42	23.40	9.99	6.88	--	--	
Working Emissions by Month (Ton)	9.03	10.55	13.22	42.83	42.21	37.84	36.94	33.98	24.14	55.01	11.86	10.34	
Standing Emissions by Month (Ton)	1.48	1.81	2.99	2.84	3.10	3.11	3.25	3.26	3.04	2.96	2.65	1.58	
Flashing Losses all tanks (lbs/day)	--	--	--	277.03	881.18	1411.90	1575.20	1509.37	665.90	443.65	--	--	
Working losses per tank (lbs/day)	291.24	376.68	426.29	1427.69	1361.64	1261.40	1191.48	1096.21	804.81	1774.38	395.21	333.65	
Standing losses per tank (lbs/day)	47.61	64.73	96.43	94.73	99.90	103.66	104.97	105.28	101.34	95.62	88.49	51.01	
Number of Tanks	2	2	2	2	2	2	2	2	2	2	2	2	
Number of Days	31	28	31	30	31	30	31	31	30	31	30	31	

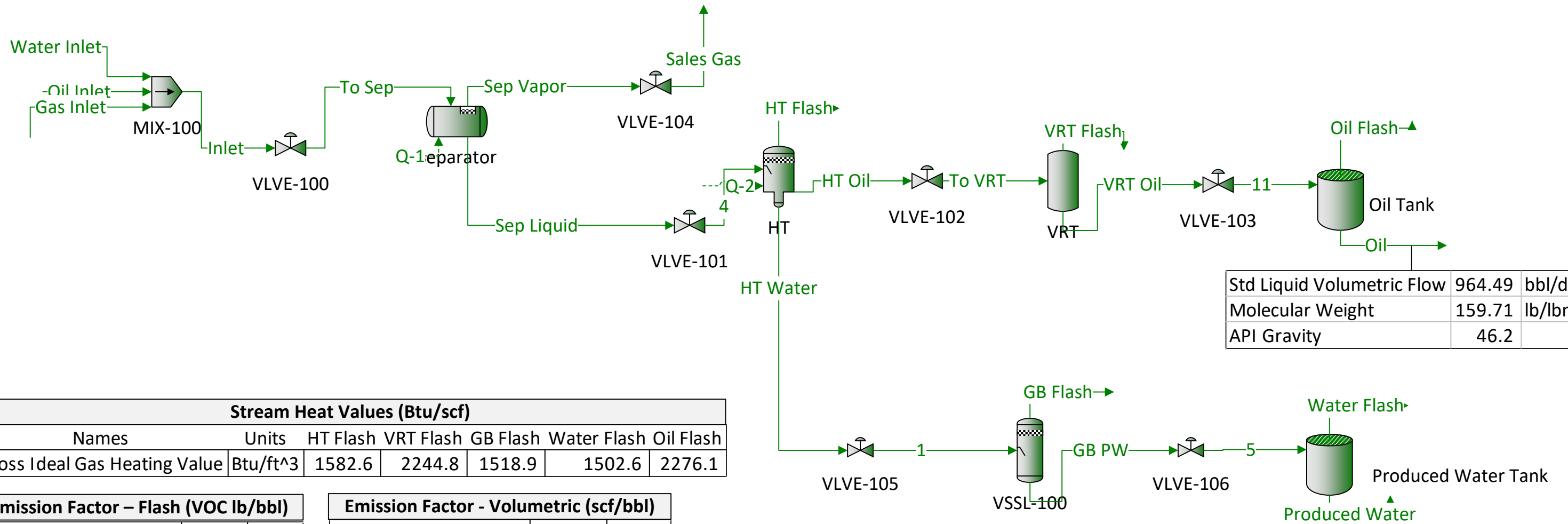
WS

Temperature	58.18	62.66	69.10	76.57	84.04	89.84	91.95	92.48	86.43	77.65	66.77	59.38
Pressure	15.34	16.22	17.45	15.96	16.03	16.26	16.33	16.39	16.03	15.86	16.77	15.53
Molecular Weight	35.51	35.92	36.53	40.69	42.55	43.94	44.45	44.58	43.24	40.94	36.34	35.62
Molar Flow	0.80	1.02	1.19	3.12	2.86	2.59	2.43	2.25	1.75	3.81	1.11	0.90
Mass Flow	28.24	36.78	43.56	126.87	121.80	113.75	108.04	100.12	75.51	155.83	40.31	32.06
Std Vapor Volumetric Flow	0.01	0.01	0.01	0.03	0.03	0.02	0.02	0.02	0.02	0.03	0.01	0.01
Std Liquid Volumetric Flow	0.12	0.16	0.19	0.53	0.50	0.46	0.43	0.40	0.31	0.65	0.18	0.14
Gross Ideal Gas Heating Value	1993	2016	2050	2268	2372	2452	2481	2488	2411	2282	2039	1999
Gross Liquid Heating Value	21158	21153	21146	20993	21002	21016	21022	21023	21003	20995	21149	21156

Flash

Temperature	58.18	62.66	69.10	76.57	84.04	89.84	91.95	92.48	86.43	77.65	66.77	59.38
Pressure	--	--	--	14.27	14.27	14.27	14.27	14.27	14.27	14.27	--	--
Molecular Weight	--	--	--	38.55	40.72	42.39	42.99	43.14	41.41	38.87	--	--
Molar Flow	--	--	--	0.30	0.90	1.39	1.53	1.46	0.67	0.48	--	--
Mass Flow	--	--	--	11.54	36.72	58.83	65.63	62.89	27.75	18.49	--	--
Std Vapor Volumetric Flow	--	--	--	0.00	0.01	0.01	0.01	0.01	0.01	0.00	--	--
Std Liquid Volumetric Flow	--	--	--	0.05	0.15	0.24	0.27	0.25	0.11	0.08	--	--
Gross Ideal Gas Heating Value	--	--	--	2160	2280	2373	2407	2415	2318	2178	--	--
Gross Liquid Heating Value	--	--	--	21118	21098	21093	21092	21092	21095	21114	--	--

Emission Inventory Flowsheet (w/ VRT and Gunbarrel)



Std Liquid Volumetric Flow	964.49	bbbl/d
Molecular Weight	159.71	lb/lbmol
API Gravity	46.2	

Stream Heat Values (Btu/scf)						
Names	Units	HT Flash	VRT Flash	GB Flash	Water Flash	Oil Flash
Gross Ideal Gas Heating Value	Btu/ft ³	1582.6	2244.8	1518.9	1502.6	2276.1

Emission Factor – Flash (VOC lb/bbl)	
Heater Treater Flashing	1.17 lb/bbl
VRT Flashing	2.32 lb/bbl
Water Tank Flashing	0.0014 lb/bbl
Oil Tank Flashing	0.037 lb/bbl
Gunbarrel Tank Flashing	0.0095 lb/bbl

Emission Factor - Volumetric (scf/bbl)	
Heater Treater Volume	38.98 scf/bbl
VRT Volume	31.75 scf/bbl
Water Tank Volume	0.059 scf/bbl
Oil Tank Volume	0.49168 scf/bbl
Gunbarrel Tank Volume	0.38 scf/bbl

Heater Treater Flash wt% of VOC	VRT Flash wt% of VOC	Water Flash wt% of VOC	Oil Tank Flash wt% of VOC	Gunbarrel Tank Flash wt% of VOC
Benzene = 0.375 wt%	Benzene = 0.433 wt%	Benzene = 1.43 wt%	Benzene = 0.435 wt%	Benzene = 1.06 wt%
Toluene = 0.289 wt%	Toluene = 0.328 wt%	Toluene = 1.08 wt%	Toluene = 0.329 wt%	Toluene = 0.801 wt%
Ethylbenzene = 0.0104 wt%	Ethylbenzene = 0.0115 wt%	Ethylbenzene = 0.038 wt%	Ethylbenzene = 0.0115 wt%	Ethylbenzene = 0.0283 wt%
Xylenes = 0.0832 wt%	Xylenes = 0.0919 wt%	Xylenes = 0.301 wt%	Xylenes = 0.0921 wt%	Xylenes = 0.224 wt%
n-Hexane = 1.25 wt%	n-Hexane = 1.43 wt%	n-Hexane = 0.169 wt%	n-Hexane = 1.43 wt%	n-Hexane = 0.351 wt%
HAPs = 2.003 wt%	HAPs = 2.3 wt%	HAPs = 3.02 wt%	HAPs = 2.3 wt%	HAPs = 2.46 wt%